

Sandstone Gold Project, Western Australia

Sandstone Mineral Resource increases by 92% to 12.4 Mt @ 1.6 g/t gold for 635,000 ounces

**Shallow, pit constrained mineral resource,
with high-grade gold mineralisation remaining open along strike and at depth.
Drilling ongoing, targeting further resource growth.**

Highlights

- Updated JORC 2012 Mineral Resource Estimate of **12.4Mt @ 1.6 g/t gold for 635,000oz** for the Sandstone Gold Project, incorporating updates for Lord Nelson, Lord Henry, Havilah Camp and Vanguard Camp.

JORC 2012 Mineral Resource Estimate for the Sandstone Gold Project as at March 2022			
Classification	Tonnes (Mt)	Grade (g/t gold)	Contained gold (koz)
Total Indicated	3.0	1.7	159
Total Inferred	9.4	1.6	476
TOTAL	12.4	1.6	635

Updated Mineral Resources reported at a cut-off grade of 0.5 g/t gold. Mineral Resources for Indomitable are reported at a cut-off grade of 0.3 g/t gold. Minor discrepancies may occur due to rounding of appropriate significant figures.

- Resource update represents an **increase of 92%** in contained gold at an average **discovery cost of less than A\$14/oz¹**.
- Updated Mineral Resources **constrained within A\$2,500/oz optimised pit-shells²** at a 0.5 g/t gold cut-off and **over 90% of total ounces within 160m from surface**.
- Shallow, high-grade resources remain open along strike and at depth at all deposits** highlights the strong potential to continue to grow the resource inventory with further drilling.
- Excellent gold recoveries of ~96% in fresh rock** returned from preliminary gold recovery testwork (avg. of 93% across all rock types) demonstrates gold will be recoverable through a simple cyanide extraction process³.
- Rapid growth at Vanguard Camp with a tripling of the resource to 2.3Mt @ 2.0 g/t gold for 150,000oz** and mineralisation remaining open along a +2km long NW/SE trending corridor.
- Substantial resource growth at Lord Nelson, increasing by 138% to 5.3Mt @ 1.6 g/t gold for 267,000oz** and mineralisation remains open.
- Mineral Resource Estimate excludes an update for Indomitable Camp**. Recent high-grade gold results⁴ outside the current resource and assays from planned drilling to be included in an update in the second half of the year.
- Located on granted mining licences⁵** and supported by excellent surrounding infrastructure.
- Strong news flow with Alto's major 60,000m drilling program planned for 2022 underway**, with an initial 18,000m of RC drilling, targeting resource growth and high-grade depth extensions at Lord Nelson, Indomitable and Vanguard.
- Next Mineral Resource update** anticipated for the second half of the year.
- Alto is well funded with a closing cash position of \$6.1m** as at 31 December 2021.

¹ Discovery cost has been calculated as the total capitalised exploration and evaluation expenditure divided by the resource ounces reported in this release.

² Updated Mineral Resources in this release are based on A\$2,500/oz pit shells. Mineral resources for Indomitable and Ladybird have not been updated and are based on A\$2,000/oz pit shells.

³ ASX Release: Excellent Gold Recoveries at Lord Nelson, Sandstone Gold Project, 2 October 2020.

⁴ ASX Release: Broad zones of significant gold mineralisation intersected at Indomitable, 14 February 2022.

⁵ All mineral resources are located within granted mining licences, with the exception of Ladybird.

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Issued Shares: 528m
Share Price: \$0.096
Market Capitalisation: \$51m



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ASX: AME

Alto's Managing Director, Matthew Bowles said:

We are extremely pleased to be able to report this substantial increase in the gold resource, that has been independently estimated by Snowden Optiro, to 635,000 ounces at the Sandstone Gold Project. We view this very much as an interim resource upgrade, with significant scope to delineate additional shallow, high-grade gold ounces with the current and planned drilling at the Lords Corridor, Vanguard and Indomitable.

The Company remains focused on adding further ounces with extensional drilling and plans to mobilise additional rigs to fast-track this resource growth and also test a number of our high-priority regional targets.

Alto completed over 60,000 metres of drilling in 2021 and the scale of growth, particularly at Lord Nelson which has more than doubled and Vanguard which has tripled in size, gives us the confidence that we can continue to materially grow the resources beyond what is currently defined at Sandstone.

I would like to thank the entire team for their hard work and dedication over the last 18 months, which has led to this significant milestone. With our next major drill program well underway, 2022 is already shaping up to be another busy year for Alto, with strong news flow over the coming months and another resource update anticipated for later in the year.

Mineral Resource Estimate grows by 92% to 635,000oz @ 1.6 g/t gold at the Sandstone Gold Project

Alto Metals Limited (ASX: AME) (Alto or Company) is pleased to announce a significant mineral resource update at the Company's 100% owned Sandstone Gold Project in Western Australia, (Sandstone Gold Project).

The updated mineral resource estimate for the Sandstone Gold Project totals **12.4Mt at 1.6 g/t gold for 635,000oz of contained gold**. The updated mineral resource incorporates updates for Lord Nelson, Lord Henry, Havilah and Vanguard Camps (refer to Tables 1 and 2 below) prepared by independent mining industry consultants, Snowden Optiro and reported in accordance with the JORC Code (2012 Edition).

The updated mineral resource was reported using a 0.5 g/t gold cut-off and is constrained within a A\$2,500 optimised pit shells, based on mining parameters and operating costs typical for Australian open pit extraction deposits of similar scale and geology. Only Indicated and Inferred categories of mineralisation were considered for use in the optimisation of the mineral resource.

Alto considers the total mineral resources for the Sandstone Gold Project have a reasonable prospect of eventually being mined, taking into account the shallow nature of the deposits, the thickness and gold grades of the deposits, which are located on granted mining leases, and proximity to existing infrastructure.

The resource update includes all of the drilling completed up to the end of August 2021. Resource estimates for the Indomitable Camp and Ladybird deposit are unchanged from the maiden resources that were reported using a 0.3g/t - 0.5 g/t gold cut-off and constrained within A\$2,000 optimised pit shells, released to the ASX on 25 September 2018 and 11 June 2019, respectively. It is anticipated that Indomitable Camp will be included in the next mineral resource update planned for the second half of the year.

This mineral resource update is a significant increase in the total mineral resources at the Sandstone Gold Project and provides strong encouragement that the Company can continue to grow its Resource Inventory and progress its strategy to develop a stand-alone gold operation.

The Company's extensive +60,000m drilling program planned for 2022, targeting resource expansion, high-grade depth extensions and high-priority regional targets is already underway, with an initial 18,000m of RC drilling at Lord Nelson, Indomitable and Vanguard.

Table 1: Total Mineral Resource Estimate for Sandstone Gold Project, March 2022

JORC 2012 Mineral Resource Estimate for the Sandstone Gold Project as at March 2022			
Classification	Tonnes (Mt)	Grade (g/t gold)	Contained gold (koz)
Total Indicated	3.0	1.7	159
Total Inferred	9.4	1.6	476
TOTAL	12.4	1.6	635

Updated Mineral Resources reported at a cut-off grade of 0.5 g/t gold. Mineral Resources for Indomitable are reported at a cut-off grade of 0.3 g/t gold. Minor discrepancies may occur due to rounding of appropriate significant figures.

Table 2: Total Mineral Resource Estimate for Sandstone Gold Project, March 2022 (by deposit)

Deposit	Indicated			Inferred			Total		
	Tonnage (Mt)	Grade g/t	Gold (koz)	Tonnage (Mt)	Grade g/t	Gold (koz)	Tonnage (Mt)	Grade g/t	Gold (koz)
Lord Nelson	1.0	1.8	56	4.3	1.5	211	5.3	1.6	267
Lord Henry	1.6	1.5	77	0.3	1.2	13	1.9	1.4	90
Vanguard Camp	0.4	2.0	26	1.9	2.0	124	2.3	2.0	150
Havilah Camp				1.0	1.5	46	1.0	1.5	46
Indomitable Camp ^a				1.7	1.3	74	1.7	1.3	74
Ladybird ^b				0.1	1.9	8	0.1	1.9	8
TOTAL	3.0	1.7	159	9.4	1.6	476	12.4	1.6	635

Updated Mineral Resources reported at a cut-off grade of 0.5 g/t gold and are constrained within a A\$2,500/oz optimised pit shells based on mining parameters and operating costs typical for Australian open pit extraction deposits of a similar scale and geology. Mineral Resources for Indomitable (reported at a cut-off grade of 0.3 g/t gold) and Ladybird deposits have not been updated. Minor discrepancies may occur due to rounding of appropriate significant figures.

The references in this announcement to Mineral Resource estimates for the Sandstone Gold Project were reported in accordance with Listing Rule 5.8 in the following announcements:

(a): Indomitable & Vanguard Camp: announcement titled: "Maiden Gold Resource at Indomitable & Vanguard Camps, Sandstone WA" 25 Sep 2018; and

(b): Havilah & Ladybird: announcement titled: "Alto increases Total Mineral Resource Estimate to 290,000oz, Sandstone Gold Project" 11 June 2019.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement noted above and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the previous market announcement continue to apply and have not materially changed.

Table 3: Mineral Resource Estimate March 2022 Grade and Tonnage by cut-off grade within the optimised pit (excl. Indomitable & Ladybird)¹

Cut-off grade (g/t gold)	Tonnage (Mt)	Grade (g/t gold)	Contained gold (koz)
0.3	10.8	1.6	557
0.5	10.5	1.6	553
0.8	8.5	1.9	510

All tonnages are reported in dry metric tonnes. Minor discrepancies may occur due to rounding of appropriate significant figures.

1 Table 3 shows the total grade and tonnage by cut-off grade for the updated deposits in this release only. The estimates for Indomitable Camp and Ladybird are excluded from this table as grade tonnage cut-off grades were not included in the release for these mineral resource estimates

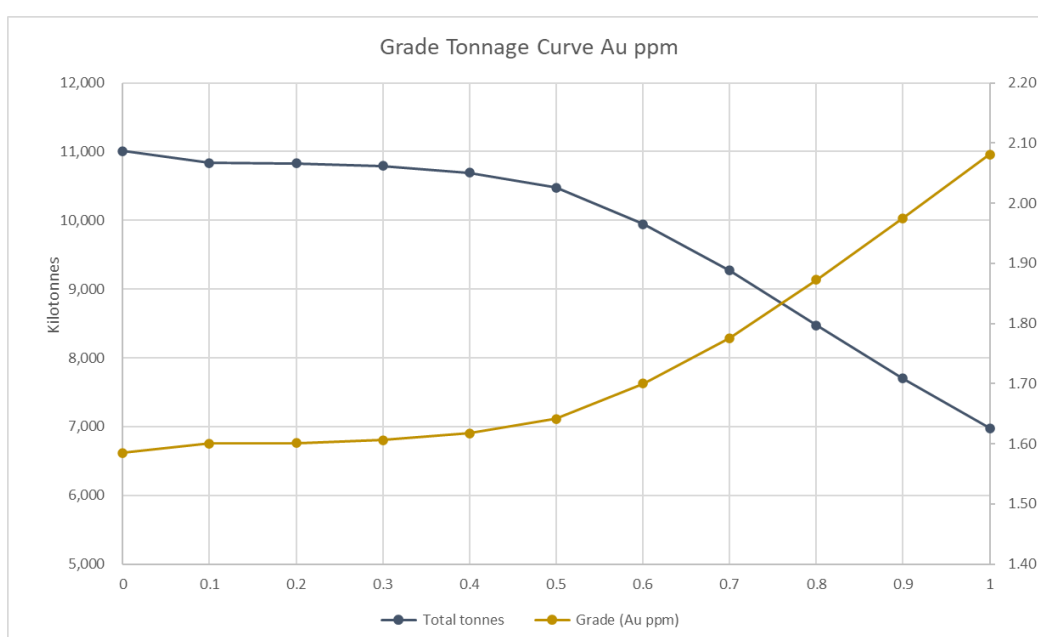


Figure 1: Sandstone Gold Project – grade tonnage curve (excl. Indomitable & Ladybird)¹

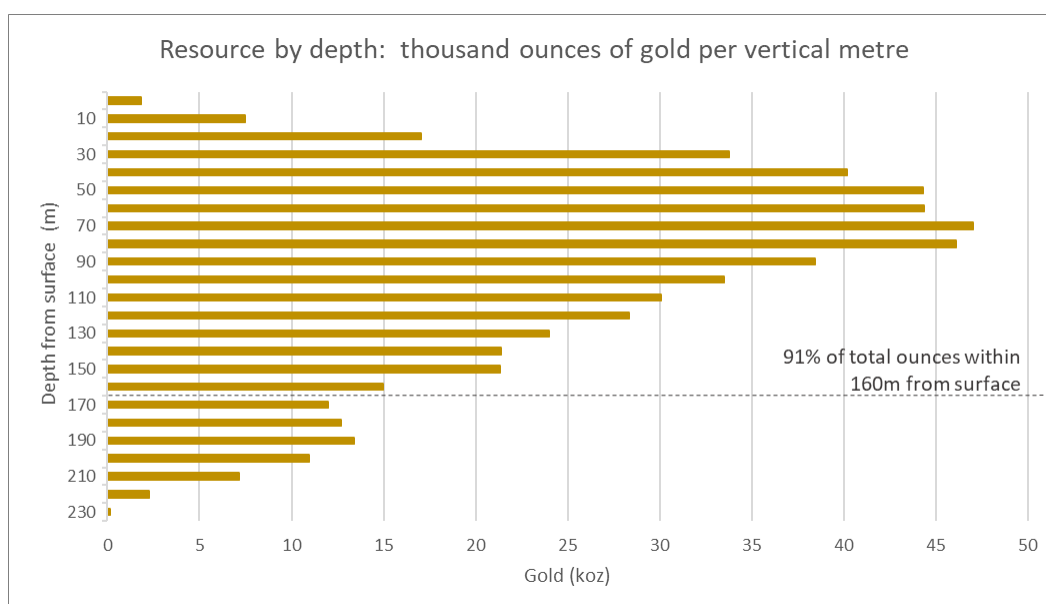


Figure 2: Sandstone Gold Project – Total ounces per vertical metre.

Updated Mineral Resource

The total combined in-pit Indicated and Inferred Mineral Resources for the Sandstone Gold Project now stand at **12.4Mt at 1.6 g/t gold for 635,000oz of gold**, representing a **total increase of 92%** on the previous total mineral resource estimate released on 27 May 2020.

Mineral Resource estimates were updated for Lord Nelson, Lord Henry, Vanguard Camp and Havilah Camp, following infill and step out RC and diamond drilling completed during 2020 and 2021. The mineral resource update includes:

Lord Nelson **5.3Mt at 1.6 g/t gold for 267,000oz (145% increase)**

Lord Henry **1.9Mt at 1.4 g/t gold for 90,000oz (30% increase)**

Vanguard Camp **2.3Mt at 2.0 g/t gold for 150,000oz (200% increase)**

Havilah Camp **1Mt at 1.5 g/t gold for 46,000oz (119% increase)**

Mineral Resource estimates for Indomitable Camp of 1.7Mt @ 1.3 g/t gold for 74,000oz (ASX release 25 September 2018) and Ladybird deposit of 136kt @ 1.9 g/t gold for 8,000oz (ASX release 11 June 2019) remain unchanged. **It is anticipated that Indomitable will be updated and included in the next mineral resource update** planned for later in the year.

Only Indicated and Inferred categories of mineralisation that fall within the optimised pit shells are reported in the Mineral Resources. *Mineralisation outside of the optimised pit shells has been excluded from the Mineral Resource statement until such time as further drilling can be carried out in these areas to potentially convert to additional in-pit resources.*

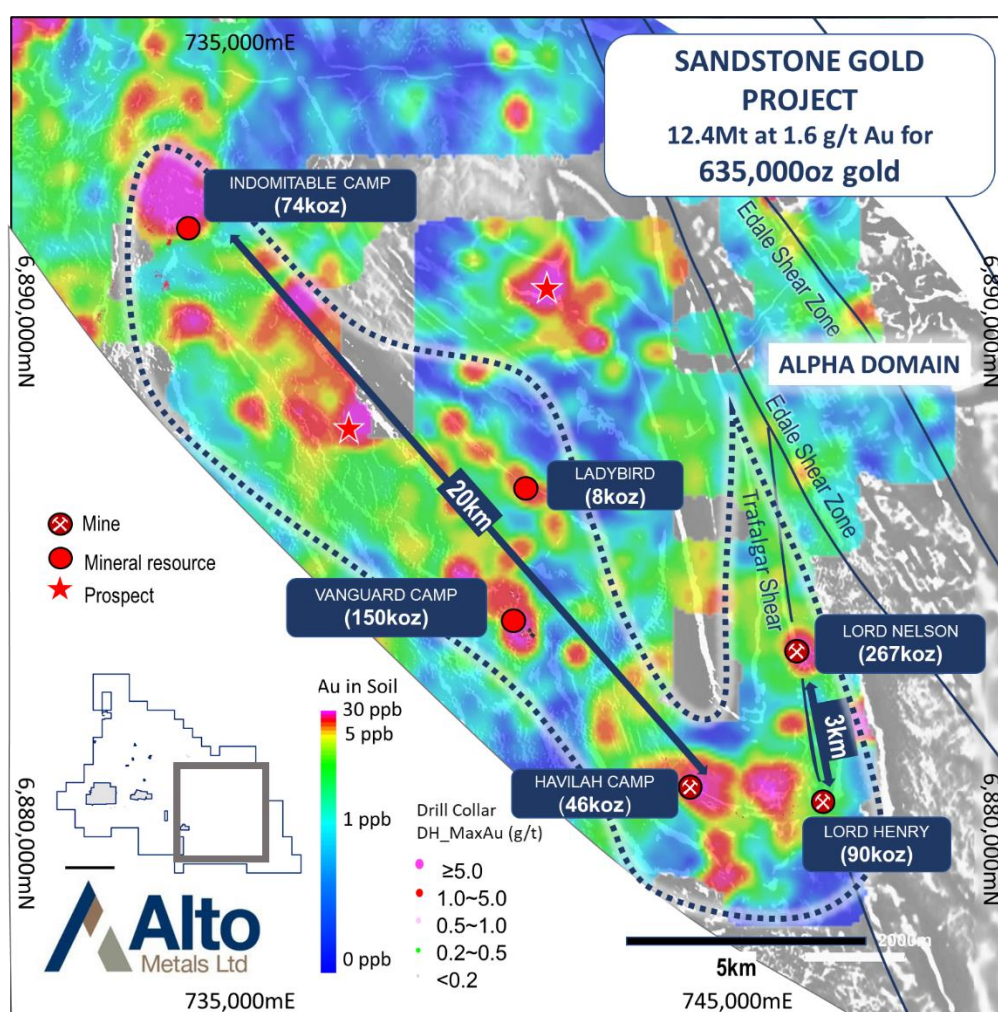


Figure 3: Location of total current mineral resources for Sandstone Gold Project within the Company's Alpha domain.

Lord Nelson

Lord Nelson represents 42% of the total Mineral Resources, with an Indicated and Inferred Resource of **5.3Mt at 1.6 g/t gold for 267,000oz** reported at a 0.5 g/t gold cut-off, constrained within an A\$2,500 pit shell, that extends over 1.2km strike, up to 400m wide and to 230m below surface. Lord Nelson has more than doubled, with the contained gold increasing by 145% since its previous update. This was driven largely by the drilling completed in 2021, including the discovery of the new high-grade zones below the historic open pit and highlights the potential to continue to grow the Mineral Resource at Lord Nelson with further drilling.

The total gold endowment of Lord Nelson (including historical reported production of 207koz @ 4.6 g/t gold) is now 474,000oz.

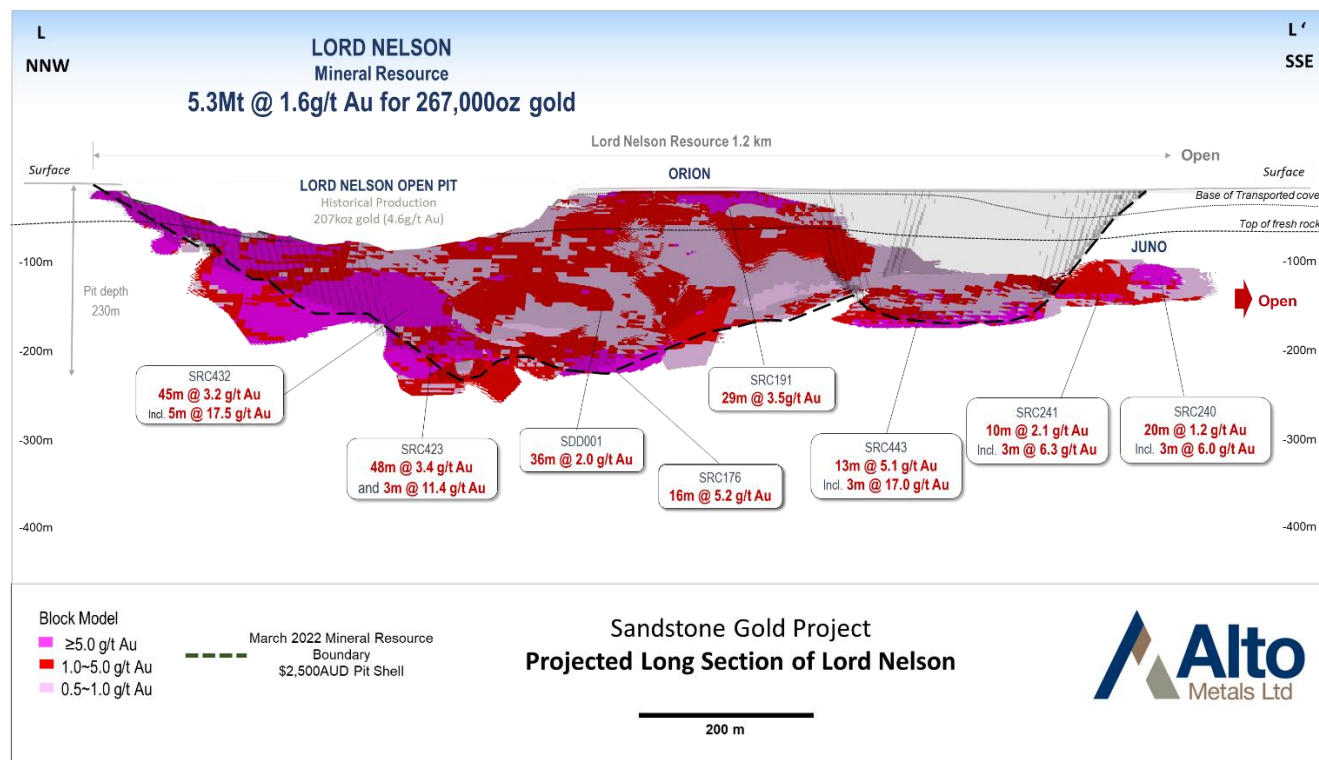


Figure 4: Lord Nelson resource block models (0.5 g/t cut-off) constrained within a A\$2,500/oz optimised pit shell.

Recent drilling results from below the historic Lord Nelson pit and along strike to the south include:

- **3m @ 11.4 g/t gold** from 191m and **48m @ 3.4 g/t gold** from 214m, incl. **19m @ 6.0 g/t gold** from 223m (SRC423) – Lord Nelson
- **45m @ 3.2 g/t gold** from 161m, incl. **5m @ 17.5 g/t gold** from 162m; (SRC432) – Lord Nelson
- **36m @ 2.0 g/t gold** from 203m, incl. **3.6m @ 10.5 g/t gold** from 232.8m (SDD001) – Lord Nelson
- **13m @ 5.1 g/t gold** from 162m, incl. **3m @ 17.0 g/t gold** from 168m (SRC443) – Juno
- **23m @ 1.7 g/t gold** from 141m (SRC444) – Juno
- **22m @ 1.6 g/t gold** from 135m (SRC449) – Juno

Drilling is currently underway at Lord Nelson and Juno where there is immediate potential to identify further mineralisation up and down dip and along strike, both within the current optimised pit shell and outside of it.

Additionally, high-grade gold intercepts outside the optimised pit-shell not included in the current update highlight an excellent opportunity for further growth. It is anticipated that future infill and step-out drilling will allow this material to be included in subsequent resource updates.

Lord Henry

The updated Indicated and Inferred mineral resource estimate for Lord Henry of **1.9Mt at 1.4 g/t gold for 90,000oz**, reported at a 0.5 g/t gold cut-off, constrained within an A\$2,500 pit shell, represents a 30% increase and is defined to a depth of 130m from surface. Lord Henry is located at the southern end of the Lords granodiorite and comprises multiple stacked lodes that make up the deposit, which remains open to the north.

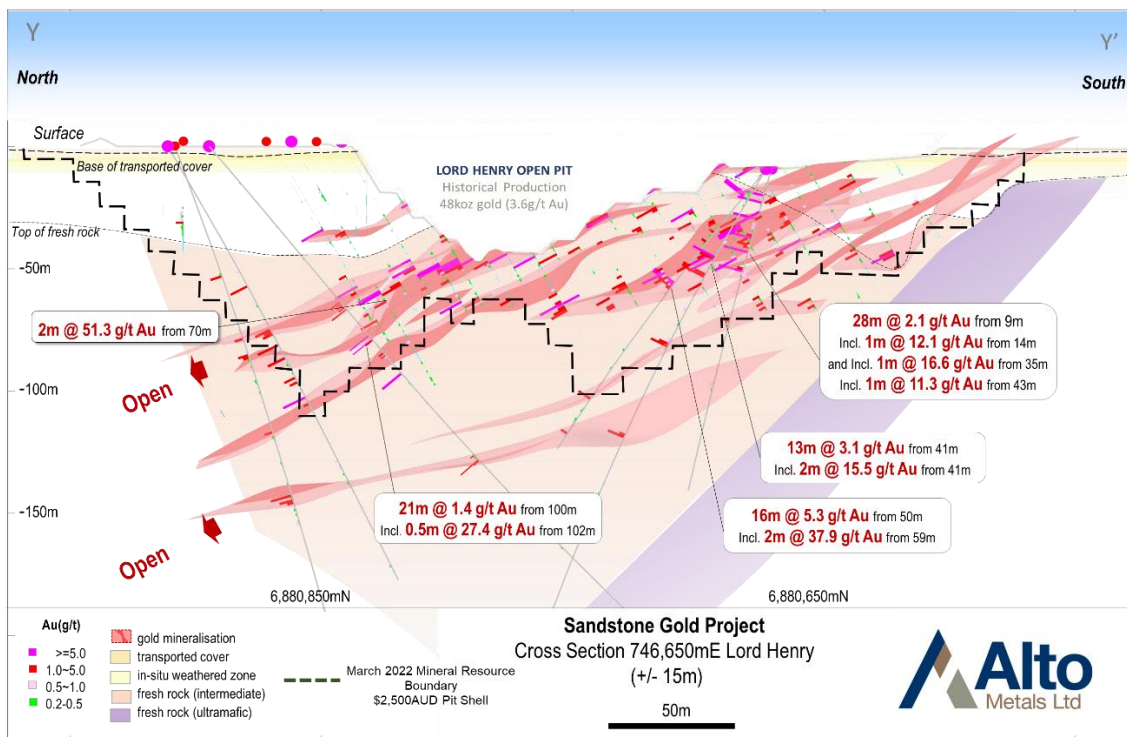


Figure 6: Cross section 746,650mE of Lord Henry within a \$2,500/oz optimised pit shell outline.

Havilah Camp

The updated mineral resource estimate for Havilah Camp is **1Mt at 1.5 g/t gold for 46,000oz**, reported at a 0.5 g/t gold cut-off, constrained within an A\$2,500 pit shell, represents a 30% increase and is defined to a depth of 130m from surface. Havilah Camp is located 2km west of the Lords Corridor and comprises the Havilah and Maninga Marley deposits, where previously identified mineralisation was recently followed up with a RC program of 21 holes for 2,550m. (ASX 31/01/22)

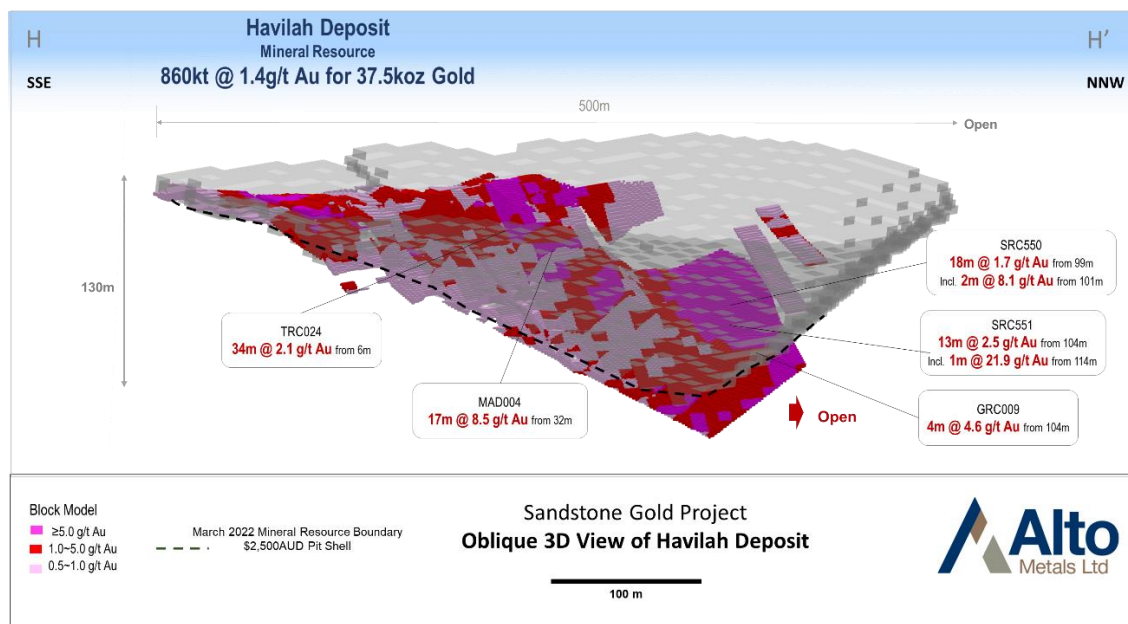


Figure 7: Oblique view of Havilah resource block models (0.5 g/t cut-off) constrained within a A\$2,500/oz optimised pit shell.

Vanguard Camp

The updated Indicated and Inferred mineral resource estimate for Vanguard and Vanguard North (together Vanguard Camp) **has tripled in size to 2.3Mt at 2.0 g/t gold for 150,000oz**, reported at a 0.5 g/t gold cut-off, constrained within an A\$2,500 pit shell, and represents 24% of the total Mineral Resources.

Approximately 20,000m of RC and diamond drilling was completed at Vanguard Camp in 2021 and the successful north-west/south-east extensional drilling has significantly contributed to the growth in the Mineral Resources.

Mineralisation at Vanguard Camp remains open and the rapid rate of growth demonstrates the potential to continue increasing both the grade and scale of the Mineral Resources with further drilling.

Importantly, Vanguard Camp includes the high-grade Vanguard North deposit of **383kt @ 3.8 g/t gold for 47,000oz** where recent drilling returned significant high-grade gold mineralisation which remains open down dip and along strike.

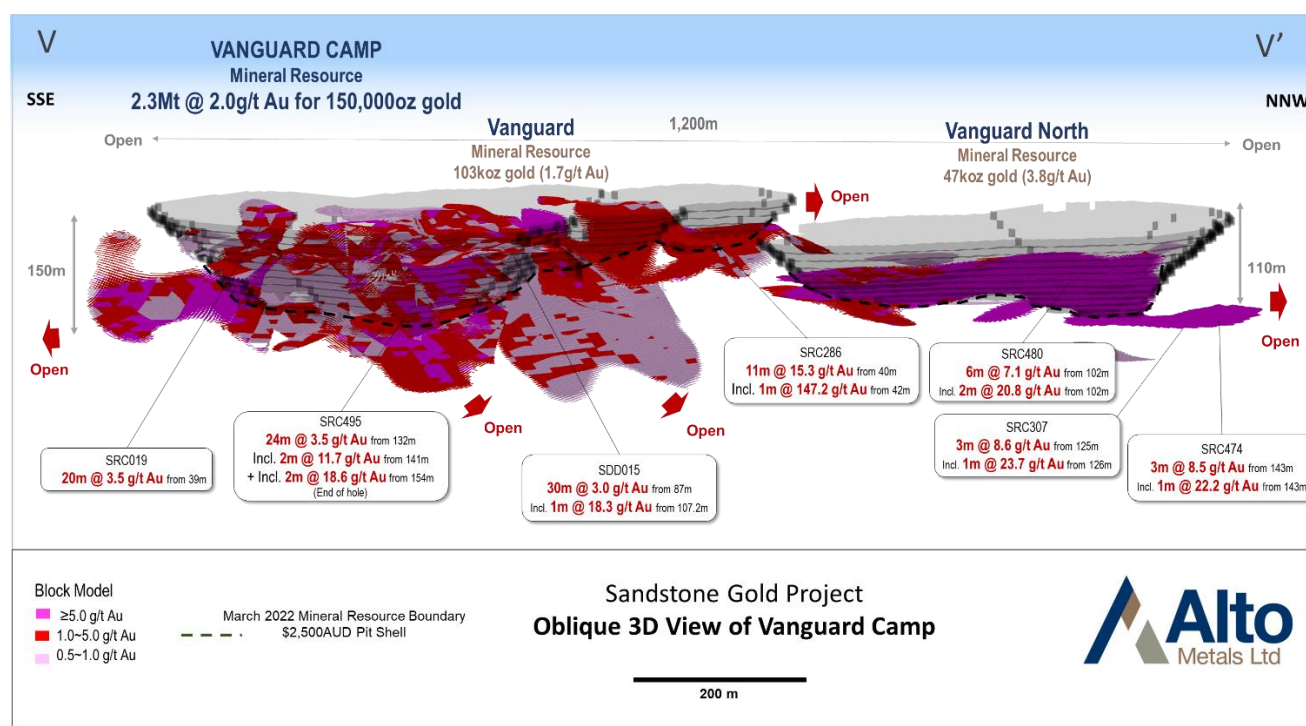


Figure 8: Oblique 3D view of Vanguard Camp resource block models (0.5 g/t cut-off) constrained within a A\$2,500/oz optimised pit shell.

Recent results from Vanguard North include:

- **2m @ 20.8 g/t gold** from 102m (SRC480)
- **5m @ 6.5 g/t gold** from 67m, incl. **1m @ 27.3 g/t gold** from 69m (SRC469)
- **3m @ 8.6 g/t gold** from 125m, incl. **1m @ 23.7 g/t gold** from 126m (SRC307)
- **3m @ 8.5 g/t gold** from 143m, incl. **1m @ 22.2 g/t gold** from 143m (SRC474)

Figure 8 shows the Mineral Resources at Vanguard Camp, constrained within the optimised pit shells and the additional mineralisation that remains open, outside the current pit shells.

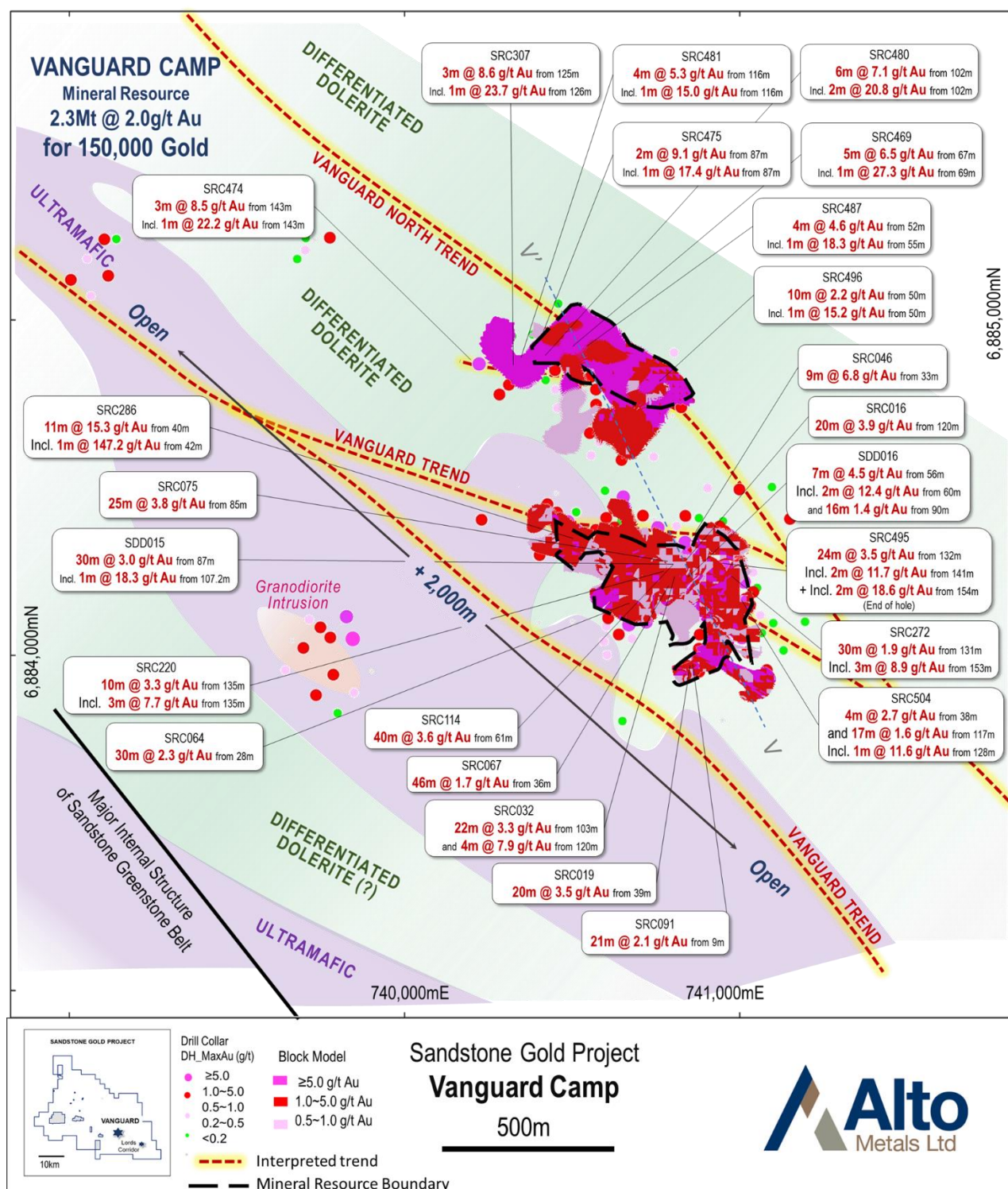


Figure 9: Vanguard Camp plan view block model of Resources (0.5 g/t cut-off) constrained within a A\$2,500/oz optimised pit shell.

RESOURCE GROWTH POTENTIAL AND NEXT ANTICIPATED RESOURCE UPDATE

The Company considers the current Mineral Resource update an interim estimate and believes there is considerable potential for continued growth at the Sandstone Gold Project, with another resource update anticipated for the second half of the year.

Alto's immediate exploration strategy remains focused on discoveries and resource growth within the Alpha Domain which hosts the Lords Corridor, Vanguard, Indomitable and Havilah. Based on the success of the Company's systematic approach to exploration to date, Alto is continuing to review multiple other early greenfield and advanced brownfield targets within the +900km² Sandstone Gold Project, as part of its longer-term strategy to increase the resource base to support a stand-alone operation.

Importantly, when considering the exploration potential of the Sandstone Gold Project, 91% of the current resources are defined within the top 160m from surface and the vast majority of the +900km² Project is virtually untested below 100m.

Indomitable Camp

The Indomitable Camp is currently defined over a 2km strike length and is hosted within the +20km NW/SE Indomitable/Vanguard/Havilah Trend that forms part of the priority 'Alpha Domain' target area. The mineral resource estimate for Indomitable Camp has not been updated since the maiden resource of 1.7Mt @ 1.3 g/t gold for 74,000oz in 2018 which was based on an A\$2,000/oz pit shell and a 0.3 g/t cut-off, remains open along strike and down plunge.

Recent drilling results from Indomitable intersected multiple, broad zones of gold mineralisation (refer ASX Release 14 February 22) including:

- **21m @ 2.0 g/t gold** from 46m, incl. **1m @ 14.9 g/t gold** from 61m and incl **1m @ 6.3 g/t gold** from 66m, and **11m @ 2.5 g/t gold** from 92m, incl. **2m @ 7.0 g/t gold** from 93m (SRC 574)
- **15m @ 2.2 g/t gold** from 44m, incl. **2m @ 13.2 g/t gold** from 45m, and **25m @ 1.2 g/t gold** from 65m, incl. **1m @ 11.5 g/t gold** from 71m (SRC 571)
- **16m @ 1.1 g/t gold** from 76m, incl. **2m @ 5.3 g/t gold** from 83m (SRC 557) – ended in mineralisation
- **21m @ 1.1 g/t gold** from 136m, incl. **6m @ 1.8 g/t gold** from 136m and incl. **11m @ 1.0 g/t gold** from 146m (SRC 566)
- **24m @ 0.7 g/t gold** from 82m, incl **4m @ 2.2 g/t gold** from 95m
29m @ 1.0 g/t gold from 113m and
15m @ 0.6 g/t gold from 154m (SRC564) – ended in mineralisation

Based on these latest exploration results the Company considers there is strong potential for further resource growth from Indomitable Camp.

Vanguard Camp

There are opportunities to continue to extend the mineralised footprint further along the +2km long north-west trending high-grade trend at Vanguard Camp and also to follow up on the high-grade drill intercepts outside the current optimised pit shells.

Lord Corridor

There are also immediate opportunities to follow up on the down dip extensions of thick, high-grade intercepts at Lord Nelson and the high-grade dip and strike extensions of the new Juno discovery, many of which are outside the optimised pit-shells and may well extend further south along the corridor.

Regional exploration

Regionally, there are multiple high-priority targets within the Sandstone Gold Project, outside of the Alpha Domain.

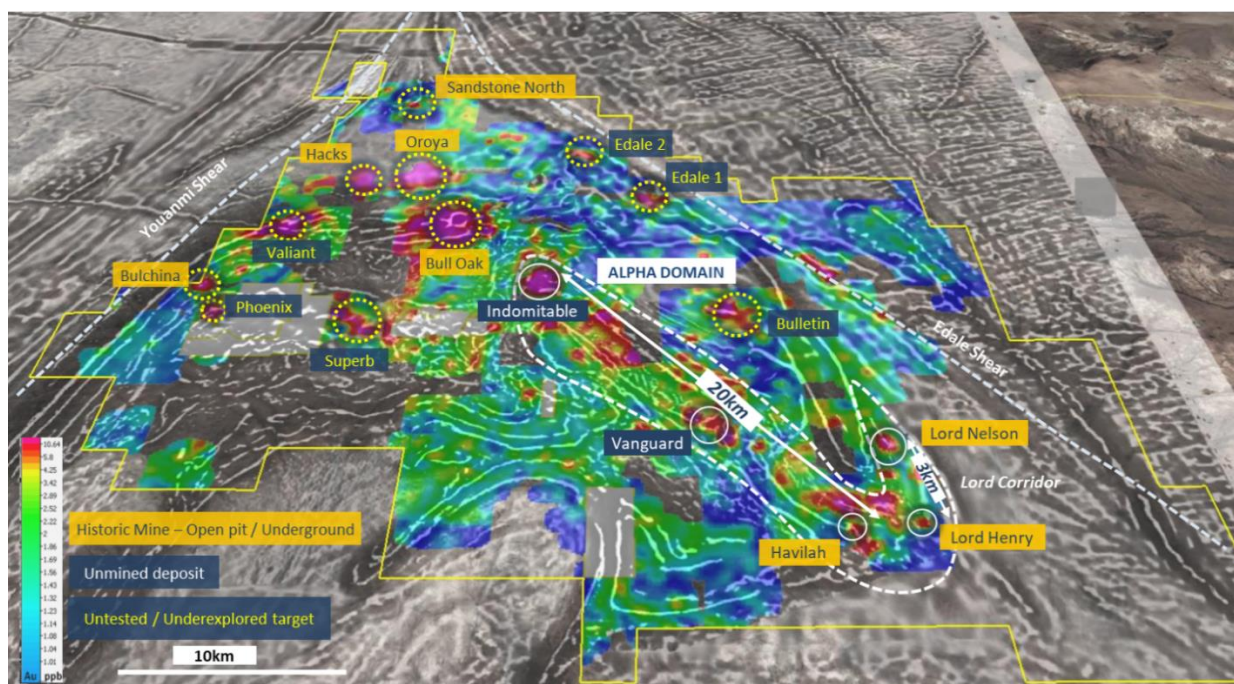


Figure 10: Regional prospect map showing gold-in-soils over 1VD Magnetics highlighting the Alpha Domain and multiple brown and greenfield regional prospects.

CURRENT AND PLANNED DRILLING FOR 2022

The Company's extensive +60,000m drilling program planned for 2022 is underway, aggressively targeting resource expansion, high-grade depth extensions and high-priority regional targets, with an initial 18,000m of RC drilling at Lord Nelson, Indomitable and Vanguard.

As announced on 2 March 2022, the first phase of 33 holes for approximately 6,200m of RC drilling planned at Lord Nelson and the new Juno Lode is underway, targeting extensions of known mineralisation. Following the first phase of Lords drilling the rig will be moved to Indomitable and then Vanguard for approximately 12,000m of planned resource and extensional drilling, to follow up on the exceptional results announced from both prospects late last year and in February this year.

Alto has ongoing drilling planned at Sandstone, with at least one RC rig secured for the majority of 2022. Following the release of the updated Mineral Resource the Company intends to secure additional rigs, subject to availability, to accelerate resource and exploration drilling.

METALLURGICAL TESTWORK – EXCELLENT GOLD RECOVERIES¹

Preliminary test work indicates **excellent gold recoveries averaging 96%** in Lord Nelson primary zone mineralisation and >93% in oxide and transitional zones from previous testwork.

Previous detailed metallurgical testwork was carried out at Lord Nelson by Troy Resources NL (Troy) as part of initial feasibility study work on both oxide and transitional ore. This testwork determined:

- Lord Nelson ore was found to be free milling.
- Gravity gold recovery was found to be required to prevent coarse gold entering the leach circuit and being partially lost to the tailings and it was estimated that over 20% of total gold could be recovered as concentrate from the oxide ore and close to 40% for the transitional ore.
- Acceptable **gold recoveries of >93% for oxide and transitional ores** were obtained after 24 hours of direct cyanide leaching.

Troy mined the Lord Nelson deposit as an open pit mine to ~90m below surface between 2005 and 2010 and recovered 207koz at 4.6 g/t Au. The ore was processed through Troy's Sandstone treatment plant, which had a general design flow sheet described by Troy as fairly typical of other gold plants in operation on the WA goldfields.

¹ Refer to ASX Announcement 2 October 2020

Troy reported that recovery of gold at the Sandstone plant typically ranged from 93% to 96% with total recovery in the period July 2006 to end of June 2007 (i.e. during mining and processing of Lord Nelson) of 94.4%.

Testwork carried out to date confirms the oxide, transitional and primary mineralisation at Lord Nelson is amenable to conventional cyanide extraction.

The Company has also completed preliminary test work on samples from the Vanguard Camp, Indomitable Camp, Havilah and Ladybird deposits with a total of 25 samples comprising various grades and lithologies within oxide, transitional and primary mineralisation to Intertek Genalysis for Accelerated Cyanide Leach LeachWELL™ testwork. (Refer to ASX announcements 25/09/18 and 11/06/19). An average gold recovery of >92% was reported indicating the mineralisation at these deposits is also amenable to conventional cyanide extraction methods.

An **overall average gold recovery of 93%** was used in the pit optimisation parameters, refer to Appendix 1 and 2 for further details.

Table 4: Total Mineral Resource Estimate March 2022, by oxidation type

JORC 2012 Mineral Resource Estimate for the Sandstone Gold Project by rock type									
	Indicated			Inferred			Total		
	Tonnage (Mt)	Grade g/t	Gold (koz)	Tonnage (Mt)	Grade g/t	Gold (koz)	Tonnage (Mt)	Grade g/t	Gold (koz)
Oxide	0.3	1.3	11	2.6	1.5	119	2.9	1.4	130
Transitional	0.7	1.5	36	1.7	1.6	86	2.4	1.6	122
Fresh	2.0	1.8	112	5.1	1.7	271	7.1	1.7	383
TOTAL	3.0	1.7	159	9.4	1.6	476	12.4	1.6	635

All tonnages are reported in dry metric tonnes. Updated Mineral Resources reported at a cut-off grade of 0.5 g/t gold. Mineral Resources for Indomitable are reported at a cut-off grade of 0.3 g/t gold). Minor discrepancies may occur due to rounding of appropriate significant figures.

The Company considers the results of the updated mineral resource encouraging, supporting further resource drilling to continue to grow the resources and the commencement of preliminary study work.

For further information regarding Alto and its Sandstone Gold Project please visit the ASX platform (ASX: AME) or the Company's website at www.altometals.com.au.

This announcement has been authorised by the Board of Alto Metals Limited.

Matthew Bowles

Managing Director & CEO

Alto Metals Limited

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Competent Persons Statement

The information in this report that relates to the Lord Nelson, Lord Henry, Vanguard, Vanguard North, Havilah and Maninga Marley Mineral Resource estimates is based on information compiled by Jan Graham who is a Member of the Australian Institute of Geoscientists (MAIG) and a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity to which she 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". Jan Graham is a Principal Consultant and a full-time employee of Snowden Optiro and consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this report that relates to the Indomitable and Ladybird Mineral Resource Estimates is extracted from the reports entitled 'Maiden Gold Resource at Indomitable and Vanguard Camps, Sandstone WA' created on 25 September 2018, and 'Alto Increases Total Mineral Resource Estimate to 290,000oz, Sandstone Gold Project', created on 11 June 2019 and is available to view on the Alto Metals Limited website (altometals.com.au) or on the ASX platform (ASX:AME). The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this Report that relates to Exploration Results and the data used as a basis for the mineral resource estimate is based on information compiled by Dr Changshun Jia, who is an employee and shareholder of Alto Metals Ltd, and he is also entitled to participate in Alto's Employee Incentive Scheme. Dr Jia is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, 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". Dr Jia consents to the inclusion in the report of the matters based on the information in the context in which it appears.

Forward-Looking Statements

This release may include forward-looking statements. Forward-looking statements may generally be identified by the use of forward-looking verbs such as expects, anticipates, believes, plans, projects, intends, estimates, envisages, potential, possible, strategy, goals, objectives, or variations thereof or stating that certain actions, events or results may, could, would, might or will be taken, occur or be achieved, or the negative of any of these terms and similar expressions. which are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Alto Metals Limited. Actual values, results or events may be materially different to those expressed or implied in this release. Given these uncertainties, recipients are cautioned not to place reliance on forward-looking statements. Any forward-looking statements in this release speak only at the date of issue. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Alto Metals Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this release or any changes in events, conditions or circumstances on which any such forward-looking statement is based.

Exploration Results

The references in this announcement to Exploration Results for the Sandstone Gold Project were reported in accordance with Listing Rule 5.7 in the announcements titled:

Broad zones of significant gold mineralisation – Indomitable, 14 February 2022

Shallow, high-grade gold confirmed at Sandstone Gold Project, 31 January 2022

Multiple high-grade gold intercepts from Vanguard, 4 November 2021

High-grade results from Lord Henry & Exploration update, 17 December 2021

Vanguard returns 24m @ 3.5 g/t gold, Sandstone Gold Project, 8 December 2021

Multiple high-grade gold intercepts from Vanguard, 4 November 2021

High-grade drill results continue from the Lords Corridor, 28 October 2021

Lords scale continues to grow with new Juno discovery, 5 October 2021

Alto intercepts 19m @ 6.0 g/t gold at Lord Nelson, 9 September 2021

Lord Henry delivers 8m @ 13.6 g/t gold from 56m, 19 August 2021

High-grade gold from first diamond hole at Lord Nelson, 2 August 2021

Further excellent results from step-out drilling at Vanguard, 1 July 2021

High-grade gold results continue at the Lords Corridor, 2 June 2021

Exceptional high-grade visible gold from Vanguard, 13 May 2021

Excellent high-grade results from the Lords, 13 April 2021

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcements noted above.

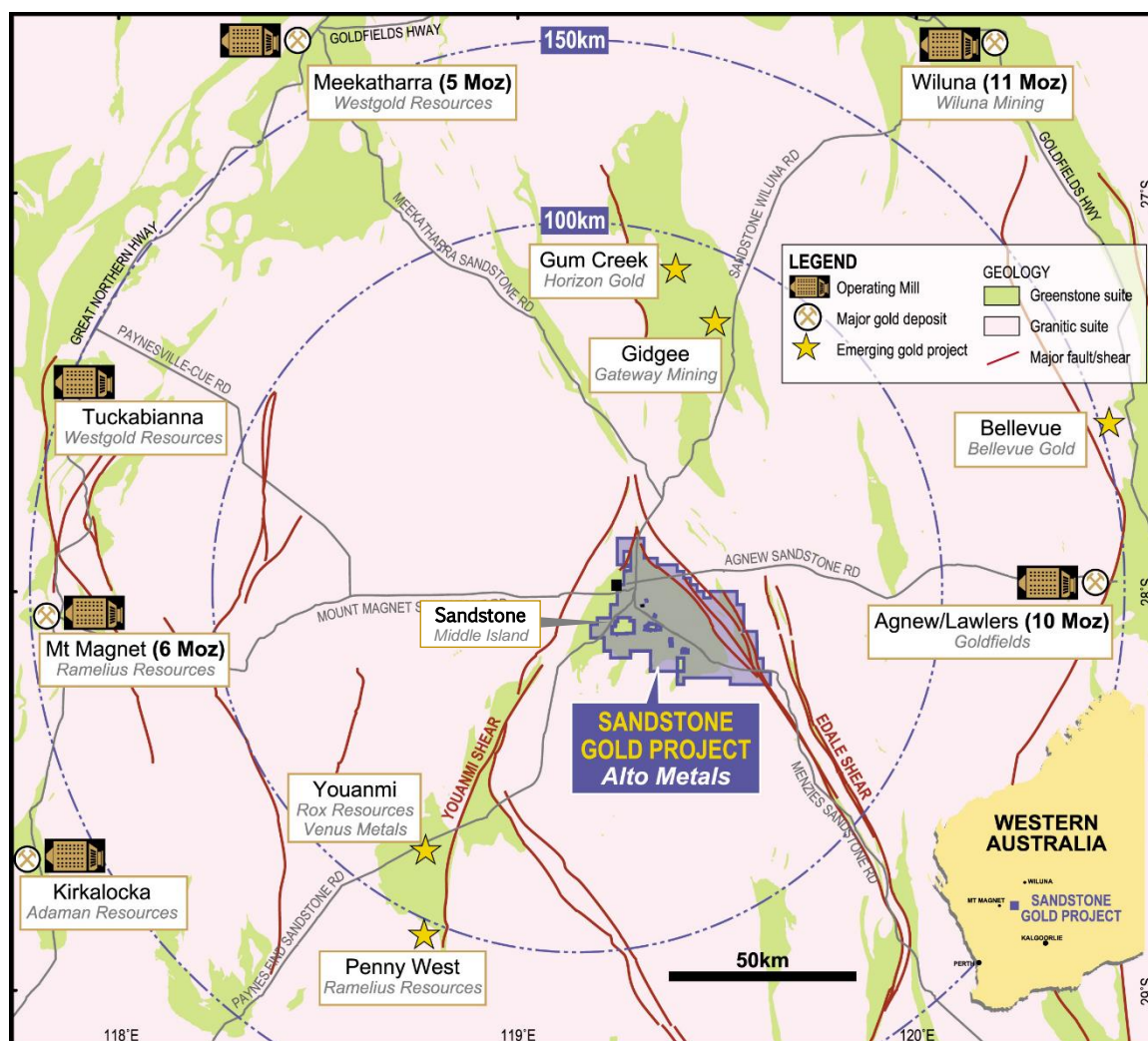


Figure 11. Location of Sandstone Gold Project within the East Murchison Gold Field, WA.

APPENDIX 1: SUMMARY OF MINERAL RESOURCE ESTIMATION PARAMETERS

The following is a material information summary relating to the Resource, consistent with ASX Listing Rule 5.8.1 requirements. Further details are provided in the JORC Code Table 1.

Location, Geology and Geological Interpretation

Alto's Sandstone Project is located in the East Murchison region of Western Australia and covers approximately 900 km² of the Sandstone Greenstone Belt, with multiple granted prospecting, exploration and mining licences all 100% owned by Sandstone Exploration Pty Ltd, which is a 100% subsidiary of Alto Metals.

Lords

The Lord Nelson deposit is hosted at the northern tip of a large granodiorite intrusion that is more than 3km long and up to 800m wide. The granodiorite has intruded mafic rocks to the west (hanging wall) and ultramafic rocks to the east (footwall). The mineralisation is mostly within the granodiorite intrusion, with a high-grade zone on the contact between the granodiorite and the ultramafic contact. In general, the mineralisation trends north-northwest, dipping approximately 50° to the west increasing to 70° with depth and plunges to the south. The mineralisation is typically characterized by a zone of pyrite + silica + biotite +/- quartz veining that follows the ultramafic footwall contact.

The Lord Henry deposit occurs along the southern end of the granodiorite intrusion and is bounded to the south and west by a sheared ultramafic contact. Mineralisation comprises a series of stacked, -20° to -30° north dipping lodes characterised by quartz-sericite-chlorite-pyrite alteration within the granodiorite body. The overall trend of the mineralised zones is northeast with a defined length of 400m. High-grade gold intersections are associated with sulphide rich quartz veins and stringers.

Vanguard Camp

Drilling indicates the Vanguard mineralisation is hosted predominantly within mafic lithologies (dolerite). The average depth of weathering varies from 30m - 70m. Petrographic work by Alto has confirmed that differentiated dolerites and granophyres have been intersected in drill holes that host the gold mineralisation. At Vanguard, gold mineralisation is mainly associated with sulphidic quartz veins which occur as plunging shoots. The structures which host the mineralisation are interpreted from drilling to strike and have a shallow plunge to the northeast. At Vanguard North, gold mineralisation is mainly associated with high-grade, narrow sulphidic quartz veins which strike approximately 300° and dip approximately 20° to the southwest.

Havilah Camp

Detailed surface geological mapping by Homestake and interpretation of drilling data by Homestake and other explorers has shown that the area of the Havilah and Maninga Marley mines is underlain by a northwest striking dolerite unit, bounded to the northeast by pillowed and amygdaloidal basalt, and to the southwest by ultramafic rocks.

Mineralisation at Havilah is confined to the dolerite close to the dolerite/basalt contact and is associated with quartz veins and stockworks within a north-dipping, NW striking mineralised shoot with a plunge of approximately 20 degrees to the north-west. Within the mineralised part of the dolerite, drilling has intersected dolerites and basalts of similar mineralogy suggesting the presence of a differentiated mafic unit. Granophyric quartz dolerite has also been identified in historic mullock dumps. Based on petrology of thin sections of diamond drill core, previous explorers reported a similarity between the dolerite and the lower units of the Golden Mile Dolerite.

Quartz-carbonate veins up to 0.5m wide have been intersected in drill core with recognisable selvages to the mineralisation up to 10m in width. Sulphides occur both in the veins and the adjacent wall rocks and consist of dominant pyrite and arsenopyrite with minor pyrrhotite and trace chalcopyrite.

Mineralisation at Maninga Marley is mostly within sheared talc carbonate rocks (ultramafic) close to the dolerite contact. The mineralised zones are represented as a series of shoots within an east-west trending shear zone. The shoots are described as up to 25m length, dipping steeply north and plunging approximately 45 degrees to the east-northeast.

Drilling Techniques

Drilling techniques used in the Mineral Resource Estimate include Aircore (AC), Rotary Air Blast (RAB), , Reverse Circulation (RC) and Diamond (DDH) drilling completed by Alto Metals and numerous previous companies. AC and RAB drill holes were used to aid in geological interpretation however samples collected by AC and RAB were not used in the resource estimation.

Alto RC drilling used a KWL 350 drill rig with an onboard 1100cfm/350psi compressor and a truck mounted 1000cfm auxiliary and 1000psi booster. The sampling hammer had a nominal 140 mm hole.

Alto diamond core was drilled using a KWL1600 drill rig. Diamond holes were drilled from surface, HQ3 diameter, triple tubed and reduction to NQ2 core where required. Diamond core was oriented by the drill contractor using the BLY TruCore UPIX Orientation tool.

Alto downhole surveys were carried out using a true north seeking gyro instrument. Collar surveys for Alto drill holes were determined by an independent licenced surveyor. Historical drill collar checks were carried out using a DGPS and by a licenced surveyor.

The portion of the mineral resource classified as Inferred is supported by drill collar spacing of generally 40m by 40m. The portion of the mineral resource classified as Indicated is generally supported by drill spacing of 20m by 20m.

Diamond holes were used to obtain representative measurements of bulk density within the mineralised zones and surrounding lithologies at Lord Nelson, Lord Henry and Vanguard.

Sampling and Assaying

Samples used in the mineral resource estimation were collected by reverse circulation (RC) and diamond (DD) drilling.

RC samples were passed through an in-line cone splitter and collected in 1m intervals. Samples comprised 2-3kg samples submitted to various laboratories for assay by traditional fire assay methods.

Alto diamond core samples were collected from HQ3/NQ2 diamond drill core at mostly 1m intervals with closer spaced sampling around specific mineralized zones or structures. Alto Metals drill core was cut in half and half core sampled and assayed at Intertek Genalysis Kalgoorlie and Perth laboratories by fire assay methods.

Field blanks and industry purchased Standards and are inserted by Alto at a rate of 1 per 20 samples and Field duplicates are inserted by Alto at a rate of 1 every 60 samples. In the case of drill core duplicates, the core is quartered, and quarter core is sampled. Laboratory Certified Reference Materials and/or in-house controls, blanks, splits and replicates are analysed with each batch of samples by the laboratory. These quality control results are reported along with the sample values in the final report. Selected samples are also re-analysed to confirm anomalous results.

Historical Laboratory and field QA/QC protocols and results for samples used in the mineral resource estimate were reviewed by Alto Metals personnel and by Snowden Optiro.

Bulk Density

At Lord Nelson and Lord Henry, bulk density values have been assigned based on analysis undertaken by Snowden Optiro by rock type and weathering state. These assigned bulk density values are based on analysis of 451 density measurements taken by Alto in the 2021 diamond drill campaign in Lord Nelson and Lord Henry area. For the oxide and transitional material there were insufficient data to determine a meaningful bulk density so it was assigned with consideration of the mean of available data. Only the fresh material had sufficient data for meaningful analysis by rock type.

Assigned bulk density values per the modelled weathering domain (1.8t/m³ for all transported and oxide material, 2.2t/m³ for transitional, 2.85t/m³ for fresh ultramafic, 2.67t/m³ fresh granodiorite and 1.5t/m³ for waste dump).

At Vanguard Camp, bulk density values have been assigned based on analysis undertaken by Snowden Optiro by rock type and weathering state. These assigned bulk density values are based on analysis of 277 density measurements taken by Alto in the 2021 diamond drill campaign in the Vanguard Camp area. For the oxide and transitional material there were insufficient data to determine a meaningful density so it was assigned with consideration of the mean of available measured data. Only the fresh material had sufficient data for meaningful analysis. Assigned bulk density values provided below.

Assigned bulk density values per the modelled weathering domain (1.8t/m³ for all transported material, 2.2t/m³ for oxide material, 2.4t/m³ for transitional, 2.79t/m³ for fresh rock).

At Havilah Camp, bulk density values have been assigned based on assumed regional values. Assigned bulk density values for each weathering domain (1.8t/m³ for all transported and oxide material, 2.2t/m³ for transitional, 2.8t/m³ for fresh rock).

Mineral Resource Estimation

The Mineral Resources reported have been estimated through three stages of evaluation:

1. Grade estimates completed for each of the gold deposits (Lord Nelson, Lord Henry, Havilah Camp and Vanguard Camp) using the methodology described below and in Appendix 2
2. The outcomes of the estimation were then constrained within optimised pit shells using an A\$2,500/oz gold price and using appropriate open-pit mining, geotechnical and processing parameters for deposits of this nature and scale; and
3. Only Indicated and Inferred categories of mineralisation that fall within the optimised pit shells are reported in the Mineral Resources.

More detail is contained in Appendix 2

Resource Estimation Methodology

The Mineral Resource was estimated using Ordinary Kriging (OK) as the grade interpolation method.

Lord Nelson & Lord Henry

Snowden Optiro estimated gold grades using ordinary block kriging (parent cell estimates) using Datamine Studio RM software. At Lord Nelson, due to the variable dip of the mineralisation, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. The smaller, discontinuous mineralised lodes utilised a fixed search ellipse as defined by the variography. At Lord Henry, due to the variable dip of the mineralisation, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. A three pass search strategy has been used.

Lord Nelson: A block model was constructed using a parent block size of 5 m(E) by 10 m(N) by 5 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.

Lord Henry: A block model was constructed using a parent block size of 10 m(E) by 5 m(N) by 2 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.

Vanguard Camp

Snowden Optiro estimated gold grades using ordinary block kriging (parent cell estimates) using Datamine Studio RM software. Due to the variable dip of the mineralisation at Vanguard, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. At Vanguard North, dynamic anisotropy was used for the main vein and a fixed search ellipse orientation was used for all other mineralisation. A three pass search strategy has been used.

A block model was constructed using a parent block size of 20 m(E) by 20 m(N) by 5 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.

Havilah Camp

Snowden Optiro estimated gold grades using ordinary block kriging (parent cell estimates) using Datamine Studio RM software. Due to the variable dip of the mineralisation at Havilah, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. At Maninga Marley a fixed search ellipse orientation was used. A three pass search strategy has been used.

A block model was constructed using a parent block size of 10 m(E) by 10 m(N) by 5 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.

More detail is contained in Appendix 2

Classification

The classification has been applied to the Mineral Resource estimate based on the drilling data spacing, grade and geological continuity and data integrity.

To meet the requirements that the reported Mineral Resource confirms to having reasonable prospects for eventual economic extraction, a high-level pit optimisation was undertaken by Snowden Optiro. The inputs for the optimisation were based on appropriate benchmarking of similar sized and geographically located conventional open-pit mining operations.

Only Indicated and Inferred categories of mineralisation that fall within the optimised pit shells are reported in the Mineral Resources. Mineralisation outside of the optimised pit shells has been excluded from the Mineral Resource statement until such time as further drilling can be carried out in these areas to potentially convert to additional Mineral Resources.

The following factors have been taken into consideration in evaluating the *reasonable prospects for eventual economic extraction*:

- The Mineral Resource is reported within a constraining optimised pit-shell, based on the factors outlined under Mining and Metallurgy parameters;
- Preliminary metallurgical test work indicates overall recoveries averaging 93%;
- Granted mining leases cover all the deposits (with the exception of Ladybird);
- The grades and shallow nature of the gold mineralisation is considered suitable for conventional open-pit mining;
- There has been extensive historical mining activities at the Sandstone Gold Project, and there are no unforeseen environmental matters that would prevent conventional open-cut mining and gold processing operations;
- The Project is located in a region with extensive mining operations and supported by excellent surrounding infrastructure.

Reporting Cut-off Grade

For the reporting of the Mineral Resource Estimate, a 0.5 g/t Au cut-off grade inside an A\$2,500/oz optimised pit shell has been used for potential open cut resources, refer to Mining and Metallurgical Parameters outlined below. Mineral Resources for Indomitable (reported at a cut-off grade of 0.3 g/t gold) and Ladybird deposits, optimised on an A\$2,000/oz pit shell have not been updated.

A grade-tonnage curve for the combined Mineral Resource (excluding Indomitable Camp and Ladybird deposit) is shown in Figure 1

Mining and Metallurgical Parameters

This Mineral Resource estimate is based on conventional open-pit extraction method. The pit optimisations prepared to support reasonable prospects for eventual economic extraction.

No additional mining dilution or ore loss has been applied to the reported mineral resource estimate.

Overall processing recoveries of 93% were based on results from both recent and previous preliminary metallurgical test work completed on each of the rock types at each of the deposits and the optimised pit shell was run at gold price of A\$2,500/oz.

Pit slope angles used are based on geotechnical analysis and vary from 40 degrees to 50 degrees depending on rock type weathering zone and area of the deposit.

Recent preliminary test work indicates excellent gold recoveries averaging 96% (and up to 98%) in Lord Nelson primary zone mineralisation. Further metallurgical testwork is planned to be undertaken.

APPENDIX 2: JORC TABLES

LORD NELSON AND LORD HENRY DEPOSITS

JORC Code, 2012 Edition Table 1 – Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<p>Alto Metals Limited (2016-2022)</p> <ul style="list-style-type: none"> Samples were collected by reverse circulation (RC) and diamond (DD) drilling. RC samples were passed directly from the in-line cyclone through a rig mounted cone splitter. Samples were collected in 1m intervals into bulk plastic bags and 1m calico splits, which were retained for later use. From the bulk 1m sample, a 4m composite sample was collected using a split PVC scoop and then submitted to the either MinAnalytical Laboratory Services Pty Ltd (“MinAnalytical”) or Intertek Genalysis (“Intertek”). RC 1m splits were submitted if the composite sample assay values are equal to or greater than 0.2 g/t Au. During 2021, the bulk sample was placed directly onto the ground (ie no green bags) and the 1m samples were sent directly to the laboratory (ie no 4m composites). Diamond core sampling on HQ/NQ diamond drill core at mostly 1m intervals. Closer spaced sampling around specific mineralized zones or structures. Core was cut in half and half core sampled at Intertek Genalysis Kalgoorlie and Perth laboratories. <p>Troy Resources NL (1999-2010)</p> <ul style="list-style-type: none"> All drilling up to 2010 was carried out by Troy. Troy’s RC samples were passed directly from the in-line cyclone through a rig mounted multi-tier riffle splitter. Samples were collected in 1m intervals into bulk plastic bags and 1m calico splits (which were retained for later use). From the bulk sample, a 5 m composite sample was collected using a split PVC scoop and then submitted to the laboratory for analysis. The 1m calico splits were submitted to the laboratory if the composite sample returned assay values equal to or greater than 0.2 g/t Au. In certain cases, selected samples from some holes were passed from the cyclone through a rig mounted multi-tier riffle splitter, and samples collected into calico bags at 1m intervals were submitted directly for analyses. The remaining bulk sample was placed on the ground in 1m intervals. Diamond cores were marked on the core by the geologist according to geological intervals. The core was cut in half by Troy field technicians, with half being placed in a pre-numbered calico bag and the other half returned to the core tray. For duplicate samples the core to be submitted for analysis is quartered.
Drilling techniques	<p>Alto Metals</p> <ul style="list-style-type: none"> RC drilling program used a KWL 350 drill rig with an onboard 1100cfm/350psi compressor and a truck mounted 1000cfm auxiliary and 1000psi booster. The sampling hammer had a nominal 140 mm hole. Diamond core was drilled using a KWL1600 drill rig. Diamond holes were drilled from surface, HQ3 diameter, triple tubed and reduction to NQ2 core where required. Diamond core was oriented by the drill contractor using the BLY TruCore UPIX Orientation tool. <p>Troy Resources</p> <ul style="list-style-type: none"> RC drilling used various drilling companies and drill rigs of similar capacity to the drill rig used by Alto Metals. For diamond drilling, triple tube coring was used due to the friable nature of the oxide zone lithologies being drilled. The angled core holes were orientated where possible using a crayon marker spear tool and the holes were regularly surveyed using an Eastman downhole camera.

Criteria	Commentary
Drill sample recovery	<p>Alto Metals</p> <ul style="list-style-type: none"> Recovery was estimated as a percentage and recorded on field sheets prior to entry into the database. RC samples generally had good recovery and there were no reported issues. The cyclone was routinely cleaned at the end of each rod. There does not appear to be a relationship with sample recovery and grade and there is no indication of sample bias. Diamond core sample recovery was measured and calculated during logging using RQD logging procedures. Diamond core had good recovery except in the unmineralized laterite at the top of the hole. No relationship between recovery and grade has been identified. <p>Troy Resources</p> <ul style="list-style-type: none"> No quantitative information on sample recovery is available for Troy RC holes. Snowden Mining Industry Consultants Pty Ltd (Snowden Optiro) previously reviewed the available diamond core in the Sandstone core yard and concluded that the drill core shows generally good recovery.
Logging	<p>Alto Metals</p> <ul style="list-style-type: none"> Alto's diamond holes were geologically and structurally logged by Alto Metals geologists using Alto standard operating procedures. Logging was transferred into the company database once complete. All core was orientated where possible, marked into metre intervals and compared to depth measurements on the core blocks. Core loss was recorded. Core was photographed wet and dry. Geological logging of drillhole intervals was carried out with sufficient detail to meet the requirements of resource estimation. Alto's RC drill chips were sieved from each 1m bulk sample and geologically logged. Washed drill chips from each 1m sample were stored in chip trays. Geological logging of drillhole intervals was carried out with sufficient detail to meet the requirements of resource estimation. <p>Troy Resources</p> <ul style="list-style-type: none"> Qualitative geological logging of most Troy drillhole intervals was done with sufficient detail to meet the requirements of resource estimation.
Subsampling techniques and sample preparation	<p>Alto Metals</p> <ul style="list-style-type: none"> Alto's DD core samples were analysed at the Intertek Genalysis Laboratory in Maddington by 50g fire assay with AAS finish for gold. The technique is appropriate for the material and style of mineralisation. Alto's 4m and 1m RC samples were transported to either MinAnalytical or Intertek, located in Perth, Western Australia, who were responsible for sample preparation and assaying for all RC drill hole samples and associated check assays. MinAnalytical and Intertek are NATA certified for all related inspection, verification, testing and certification activities. Samples submitted for analysis via Photon assay technique were dried, crushed to nominal 85% passing 2mm, linear split and a nominal 500g sub sample taken (method code PAP3502R) The 500g sample is assayed for gold by Photon Assay (method code PAAU2) along with quality control samples including certified reference materials, blanks and sample duplicates. Intervals of 4m composite samples reporting greater than 0.2 g/t Au (with constrain intervals) were selected for re-assay, and 1m re-split samples were submitted for 50g fire assay. RC 1m samples were analysed using 50g fire assay with AAS finish. Alto's diamond core was transported to Intertek Genalysis in Maddington for cutting, sampling and assaying. Core is cut in half and half core is sampled. Intertek Genalysis is responsible for sample preparation and assaying for all diamond drill hole samples and associated check assays. Sample sizes are appropriate to give an indication of mineralisation. Samples are prepared by Intertek Genalysis Laboratory in Maddington. Samples are dried, pulverised to 90% passing -75um. Samples are analysed at the Intertek Genalysis Laboratory in Maddington by 50g fire assay with AAS finish for gold.

Criteria	Commentary
	<ul style="list-style-type: none"> The technique is appropriate for the material and style of mineralization. <p>Troy Resources</p> <ul style="list-style-type: none"> Troy typically used SGS Australia Pty Ltd (SGS) located in Perth, Western Australia, who were responsible for sample preparation and assaying for drillhole samples and associated check assays. The company was certified to the ISO 9001 requirements for all related inspection, verification, testing and certification activities. Resource definition RC and DD samples were assayed using 50g fire assay with AAS finish. Sample sizes are considered to be appropriate.
Quality of assay data and laboratory tests	<p>Alto Metals</p> <ul style="list-style-type: none"> The Fire Assay method is considered to be a total extraction technique. There are no deleterious elements present which could affect the technique. There is no information available to Alto to indicate that the gold is refractory gold. Field blanks and industry purchased Standards and are inserted by Alto at a rate of 1 per 20 samples. Field duplicates are inserted by Alto at a rate of 1 every 60 samples. In the case of drill core duplicates, the core is quartered, and quarter core is sampled. Laboratory Certified Reference Materials and/or in-house controls, blanks, splits and replicates are analysed with each batch of samples by the laboratory. These quality control results are reported along with the sample values in the final report. Selected samples are also re-analysed to confirm anomalous results. Laboratory and field QA/QC results are reviewed by Alto Metals personnel. <p>Troy Resources</p> <ul style="list-style-type: none"> For Troy's RC and DDH resource evaluation drilling, an average of one field duplicate, one blank and one standard were submitted for every 50 samples. QC samples were inserted randomly throughout the sample sequence. Standards were purchased from Gannet Holdings Pty Ltd (Gannet) in Perth, WA. The actual standard used was dependent on the expected assay results and type of sample being taken (i.e. oxide, transitional or fresh rock). The grade of the standard used was also routinely varied. Blank material (crushed basalt) for the resource drilling at Lord Nelson and Lord Henry was also purchased from Gannet. The results of the QC standards were assessed by Troy on a batch-by-batch basis. Batches of samples where the results of the submitted standards differ from the expected value by more than $\pm 10\%$ were re-analysed by the laboratory. Troy had independent checking of all QC sample results carried out by Maxwell Geoservices (Maxwell) on a monthly basis. Maxwell monitored the laboratory performance over the longer period and liaised with the laboratory and with Troy when QC problems were detected. Maxwell reported that all standards and blanks fell within the expected limits. The field duplicate results show that 20–25% of the repeat samples are outside of $\pm 10\%$ compared to the original sample values with no apparent bias. This is to be expected given the style of mineralisation.
Verification of sampling and assaying	<ul style="list-style-type: none"> All significant intersections are reviewed by alternative company personnel. Several RC holes drilled by previous companies have been twinned with Alto RC drill holes and the results were considered satisfactory. Alto RC holes have been twinned by Alto DD holes and the results were considered satisfactory. Field data is recorded on logging sheets and entered into excel prior to uploading to and verification in Micromine and Datashed. Laboratory data is received electronically and uploaded to and verified in Micromine and Datashed. Values below the analytical detection limit were replaced with half the detection limit value. Snowden Optiro reported in the 2016 Mineral Resource Estimate that Troy maintained a well audited database, however as Alto do not own the database, the data used for the 2016 Mineral Resource is based on a database compiled by Alto from publicly available data. Review of the statistics of the compiled database shows that it is not materially different to that reported by Troy (Snowden Optiro, 2007).
Location of data points	<p>Alto Metals</p> <ul style="list-style-type: none"> All data is reported based on GDA 94 zone 50. Alto used handheld Garmin GPS to locate and record drill collar positions, accurate to ± 5 metres (northing and easting), which is sufficient for exploration drilling. Subsequently RM Surveys (licensed surveyor) carry out collar surveys with RTK GPS with accuracy of ± 0.05m to accurately record the easting, northing and RL prior to drill holes being used for resource estimation.

Criteria	Commentary
	<ul style="list-style-type: none"> Downhole surveys are undertaken by the drilling contractor at 30m intervals using a true north seeking gyro. Alto has previously engaged an independent downhole survey company to carry out an audit of downhole surveys and the results were considered satisfactory. <p>Troy Resources</p> <ul style="list-style-type: none"> The majority of Troy drill holes were recorded with DGPS in GDA94.
Data spacing and distribution	<ul style="list-style-type: none"> RC and DD drill collar spacing is sufficient to establish the degree of geological and grade continuity appropriate for a mineral resource estimation. Diamond holes were used to obtain measurements of bulk density within the mineralized zone and surrounding lithologies. The drilling was composited downhole for estimation using a 1m interval.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Drill orientation of at Lord Nelson is typically -60° to 090° which is designed to intersect mineralisation perpendicular to the interpreted mineralised zones. Drill orientation of at Lord Henry is typically -60° to 180° which is designed to intersect mineralisation perpendicular to the interpreted mineralised zones. Geological and mineralised structures have been interpreted at Lords from drilling and pit mapping.
Sample security	<p>Alto Metals</p> <ul style="list-style-type: none"> For Alto, RC 4m composite and 1m original RC drill samples comprised approximately 3 kg of material within a labelled and tied calico bag. Individual sample bags were placed in a larger plastic poly-weave bag then into a bulka bag that was tied and dispatched to the laboratory via freight contractors or company personnel. Whole core marked up and stored in plastic core boxes on pallets secured with metal strapping was transported to Intertek Genalysis in Maddington by McMahon Burnett transport. Sampling data was recorded on field sheets and entered into a database then sent to the head office. Laboratory submission sheets are also completed and sent to the laboratory prior to sample receipt. <p>Troy Resources</p> <ul style="list-style-type: none"> For Troy, drill samples comprised approximately 2 kg of material within a labelled and tied calico bag. After wet samples were dried, six bags were placed in a larger plastic polyweave bag that was labelled with the laboratory address and sender details and tied with wire. Samples were dispatched three times per week. On each occasion, a sample submission form was completed which lists the sample IDs, the total number of samples and analyses to be conducted. This form was faxed to the laboratory and to the database technician in Troy's Perth office. Samples were picked up by a courier firm, who counted the total number of polyweave bags before taking them to the Mount Magnet depot 150 km to the west of Sandstone. Here the samples were picked up by the courier's road train and taken to the Perth depot before being dispatched to the lab. Upon receipt of the samples, the lab checked the sample IDs and total number of samples and notified Troy of any differences from the sample submission form. After the analysis of the samples had been completed, results were sent to the senior geologist and database technician in both digital and paper format.
Audits and reviews	<ul style="list-style-type: none"> Alto's Exploration Manager and Chief Geologist attended the RC and DD drilling programs and ensured that sampling and logging practices adhered to Alto's prescribed standards. Alto's Chief Geologist has reviewed the laboratory assay results against field logging sheets and drill chip trays and confirmed the reported assays occur with logged mineralised intervals and checked that assays of standards and blanks inserted by the Company were appropriately reported. Alto have compiled and reviewed Troy's drilling and assay data. Alto and Snowden Optiro are not aware of any other independent reviews of the drilling, sampling and assaying protocols, or the assay database.

JORC (2012) Table 1 – Section 2 Reporting of Exploration Results

Item	Comments
Mineral tenement and land tenure	<ul style="list-style-type: none"> Alto's Sandstone Project is located in the East Murchison region of Western Australia and covers approximately 900 km² with multiple prospecting, exploration and mining licences all 100% owned by Sandstone Exploration Pty Ltd, which is a 100% subsidiary of Alto Metals. All tenements are currently in good standing with the Department of Mines, Industry Regulation and Safety and to date there has been no issues obtaining approvals to carry out exploration. Royalties include up to 2% of the Gross Revenue payable to a third party, and a 2.5% royalty payable to the State Government.
Exploration done by other parties	<p>Lord Nelson</p> <ul style="list-style-type: none"> Troy Resources discovered the Lord Nelson deposit in 2004 and carried out open pit mining between 2005 and 2010 to produce approximately 207,000 ounces of gold. <p>Lord Henry</p> <ul style="list-style-type: none"> Troy Resources discovered the Lord Henry deposit in 2004 and carried out open pit mining between 2005 and 2010 to produce approximately 48,000 ounces of gold.
Geology	<p>Lord Nelson</p> <ul style="list-style-type: none"> Lord Nelson is hosted at the northern tip of a large granodiorite intrusion, that is more than 3 kilometres long and up to 800m wide. The granodiorite has intruded mafic rocks to the west (hanging wall) and ultramafic rocks to the east (footwall). The mineralisation is mostly within the granodiorite intrusion, with a high-grade zone on the contact between the granodiorite and the ultramafic contact. The main Lord Nelson deposit which was mined by Troy is hosted within a zone of intermixed high-magnesium basalt and granodiorite intrusive rocks above a footwall ultramafic unit. The Orion lode was identified by Alto approximately 200m south of the Lord Nelson open pit and is considered a repeat of the Lord Nelson deposit. The Juno lode is considered a previously undiscovered extension of the mineralised zone extending below and south from the Lord Nelson pit. Juno has a gentle southerly plunge and remains open up and down dip, and along strike. In general, the mineralisation trends north-northwest, dipping approximately 50° to the west increasing to 70° with depth and plunges to the south. The mineralisation is typically characterized by a zone of pyrite + silica + biotite +/- quartz veining that follows the ultramafic footwall contact. The interpreted mineralisation domains are based on a nominal 0.2 g/t Au to 0.3 g/t Au cut-off which appears to be a natural break in the grade distribution. <p>Lord Henry</p> <ul style="list-style-type: none"> The Lord Henry deposit occurs along the southern end of the granodiorite intrusion. At Lord Henry, the granodiorite body is bounded to the south and west by a sheared ultramafic contact. Mineralisation comprises a series of stacked, -20° to -30° north dipping lodes characterised by quartz-sericite-chlorite-pyrite alteration within the granodiorite body. The overall trend of the mineralised zones is northeast with a defined length of 400m. High-grade gold intersections are associated with sulphide rich quartz veins and stringers. The interpreted mineralisation domains for Lord Henry are based on a nominal 0.2 g/t Au to 0.3 g/t Au cutoff which appears to be a natural break in the grade distribution
Drill hole information	<ul style="list-style-type: none"> All material drill hole information and significant mineralised intercepts and widths have been reported in previous reports which can be found on the Company website or ASX site.
Data aggregation methods	<ul style="list-style-type: none"> Reported mineralised intervals +0.2 g/t Au may contain 2 to 4 metres of internal waste (or less than 0.2 g/t Au low grade mineralisation interval). No metal equivalent values have been reported. The reported grades are uncut.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> DD drill holes were angled at -60° and designed to intersect perpendicular to the mineralisation. RC drill holes were angled at -60° and designed to intersect perpendicular to the mineralisation. Downhole intercepts are not reported as true widths however are considered to be close to true widths based on the drill orientation and current understanding of the mineralisation.

Item	Comments
Diagrams	<ul style="list-style-type: none"> Relevant sections and plans have been included in the main report and in previous reports which can be found on the Company website or ASX site.
Balanced reporting	<ul style="list-style-type: none"> All drill hole information and significant mineralised intercepts and widths have been reported in previous reports which can be found on the Company website or ASX site.
Other substantive exploration data	<ul style="list-style-type: none"> All material information has been included in the report. Preliminary gold recovery testwork has been carried out by Alto in addition to the historical mining and production records. Bulk densities have been measured from drill core by Alto Metals. There are no known deleterious elements.
Further work	<ul style="list-style-type: none"> Alto has planned further RC infill and extension drilling.

JORC (2012) Table 1 – Section 3 Estimation and Reporting of Mineral Resources

Item	Comments
Database integrity	<ul style="list-style-type: none"> Troy maintained a well audited database; however, as Alto do not own the database, the pre-Alto data used for the 2022 Mineral Resource is based on a database compiled by Alto from publicly available data. Review of the statistics of the compiled database shows that it is not materially different to that reported by Troy (Snowden, 2007). Alto carried out verification checks on the historic database including locations checks, downhole surveys and assay checks. Drilling undertaken by Alto is recorded in a separate secure database. Collar and survey data is imported directly into the database with no manual transcription. Snowden Optiro undertook a basic check of the data for potential errors as a preliminary step to compiling the resource estimate for Lord Nelson and Lord Henry. No significant flaws were identified.
Site visits	<ul style="list-style-type: none"> The Snowden Optiro CP responsible for the mineral resource estimate visited the Lord Nelson and Lord Henry Project on 7 and 8 October 2021, observing the existing open pit, local geology and general site layout. Staff from Alto, who accept responsibility for the reliability of the underlying drillhole data, have been to site multiple times and have been present during the drilling programs.
Geological interpretation	<ul style="list-style-type: none"> Snowden Optiro believes that the local geology is reasonably well understood. All drillholes used in the interpretation and estimation were either RC or diamond drilled. Historic drillholes prior to 2016 have been vetted by Alto to ensure they meet minimum drilling and sampling requirements for resource estimation. Historic drillholes with unsampled intervals have been left as null in the database. <p>Lord Nelson</p> <ul style="list-style-type: none"> The interpreted mineralisation domains are based on a nominal 0.2 g/t Au to 0.3 g/t Au cut-off which appears to be a natural break in the grade distribution. In total, 31 mineralised domains have been interpreted. The interpreted domains include: <ul style="list-style-type: none"> Eastern mineralisation – main ultramafic contact: A continuous domain of mineralisation which runs along the ultramafic to intermediate contact on the eastern edge of the deposit (Domain 10030). Eastern mineralisation – southern extension: A continuous extension domain of mineralisation to the main ultramafic contact domain (10300) extending into the Juno area. Western mineralisation: A continuous domain of mineralisation on the western edge of the deposit (10050), closely shadowed by another continuous lode (10060) in the footwall of 10050. Central, disconnected mineralisation: A series of less continuous mineralised pods between the two main (east and west) domains, with the larger areas potentially related to west-northwest structures.

Item	Comments
	<ul style="list-style-type: none"> ○ Flat lying near surface mineralisation: A lower grade flat lying, near-surface domain overlying the main mineralisation. A second flat lying, near-surface domain lies to the east in an area which is poorly drilled at depth. This eastern near-surface domain indicates potential for a repeat of the Lord Nelson mineralisation and is a target for further exploration. This material may be lateritic, (Domains 10010 and 10020) • The main domain extending to the south (10300) is on the contact of the ultramafic and granodiorite intrusion. Drillhole logging and assay results have been used to guide the modelling. • Alternative interpretations of the mineralisation are unlikely to significantly change the overall volume of the mineralised envelopes in terms of the reported classified resources. <p>Lord Henry</p> <ul style="list-style-type: none"> • The interpreted mineralisation domains are based on a nominal 0.2 g/t Au to 0.3 g/t Au cut-off which appears to be a natural break in the grade distribution. In total, 39 mineralised domains have been interpreted. The interpreted domains include: <ul style="list-style-type: none"> ○ The main mineralisation domain, domain 20070. A continuous domain of mineralisation which runs the entire length of the deposit. ○ Mineralisation in the hangingwall of the main mineralisation domain (20010, 20020, 20060, 20080, 20280, 20300,). These domains are in the west of the deposit and are not as thick or continuous as the main domain. There are some discontinuous pods of mineralisation in the hangingwall which have been domained separately (20030, 20040, 20050, 20190, 20310, 20320, 20330, 20370, 20380, 20390). ○ Mineralisation in the footwall of the main mineralisation domain, domains (20090, 20100, 20110, 20120, 20130, 20140, 20150, 20160, 20170, 20180, 20200, 20210, 20220, 20230, 20240, 20250, 20260, 20270, 20290, 20340, 20350, 20360). These domains are smaller than the main domain and are less continuous. ○ Internal waste material has been modelled within some of the mineralisation domains, coded 20500. • Alternative interpretations of the mineralisation are unlikely to significantly change the overall volume of the mineralised envelopes in terms of the reported classified resources.
Dimensions	<p>Lord Nelson</p> <ul style="list-style-type: none"> • The Lord Nelson gold mineralisation covers an area of around 1300 m along strike by 400 m across strike and extends to over 250 m below surface. The mineralisation interpretation extends around 180 m down dip from the base of the current pit. • The mineralisation is open along strike to the north and south. In the Juno area of the deposit the mineralisation on the contact is open both up and down dip and is a target for further exploration. There is a second near surface mineralised domain to the east of the area reported above, which is poorly drilled at depth. This eastern near surface domain indicates potential for a repeat of the Lord Nelson mineralisation and could be a target for further exploration. <p>Lord Henry</p> <ul style="list-style-type: none"> • The Lord Henry gold mineralisation covers an area of around 400 m along strike by 250 m across strike and extends to approximately 150 m below surface. The mineralisation interpretation extends between 60 m and 140 m down dip from the base of the current pit. • The mineralisation is open along strike and down dip.
Estimation and modelling techniques	<ul style="list-style-type: none"> • Snowden Optiro estimated gold grades using ordinary block kriging (parent cell estimates) using Datamine Studio RM software. At Lord Nelson, due to the variable dip of the mineralisation, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. The smaller, discontinuous mineralised lodes utilised a fixed search ellipse as defined by the variography. At Lord Henry, due to the variable dip of the mineralisation, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. A three pass search strategy has been used. • The statistical analysis shows that the main mineralised domains have positively skewed gold distributions with high coefficients of variation (CVs), indicating there are outliers in the domains which have the potential to cause local over estimation. Top cut levels have been determined using a combination of histograms, log probability and mean variance plots on a domain by domain basis. Top cuts (ranging from 3 g/t Au to 45 g/t Au depending on domain at Lord Nelson and ranging from 2 g/t Au to 30 g/t Au depending on domain at Lord Henry) were applied prior to estimation. The CVs for two of the domains at each deposit were still slightly elevated after top cutting; however, review of the high-grade outliers shows that they are mostly located in the centre of the mined-out portion of

the open pits, and as such will have no influence on the Mineral Resource. The flat lying, near-surface mineralisation at Lord Nelson is lower grade and less skewed, no top cut was applied to this domain.

- Based on the statistical analysis, Snowden Optiro considers that ordinary kriging with a top cut is an appropriate estimation technique for these domains.
- Boundaries between the mineralised domains were treated as hard for estimation.
- Two check estimates were undertaken using inverse distance to the power of 2 (ID2) and nearest neighbour (NN) for gold and reviewed in the validation steps.
- No assumptions have been made regarding recovery of any by-products.

Lord Nelson

- A block model was constructed using a parent block size of 5 m(E) by 10 m(N) by 5 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.
- The initial search ellipse of 45 m by 20 m by 10 m was defined based on the results of the variography and assessment of the data coverage. A minimum of ten and maximum of 24 samples was used for the initial search pass. Second pass was one and a half times the initial search ellipse with a minimum of ten and maximum of 24 samples. Third pass was three times the initial search with a minimum of five and maximum of 24 samples. All passes had a maximum of four samples per drillhole in the main mineralisation domains, and a maximum of two samples per drillhole in the near surface flat lying mineralised domains.

Lord Henry

- A block model was constructed using a parent block size of 10 m(E) by 5 m(N) by 2 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.
- The initial search ellipse of 30 m by 30 m by 5 m was defined based on the results of the variography and assessment of the data coverage. A minimum of ten and maximum of 20 samples was used for the initial search pass. Second pass was two times the initial search ellipse with a minimum of ten and maximum of 20 samples. Third pass was three times the initial search with a minimum of five and maximum of 15 samples. All passes had a maximum of four samples per drillhole in the main mineralisation domains.
- No selective mining units are assumed in this estimate.
- Grade estimates were validated against the input drillhole composites (globally and using grade trend plots) and show a good comparison. There is evidence of some over-smoothing and underestimation in the mined out and supergene area as expected from the statistical analysis. Visual comparison between estimated blocks and composites have been undertaken.
- A number of small domains with one or two drillholes that did not estimate (due to low composite numbers) have been assigned the mean grade of the top-cut composites in that domain. The majority of these have been mined out.
- At Lord Henry, internal waste domains have been assigned a grade of 0.1 g/t Au (average grade of the internal waste domain 20500).

Lord Nelson

- The previous Mineral Resource for Lord Nelson was estimated in 2020 (Snowden Optiro, 2020) and reported in accordance with the 2012 Edition of the JORC Code. For comparison purposes Snowden Optiro compared the 2022 Mineral Resource to the depleted Mineral Resource reported in the Troy annual report (2011), as well as the 2020 depleted Mineral Resource reported in the Snowden Optiro report (2020). No mining has occurred since mining ceased in 2010.

The comparison of the 2022 MRE to the 2020 MRE shows an increase of 3.5 Mt (+210%) with a slight decrease of 0.3 g/t Au (-15%) for an increase of 158,000 oz Au (+145%). The increase in Mineral Resources in 2022 is primarily due to a 30% increase in total volume of the mineralisation. The down dip and along strike mineralisation extension is informed by an additional 1,256 samples from 130 new RC and 7 new DD holes intersecting mineralisation. Areas previously classified as Inferred below the existing pit have been classified as Indicated material given the close spaced (20 m by 20 m) drilling, confidence via previous mining and new drilling supporting the continuation of mineralisation extending at depth. A new lode to the south "Juno" has been identified, drilled and included in the 2022 MRE increasing the mineralised volume. There is a change in reporting cut-off grade from 0.8 g/t Au to 0.5 g/t Au. The new reporting cut-off grade has been based on a higher gold price and the possibility of a standalone plant.

Lord Henry

- The previous Mineral Resource for Lord Henry was estimated in 2017 by Snowden Optiro and reported in accordance with the 2012 Edition of the JORC Code. For comparison purposes Snowden Optiro

Item	Comments												
	<p>compared the 2022 Mineral Resource to the depleted Mineral Resource reported in the Troy annual report (2011), as well as the 2017 depleted Mineral Resource reported in the 2017 MRE by Snowden Optiro. No mining has occurred since mining ceased in 2010.</p> <p>The comparison of the 2022 MRE to the 2017 MRE shows an increase of 630 kt (+50%) with a slight decrease of 0.2 g/t Au (-10%) for an increase of 21,000 oz Au (+30%). The increase in Mineral Resources in 2022 is partially due to a 15% increase in total volume of the mineralisation. The down dip and along strike mineralisation extension is informed by an additional 451 samples from 38 new RC and 2 new DD holes intersecting mineralisation at depth. There is a change in reporting cut-off grade from 0.8 g/t Au to 0.5 g/t Au. The 2022 MRE has been reported within an optimised pit shell, the 2017 MRE was not.</p>												
Moisture	<ul style="list-style-type: none"> All tonnages have been estimated as dry tonnages. 												
Cut-off parameters	<ul style="list-style-type: none"> For the reporting of the Mineral Resource Estimate, a 0.5 g/t Au cut-off grade inside an optimised pit shell has been used for potential open cut resources. 												
Mining factors and assumptions	<ul style="list-style-type: none"> It is assumed the deposit will be mined using conventional open cut mining methods. The Mineral Resource has been reported within a pit shell generated by Snowden Optiro using an input gold price of A\$2,500 with all cost and recovery assumptions provided by Alto based on their bench marking against deposits of a similar scale and geological nature. 												
Metallurgical factors and assumptions	<ul style="list-style-type: none"> The deposit has been mined previously by Troy with the material processed at the Sandstone Mill. The previous operation focused mainly on the oxide resources; however, with a suitable process flowsheet, in Snowden Optiro's opinion, the sulphide ore should also be recoverable. Processing recoveries of 94% for oxide, transitional and fresh mineralisation have been applied to the optimisation. The fresh recoveries are based on preliminary metallurgical test work undertaken by Alto 2020 and are supported by reported historical performance of the production plant gold recovery for Lord Nelson (93% to 96%). These results are preliminary and Snowden Optiro recommends further metallurgical test work be undertaken. 												
Environmental factors and assumptions	<ul style="list-style-type: none"> It is assumed that no environmental factors exist that could prohibit any potential mining development at the Lord Nelson deposit. The Sandstone area has a strong history of mining and several prospecting leases are currently being worked. Anecdotal evidence suggests strong local support for mining in the area. 												
Bulk density	<ul style="list-style-type: none"> At Lord Nelson and Lord Henry, bulk density values have been assigned based on analysis undertaken by Snowden Optiro by rock type and weathering state. These assigned bulk density values are based on analysis of 451 density measurements taken by Alto in the 2021 diamond drill campaign in Lord Nelson and Lord Henry area. For the oxide and transitional material there were insufficient data to determine a meaningful bulk density so it was assigned with consideration of the mean of available data. Only the fresh material had sufficient data for meaningful analysis by rock type. Assigned bulk density values provided below. <table border="1"> <thead> <tr> <th>Bulk Density Assigned t/m³</th><th>Description</th></tr> </thead> <tbody> <tr> <td>1.8</td><td>All transported and oxide material (all rock types)</td></tr> <tr> <td>2.2</td><td>Transitional (all rock types)</td></tr> <tr> <td>2.85</td><td>Fresh ultramafic</td></tr> <tr> <td>2.67</td><td>Fresh granodiorite</td></tr> <tr> <td>1.5</td><td>Waste Dump</td></tr> </tbody> </table> <ul style="list-style-type: none"> The oxide and transitional values are slightly lower than previously used in the 2020 Lord Nelson MRE and the 2017 Lord Henry MRE. The bulk density value for the fresh in Granodiorite is the same as previously used and the value for ultramafic is higher. Snowden Optiro recommends undertaking more bulk density measurements, however, considers the bulk densities reasonable for the style of mineralisation. 	Bulk Density Assigned t/m ³	Description	1.8	All transported and oxide material (all rock types)	2.2	Transitional (all rock types)	2.85	Fresh ultramafic	2.67	Fresh granodiorite	1.5	Waste Dump
Bulk Density Assigned t/m ³	Description												
1.8	All transported and oxide material (all rock types)												
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2.85	Fresh ultramafic												
2.67	Fresh granodiorite												
1.5	Waste Dump												
Classification	<ul style="list-style-type: none"> The classification has been applied to the Mineral Resource estimate based on the drilling data spacing, grade and geological continuity and data integrity. <p>Lord Nelson</p>												

Item	Comments
	<ul style="list-style-type: none"> No areas of the in situ Mineral Resource satisfied the requirement to be classified as Measured Resources. The Mineral Resource has been classified as an Indicated Resource where the mineralisation is continuous and supported by 20 m by 20 m drilling data and estimated in the first pass. Extrapolation beyond the drilling is limited to approximately one drill section. These areas are enclosed within the Indicated wireframe. The Mineral Resource has been classified as an Inferred Resource where the mineralisation is supported by drilling data. Extrapolation beyond the drilling is limited to approximately one drill section. The eastern lens of the flat lying, near-surface mineralisation is not classified due to a combination of limited data, low grade and location beneath the existing waste dump. <p>Lord Henry</p> <ul style="list-style-type: none"> No areas of the in situ Mineral Resource satisfied the requirement to be classified as Measured Resources. The Mineral Resource has been classified as an Indicated Resource where the mineralisation is continuous and supported by 20 m by 20 m drilling data and estimated in the first or second pass. Extrapolation beyond the drilling is limited to approximately one drill section. These areas are enclosed within the Indicated wireframe. The Mineral Resource has been classified as an Inferred Resource where the mineralisation is supported by more widely spaced drill data. All small, discontinuous lodes have been classified as Inferred. Extrapolation beyond the drilling is limited to approximately one drill section. The Mineral Resource classification appropriately reflects the view of the Competent Person.
Audits and reviews	<ul style="list-style-type: none"> The MRE has been peer reviewed as part of Snowden Optiro's standard internal peer review process. Snowden Optiro is not aware of any external reviews of the Lord Nelson or Lord Henry MREs.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> The relative accuracy of the Lord Nelson and Lord Henry Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. The Mineral Resource has been validated against the input composite data. The statement relates to a global estimate of tonnes and grade with an open pit cut-off of 0.5 g/t Au. <p>Lord Nelson</p> <ul style="list-style-type: none"> Comparison to historically reported production data shows that the 2022 estimate has similar tonnes for lower grade, with lower contained gold. Snowden Optiro is aware that the estimate within the mined-out area is slightly over-smoothed and under-estimated as a result of high-grade outliers in the supergene. As such, Snowden Optiro considers this a reasonable result. <p>Lord Henry</p> <ul style="list-style-type: none"> Comparison to historically reported production data shows that the 2022 estimate has higher tonnes for lower grade, but overall similar contained gold. Snowden Optiro is aware that the estimate is over-smoothed and that more selectivity may be achieved during mining, as such, Snowden Optiro considers this a reasonable result.

VANGUARD AND VANGUARD NORTH

JORC Code, 2012 Edition Table 1 – Section 1 Sampling Techniques and Data

Item	Comments
Sampling techniques	<p>Alto Metals Limited (2016-2022)</p> <ul style="list-style-type: none"> Samples were collected by reverse circulation (RC) and diamond (DD) drilling. RC samples were passed directly from the in-line cyclone through a rig mounted cone splitter. Samples were collected in 1m intervals into bulk plastic bags and 1m calico splits, which were retained for later use. From the bulk 1m sample, a 4m composite sample was collected using a split PVC scoop and then submitted to the either MinAnalytical Laboratory Services Pty Ltd ("MinAnalytical") or Intertek Genalysis ("Intertek"). RC 1m splits were submitted if the composite sample assay values are equal to or greater than 0.2 g/t Au. During 2021, the bulk sample was placed directly onto the ground (ie no green bags) and the 1m samples were sent directly to the laboratory (ie no 4m composites). Diamond core sampling on HQ/NQ diamond drill core at mostly 1m intervals. Closer spaced sampling around specific mineralized zones or structures. Core was cut in half and half core sampled at Intertek Genalysis Kalgoorlie and Perth laboratories. <p>Troy Resources NL (1999-2010)</p> <ul style="list-style-type: none"> All drilling up to 2010 was carried out by Troy. Troy's RC samples were passed directly from the in-line cyclone through a rig mounted multi-tier riffle splitter. Samples were collected in 1m intervals into bulk plastic bags and 1m calico splits (which were retained for later use). From the bulk sample, a 5 m composite sample was collected using a split PVC scoop and then submitted to the laboratory for analysis. The 1m calico splits were submitted to the laboratory if the composite sample returned assay values equal to or greater than 0.2 g/t Au. In certain cases, selected samples from some holes were passed from the cyclone through a rig mounted multi-tier riffle splitter, and samples collected into calico bags at 1m intervals were submitted directly for analyses. The remaining bulk sample was placed on the ground in 1m intervals. <p>Herald Resources Limited (1994-1999)</p> <ul style="list-style-type: none"> All dry RC samples were split at 1m intervals using a 3-tier riffle splitter, with the excess collected in plastic bags and left on site. Wet samples were generally grabbed by hand – samples were also collected in 2m or 4m composites which were sent to the laboratory for initial analysis. For samples returning significant results the corresponding 1m resplits were sent for further analysis. 1m resplits were collected for all 4m composites returning >0.20ppm Au.
Drilling techniques	<p>Alto Metals</p> <ul style="list-style-type: none"> RC drilling program used a KWL 350 drill rig with an onboard 1100cfm/350psi compressor and a truck mounted 1000cfm auxiliary and 1000psi booster. The sampling hammer had a nominal 140 mm hole. Diamond core was drilled using a KWL1600 drill rig. Diamond holes were drilled from surface, HQ3 diameter, triple tubed and reduction to NQ2 core where required. Diamond core was oriented by the drill contractor using the BLY TruCore UPIX Orientation tool. <p>Troy and Herald</p> <ul style="list-style-type: none"> RC drilling used various drilling companies and drill rigs of similar capacity to the drill rig used by Alto Metals.
Drill sample recovery	<p>Alto Metals</p> <ul style="list-style-type: none"> Recovery was estimated as a percentage and recorded on field sheets prior to entry into the database. RC samples generally had good recovery and there were no reported issues. The cyclone was routinely cleaned at the end of each rod. There does not appear to be a relationship with sample recovery and grade and there is no indication of sample bias. Diamond core sample recovery was measured and calculated during logging using RQD logging procedures. Diamond core had good recovery except in the unmineralized laterite at the top of the hole.

Item	Comments
	<ul style="list-style-type: none"> No relationship between recovery and grade has been identified. Alto has no quantitative information on Troy or Herald RC sample recovery.
Logging	<p>Alto Metals</p> <ul style="list-style-type: none"> Alto's diamond holes were geologically and structurally logged by Alto Metals geologists using Alto standard operating procedures. Logging was transferred into the company database once complete. All core was orientated where possible, marked into metre intervals and compared to depth measurements on the core blocks. Core loss was recorded. Core was photographed wet and dry. Geological logging of drillhole intervals was carried out with sufficient detail to meet the requirements of resource estimation. Alto's RC drill chips were sieved from each 1m bulk sample and geologically logged. Washed drill chips from each 1m sample were stored in chip trays. Geological logging of drillhole intervals was carried out with sufficient detail to meet the requirements of resource estimation. <p>Troy and Herald</p> <ul style="list-style-type: none"> Troy and Herald drill holes were logged using detailed geological codes that are able to be correlated with Alto logging codes.
Subsampling techniques and sample preparation	<p>Alto Metals</p> <ul style="list-style-type: none"> Alto's DD core samples were analysed at the Intertek Genalysis Laboratory in Maddington by 50g fire assay with AAS finish for gold. The technique is appropriate for the material and style of mineralisation. Alto's 4m and 1m RC samples were transported to either MinAnalytical or Intertek, located in Perth, Western Australia, who were responsible for sample preparation and assaying for all RC drill hole samples and associated check assays. MinAnalytical and Intertek are NATA certified for all related inspection, verification, testing and certification activities. Samples submitted for analysis via Photon assay technique were dried, crushed to nominal 85% passing 2mm, linear split and a nominal 500g sub sample taken (method code PAP3502R) The 500g sample is assayed for gold by Photon Assay (method code PAAU2) along with quality control samples including certified reference materials, blanks and sample duplicates. Intervals of 4m composite samples reporting greater than 0.2 g/t Au (with constrain intervals) were selected for re-assay, and 1m re-split samples were submitted for 50g fire assay. RC 1m samples were analysed using 50g fire assay with AAS finish. Alto's diamond core was transported to Intertek Genalysis in Maddington for cutting, sampling and assaying. Core is cut in half and half core is sampled. Intertek Genalysis is responsible for sample preparation and assaying for all diamond drill hole samples and associated check assays. Sample sizes are appropriate to give an indication of mineralisation. Samples are prepared by Intertek Genalysis Laboratory in Maddington. Samples are dried, pulverised to 90% passing -75um. Samples are analysed at the Intertek Genalysis Laboratory in Maddington by 50g fire assay with AAS finish for gold. The technique is appropriate for the material and style of mineralization. <p>Troy and Herald</p> <ul style="list-style-type: none"> Troy RC samples were assayed at Analabs Perth by 50g aqua regia digest followed by DIBK extraction Flame Atomic Absorption Spectrometry Sample sizes are considered to be appropriate. Herald's RC samples were sent to Analabs Perth for Fire Assay gold only.
Quality of assay data and laboratory tests	<p>Alto Metals</p> <ul style="list-style-type: none"> The Fire Assay method is considered to be a total extraction technique. There are no deleterious elements present which could affect the technique. There is no information available to Alto to indicate that the gold is refractory gold.

Item	Comments
	<ul style="list-style-type: none"> Field blanks and industry purchased Standards and are inserted by Alto at a rate of 1 per 20 samples. Field duplicates are inserted by Alto at a rate of 1 every 60 samples. In the case of drill core duplicates, the core is quartered, and quarter core is sampled. Laboratory Certified Reference Materials and/or in-house controls, blanks, splits and replicates are analysed with each batch of samples by the laboratory. These quality control results are reported along with the sample values in the final report. Selected samples are also re-analysed to confirm anomalous results. Laboratory and field QA/QC results are reviewed by Alto Metals personnel. <p>Troy and Herald</p> <ul style="list-style-type: none"> For Troy's RC drilling, an average of one field duplicate, one blank and one standard were submitted for every 50 samples. QC samples were inserted randomly throughout the sample sequence. Standards were purchased from Gannet Holdings Pty Ltd (Gannet) in Perth, WA. The actual standard used was dependent on the expected assay results and type of sample being taken (i.e. oxide, transitional or fresh rock). The grade of the standard used was also routinely varied. Blank material (crushed basalt) for the resource drilling at Lord Nelson and Lord Henry was also purchased from Gannet. The results of the QC standards were assessed by Troy on a batch-by-batch basis. Batches of samples where the results of the submitted standards differ from the expected value by more than $\pm 10\%$ were re-analysed by the laboratory. Troy had independent checking of all QC sample results carried out by Maxwell Geoservices (Maxwell) on a monthly basis. Maxwell monitored the laboratory performance over the longer period and liaised with the laboratory and with Troy when QC problems were detected. Maxwell reported that all standards and blanks fell within the expected limits. The field duplicate results show that 20–25% of the repeat samples are outside of $\pm 10\%$ compared to the original sample values with no apparent bias. This is to be expected given the style of mineralisation. There is no available information on the protocols used by Herald.
Verification of sampling and assaying	<ul style="list-style-type: none"> All significant intersections are reviewed by alternative company personnel. Several RC holes drilled by previous companies have been twinned with Alto RC drill holes and the results were considered satisfactory. Alto RC holes have been twinned by Alto DD holes and the results were considered satisfactory. Field data is recorded on logging sheets and entered into excel prior to uploading to and verification in Micromine and Datashed. Laboratory data is received electronically and uploaded to and verified in Micromine and Datashed. Values below the analytical detection limit were replaced with half the detection limit value. Troy engaged Maxwell to undertake independent periodic audit of their exploration QAQC data on a monthly basis.
Location of data points	<p>Alto Metals</p> <ul style="list-style-type: none"> All data is reported based on GDA 94 zone 50. Alto used handheld Garmin GPS to locate and record drill collar positions, accurate to ± 5 metres (northing and easting), which is sufficient for exploration drilling. Subsequently RM Surveys (licensed surveyor) carry out collar surveys with RTK GPS with accuracy of ± 0.05m to accurately record the easting, northing and RL prior to drill holes being used for resource estimation. Downhole surveys are undertaken by the drilling contractor at 30m intervals using a true north seeking gyro. Alto has previously engaged an independent downhole survey company to carry out an audit of downhole surveys and the results were considered satisfactory. <p>Troy Resources</p> <ul style="list-style-type: none"> The majority of Troy drill holes were recorded with DGPS in GDA94. In July 2017, Alto used a DGPS to re-locate historic Troy drill collars to verify the accuracy of historic data.

Item	Comments
Data spacing and distribution	<ul style="list-style-type: none"> • RC and DD drill collar spacing is sufficient to establish the degree of geological and grade continuity appropriate for a mineral resource estimation. • Diamond holes were used to obtain measurements of bulk density within the mineralized zone and surrounding lithologies. • The drilling was composited downhole for estimation using a 1m interval.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • There is no outcrop in the drilled area however historic workings have exposed a quartz vein that strikes 070° and dips 60° to the north. • Geological structures have been interpreted from drilling. • Alto drill holes are mostly drilled at -60° to 200° and to 040° which was designed to intersect mineralisation perpendicular to stratigraphy. • Herald and Troy drill orientation was typically -60° to 180° which was designed to intersect mineralisation perpendicular to the quartz vein exposed in the historic workings.
Sample security	<p>Alto Metals</p> <ul style="list-style-type: none"> • For Alto, RC 4m composite and 1m original RC drill samples comprised approximately 3 kg of material within a labelled and tied calico bag. • Individual sample bags were placed in a larger plastic poly-weave bag then into a bulk bag that was tied and dispatched to the laboratory via freight contractors or company personnel. • Whole core marked up and stored in plastic core boxes on pallets secured with metal strapping was transported to Intertek Genalysis in Maddington by McMahon Burnett transport. • Sampling data was recorded on field sheets and entered into a database then sent to the head office. • Laboratory submission sheets are also completed and sent to the laboratory prior to sample receipt. <p>Troy and Herald</p> <ul style="list-style-type: none"> • For Troy, drill samples comprised approximately 2 kg of material within a labelled and tied calico bag. After wet samples were dried, six bags were placed in a larger plastic polyweave bag that was labelled with the laboratory address and sender details and tied with wire. • Samples were dispatched three times per week. On each occasion, a sample submission form was completed which lists the sample IDs, the total number of samples and analyses to be conducted. This form was faxed to the laboratory and to the database technician in Troy's Perth office. • Samples were picked up by a courier firm, who counted the total number of polyweave bags before taking them to the Mount Magnet depot 150 km to the west of Sandstone. Here the samples were picked up by the courier's road train and taken to the Perth depot before being dispatched to the lab. • Upon receipt of the samples, the lab checked the sample IDs and total number of samples and notified Troy of any differences from the sample submission form. • After the analysis of the samples had been completed, results were sent to the senior geologist and database technician in both digital and paper format. • There is no available information on the protocols used by Herald.
Audits and reviews	<ul style="list-style-type: none"> • Alto's Exploration Manager and Chief Geologist attended the RC and DD drilling programs and ensured that sampling and logging practices adhered to Alto's prescribed standards. • Alto's Chief Geologist has reviewed the laboratory assay results against field logging sheets and drill chip trays and confirmed the reported assays occur with logged mineralised intervals and checked that assays of standards and blanks inserted by the Company were appropriately reported. • Alto have reviewed and compiled Troy and Herald drilling and assay data. Alto are not aware of any other independent reviews of the drilling, sampling and assaying protocols, or the assay database. • Troy engaged Maxwell to undertake periodic independent audit of the exploration QAQC data. • A Mineral Resource Estimate published by Troy for Vanguard in 2007 was reported by Snowden Optiro. • A Mineral Resource Estimate was estimated by Herald for Vanguard in 1999.

JORC (2012) Table 1 – Section 2 Reporting of Exploration Results

Item	Comments
Mineral tenement and land tenure	<ul style="list-style-type: none"> Alto's Sandstone Project is located in the East Murchison region of Western Australia and covers approximately 900 km² with multiple prospecting, exploration and mining licenses all 100% owned by Sandstone Exploration Pty Ltd, which is a 100% subsidiary of Alto Metals. All tenements are currently in good standing with the Department of Mines, Industry Regulation and Safety and to date there has been no issues obtaining approvals to carry out exploration. Royalties include up to 2% of the Gross Revenue payable to a third party, and a 2.5% royalty payable to the State Government.
Exploration done by other parties	<ul style="list-style-type: none"> Historically gold was first discovered in the Sandstone area in the 1890's. For the period 1907-1912 a total of 64 tons of ore was mined from Vanguard for 71.11 ounces of gold at a grade of 34g/t gold. Western Mining Corporation (WMC) carried out surface geochemistry, geological mapping and percussion drilling in the 1980's. Herald completed RAB and RC drilling and resource estimation in the 1990's. Troy completed RC drilling and resource estimation between 1999 and 2010.
Geology	<p>Vanguard</p> <ul style="list-style-type: none"> Drilling indicates the Vanguard mineralisation is hosted predominantly within mafic lithologies (dolerite). The average depth of weathering varies from 30 - 70m. Petrographic work by Alto has confirmed that differentiated dolerites and granophyres have been intersected in drill holes that host the gold mineralisation. Gold mineralisation is mainly associated with sulphidic quartz veins which occur as plunging shoots. The structures which host the mineralisation are interpreted from drilling to strike and have a shallow plunge to the NE. <p>Vanguard North</p> <ul style="list-style-type: none"> Drilling indicates the Vanguard North mineralization is hosted predominantly within mafic lithologies. The average depth of weathering varies from 50 - 70m. Gold mineralization is mainly associated with high-grade, narrow sulphidic quartz veins which strike approximately 300° and dip approximately 20° to the southwest.
Drill hole information	<ul style="list-style-type: none"> All material drill hole information and significant mineralised intercepts and widths have been reported in previous reports which can be found on the Company website or ASX site.
Data aggregation methods	<ul style="list-style-type: none"> Reported mineralised intervals +0.2 g/t Au may contain 2 to 4 metres of internal waste (or less than 0.2 g/t Au low grade mineralisation interval). No metal equivalent values have been reported. The reported grades are uncut.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> DD drill holes were angled at -60° and designed to intersect perpendicular to the mineralisation. RC drill holes were angled at -60° and designed to intersect perpendicular to the mineralisation. Downhole intercepts are not reported as true widths however are considered to be close to true widths based on the drill orientation and current understanding of the mineralisation.
Diagrams	<ul style="list-style-type: none"> Relevant sections and plans have been included in the main report and in previous reports which can be found on the Company website or ASX site.
Balanced reporting	<ul style="list-style-type: none"> All material drill hole information and significant mineralised intercepts and widths have been reported in previous reports which can be found on the Company website or ASX site.
Other substantive exploration data	<ul style="list-style-type: none"> All material information has been included in the report. Preliminary gold recovery testwork has been carried out by Alto. Bulk densities have been measured from drill core by Alto Metals. There are no known deleterious elements.
Further work	<ul style="list-style-type: none"> Alto has planned further RC infill and extension drilling.

JORC (2012) Table 1 – Section 3 Estimation and Reporting of Mineral Resources

Item	Comments
Database integrity	<ul style="list-style-type: none"> Sample data used for the MRE was obtained from various drilling programs carried out since 1996 including Herald and Troy. Alto have undertaken drill campaigns in the Vanguard area since 2017. Alto carried out verification checks on the historic database including locations checks, downhole surveys and assay checks. Alto have utilised the lithological coding system for logging and have photographic records of drill core. Drilling undertaken by Alto is recorded in a separate secure Datashed database. Historic collars have been pressed to the topographic surface. All Alto collars have been picked up. Validation checks showed all surveyed collars were within 2 m of the topographic surface. Snowden Optiro undertook a basic check of the data for potential errors as a preliminary step to compiling the resource estimate. No significant flaws were identified.
Site visits	<ul style="list-style-type: none"> The Snowden Optiro CP responsible for the mineral resource estimate visited the Vanguard Camp Project area on 7 and 8 October 2021, observing the local geology, recent drill holes and general site layout. Staff from Alto, who accept responsibility for the reliability of the underlying drillhole data, have been to site multiple times and have been present during the drilling programs.
Geological interpretation	<ul style="list-style-type: none"> Alto staff were involved in all aspects of the geological interpretation used for the MRE and provided guidance to the modelling, undertaken by Snowden Optiro. Snowden Optiro believes that the local geology is reasonably well understood. All available drillholes (AC, RC, RAB and DD) were used in the interpretation. For the estimation, all AC and RAB holes were excluded, only RC and Diamond drilled holes were used. Historic drillholes prior to 2016 have been vetted by Alto to ensure they meet minimum drilling and sampling requirements for resource estimation. Historic drillholes with unsampled intervals have been left as null in the database. Faulting. Four cross cutting faults have been modelled in the Vanguard Camp area which post date the mineralisation, mineralisation modelled has been truncated by the faults. <p>Vanguard</p> <ul style="list-style-type: none"> The interpreted mineralisation domains have been modelled within the differentiated dolerite utilising the magnetic susceptibility (mag sus) to assist. The main control is the northwest to southeast trending stratigraphy. The dolerite horizons with high mag sus have zones with lower mag sus within them, which appear to correspond to the gold mineralisation. The mag sus has been used as the primary guide for modelling along with a nominal 0.2 g/t Au to 0.3 g/t Au cut-off. In total, five mineralised domains have been interpreted. The interpreted domains include: <ul style="list-style-type: none"> Domain 30010 is the main upper mineralised domain and is a continuous horizon of mineralisation within the undifferentiated dolerite close to surface. The mineralisation runs the entire length of the deposit but is offset by faulting. Domain 30020 is the main lower mineralised domain and is a continuous horizon of mineralisation within the undifferentiated dolerite at depth. The mineralisation runs the entire length of the deposit but is offset by faulting. Domains 30030 and 30040 are two steeply dipping mineralised structures connecting the two main domains and are believed to be feeders. Domain 30050 is a small mineralised domain close to surface in the western portion of the deposit. <p>Vanguard North</p> <ul style="list-style-type: none"> The main gold mineralisation is a high-grade narrow sulphidic quartz vein trending approximately northwest dipping to the southwest, domain 40010. Domain 40030 comprises some small, flat lying splays off the main vein. Domains 40020, 40040 and 40050 are small, low grade, discontinuous veins. Alternative interpretations of the mineralisation are possible, however, are unlikely to significantly change the overall volume of the mineralised envelopes in terms of the reported classified resources.

Item	Comments
Dimensions	<p>Vanguard</p> <ul style="list-style-type: none"> The Vanguard gold mineralisation covers an area of around 900 m along strike by 400 m across strike and extends to approximately 220 m below surface. The mineralisation is open along strike and down dip. <p>Vanguard North</p> <ul style="list-style-type: none"> The Vanguard North gold mineralisation covers an area of around 600 m along strike by 350 m across strike and extends to approximately 140 m below surface. The mineralisation is open along strike to the southeast and down dip.
Estimation and modelling techniques	<ul style="list-style-type: none"> Snowden Optiro estimated gold grades using ordinary block kriging (parent cell estimates) using Datamine Studio RM software. Due to the variable dip of the mineralisation at Vanguard, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. At Vanguard North, dynamic anisotropy was used for the main vein and a fixed search ellipse orientation was used for all other mineralisation. A three pass search strategy has been used. The statistical analysis shows that the main mineralised domains have positively skewed gold distributions with high coefficients of variation (CVs), indicating there are outliers in the domains which have the potential to cause local over estimation. Top cut levels have been determined using a combination of histograms, log probability and mean variance plots on a domain by domain basis. Top cuts (ranging from 3.8 g/t Au to 25 g/t Au depending on domain) were applied prior to estimation. Based on the statistical analysis, Snowden Optiro considers that ordinary kriging with a top cut is an appropriate estimation technique for these domains. Boundaries between the mineralised domains were treated as hard for estimation. A high-grade restriction and top cut was applied to domain 30040 in the estimate to control smearing. Two check estimates were undertaken using inverse distance to the power of 2 (ID2) and nearest neighbour (NN) for gold and reviewed in the validation steps. No assumptions have been made regarding recovery of any by-products. A block model was constructed using a parent block size of 20 m(E) by 20 m(N) by 5 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis. For Vanguard, the initial search ellipse for the main horizons of 90 m by 30 m by 10 m was defined based on the results of the variography and assessment of the data coverage. For the steep dipping mineralisation an initial search ellipse of 50 m by 25 m by 10 m was applied. A minimum of ten and maximum of 22 samples was used for the initial search pass for all domains. Second pass was two times the initial search ellipse with a minimum of ten and maximum of 22 samples. Third pass was three times the initial search with a minimum of four and maximum of 15 samples. All passes had a maximum of four samples per drillhole applied. For Vanguard North, the initial search ellipse of 80 m by 50 m by 5 m was defined based on the results of the variography and assessment of the data coverage. A minimum of ten and maximum of 22 samples was used for the initial search pass for all domains. Second pass was two times the initial search ellipse with a minimum of ten and maximum of 22 samples. Third pass was three times the initial search with a minimum of four and maximum of 15 samples. All passes had a maximum of four samples per drillhole applied. No selective mining units are assumed in this estimate. Grade estimates were validated against the input drillhole composites (globally and using grade trend plots) and show a good comparison. Visual comparison between estimated blocks and composites on sections through the deposit have been undertaken. A small number of blocks within the Vanguard domains did not estimate, these have been assigned the mean grade of the top-cut composites in the appropriate domain. In total the assigned blocks represent less than 2 kt. In Vanguard North, three small domains did not estimate due to low sample numbers, (40020, 40040 and 40050) these have been assigned the mean grade of the top-cut composites in the appropriate domain. The previous Mineral Resource for Vanguard was estimated in 2018 (Carras Mining Pty Ltd) and reported in accordance with the 2012 Edition of the JORC Code. For comparison purposes Snowden

Item	Comments										
	<p>Optiro compared the 2022 Mineral Resource to the 2018 Mineral Resource. No mining has occurred in the area that has a material effect on the mineral resource.</p> <p>Vanguard</p> <ul style="list-style-type: none"> The comparison of the 2022 MRE to the 2018 MRE shows a significant increase of 1.3 Mt (+210%) with a slight decrease of 0.1 g/t Au (-4%) for an overall increase of 68,000 oz Au. The increase in 										
	<p>Mineral Resources in 2022 is primarily due to a 160% increase in total volume of the mineralisation.</p> <p>Vanguard North</p> <p>The comparison of the 2022 MRE to the 2018 MRE shows a significant increase of 150 kt (+65%) with an increase in grade of 1.8 g/t Au (+89%) for an overall increase of 32,000 oz Au (+214%). The increase in Mineral Resources in 2022 is primarily due to a 60% increase in total volume of the mineralisation.</p> <p>For both deposits at the Vanguard camp, the interpretation of the mineralised structures has changed with information from 149 additional drill holes covering a greater area. Extensional mineralisation is informed by an additional 671 samples from 145 new RC and 4 new DD holes.</p> <p>The interpretation, estimation methodology, block size, search strategy and gold price used for pit optimisation are substantially different from the 2018 MRE.</p>										
Moisture	<ul style="list-style-type: none"> All tonnages have been estimated as dry tonnages. 										
Cut-off parameters	<ul style="list-style-type: none"> For the reporting of the Mineral Resource Estimate, a 0.5 g/t Au cut-off grade inside an optimised pit shell has been used for potential open cut resources. 										
Mining factors and assumptions	<ul style="list-style-type: none"> It is assumed the deposit will be mined using conventional open cut mining methods. The Mineral Resource has been reported within a pit shell generated by Snowden Optiro using an input gold price of A\$2500 with all cost and recovery assumptions provided by Alto based on their bench marking against deposits of a similar scale and geological nature. 										
Metallurgical factors and assumptions	<ul style="list-style-type: none"> Processing recoveries of 92% for oxide, transitional and fresh mineralisation have been applied to the optimisation. The recoveries are based on preliminary metallurgical test work undertaken by Alto in 2020. These results are preliminary and Snowden Optiro recommends further metallurgical test work be undertaken at Vanguard. 										
Environmental factors and assumptions	<ul style="list-style-type: none"> It is assumed that no environmental factors exist that could prohibit any potential mining development at the Vanguard deposit. The Sandstone area has a strong history of mining and several prospecting leases are currently being worked. Anecdotal evidence suggests strong local support for mining in the area. 										
Bulk density	<ul style="list-style-type: none"> At Vanguard Camp, bulk density values have been assigned based on analysis undertaken by Snowden Optiro by rock type and weathering state. These assigned bulk density values are based on analysis of 277 density measurements taken by Alto in the 2021 diamond drill campaign in the Vanguard Camp area. For the oxide and transitional material there were insufficient data to determine a meaningful density so it was assigned with consideration of the mean of available measured data. Only the fresh material had sufficient data for meaningful analysis. Assigned bulk density values provided below. <table border="1"> <thead> <tr> <th>Bulk Density Assigned t/m3</th><th>Description</th></tr> </thead> <tbody> <tr> <td>1.8</td><td>All transported material</td></tr> <tr> <td>2.2</td><td>Oxide material (all rock types)</td></tr> <tr> <td>2.4</td><td>Transitional (all rock types)</td></tr> <tr> <td>2.79</td><td>Fresh (all rock types)</td></tr> </tbody> </table>	Bulk Density Assigned t/m3	Description	1.8	All transported material	2.2	Oxide material (all rock types)	2.4	Transitional (all rock types)	2.79	Fresh (all rock types)
Bulk Density Assigned t/m3	Description										
1.8	All transported material										
2.2	Oxide material (all rock types)										
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Item	Comments
	<ul style="list-style-type: none"> The bulk density values are all higher than previously used in the 2018 MRE. The 2018 estimate used bulk densities based on assumed regional values, the 2022 is based on 277 measurements undertaken by Alto. Snowden Optiro recommends undertaking more bulk density measurements, however, considers the bulk densities reasonable for the style of mineralisation.
Classification	<ul style="list-style-type: none"> The classification has been applied to the Mineral Resource estimate based on the drilling data spacing, grade and geological continuity and data integrity. <p>Vanguard</p> <ul style="list-style-type: none"> No areas of the in situ Mineral Resource satisfied the requirement to be classified as Measured Resources. The Mineral Resource has been classified as an Indicated Resource where the mineralisation is continuous and supported by 20 m by 20 m drilling data and estimated in the first pass. Extrapolation beyond the drilling is limited to approximately one drill section. These areas are enclosed within the Indicated wireframe. The Mineral Resource has been classified as an Inferred Resource where the mineralisation is supported by more widely spaced drill data. Extrapolation beyond the drilling is limited to approximately one drill section. <p>Vanguard North</p> <ul style="list-style-type: none"> No areas of the in situ Mineral Resource satisfied the requirement to be classified as Measured or Indicated Resources. The Mineral Resource has been classified as an Inferred Resource where the mineralisation is supported by 40 m by 40 m drill data. Extrapolation beyond the drilling is limited to approximately one drill section.
	<ul style="list-style-type: none"> The Mineral Resource classification appropriately reflects the view of the Competent Person.
Audits and reviews	<ul style="list-style-type: none"> The MRE has been peer reviewed as part of Snowden Optiro's standard internal peer review process. Snowden Optiro is not aware of any external reviews of the Vanguard MRE.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. The Mineral Resource has been validated both against the input composite data. The statement relates to a global estimate of tonnes and grade with an open pit cut-off of 0.5 g/t Au.

HAVILAH AND MANINGA MARLEY DEPOSITS

JORC Code, 2012 Edition Table 1 – Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<p>Alto Metals Limited (2016-2022)</p> <ul style="list-style-type: none"> Samples were collected by reverse circulation (RC) drilling. RC samples were passed directly from the in-line cyclone through a rig mounted cone splitter. Samples were collected in 1m intervals into bulk plastic bags and 1m calico splits, which were retained for later use. From the bulk 1m sample, a 4m composite sample was collected using a split PVC scoop and then submitted to the either MinAnalytical Laboratory Services Pty Ltd ("MinAnalytical") or Intertek Genalysis ("Intertek"). RC 1m splits were submitted if the composite sample assay values are equal to or greater than 0.2 g/t Au. During 2021, the bulk sample was placed directly onto the ground (ie no green bags) and the 1m samples were sent directly to the laboratory (ie no 4m composites). <p>Troy Resources NL (1999-2010)</p> <ul style="list-style-type: none"> Samples were collected by reverse circulation (RC) drilling. Troy's RC samples were passed directly from the in-line cyclone through a rig mounted multi-tier riffle splitter. Samples were collected in 1m intervals into bulk plastic bags and 1m calico splits (which were retained for later use). From the bulk sample, a 5m composite sample was collected using a split PVC scoop and then submitted to the laboratory for analysis. The 1m calico splits were submitted to the laboratory if the composite sample returned assay values equal to or greater than 0.2 g/t Au. RC samples were submitted to Genalysis Laboratory in Perth for analysis of gold analysis by fire assay. The 1m splits were submitted for analysis by fire assay where the composite sample returned gold assay values >0.2 ppm Au over anomalous zones. <p>Herald Resources Limited (1996-1997)</p> <ul style="list-style-type: none"> Samples were collected by reverse circulation (RC) drilling. All dry RC samples were collected at 1m intervals via a cyclone and a 3-tier riffle splitter with the excess collected in plastic bags and left on site. Wet samples were generally grabbed and of a lesser quality. The drilling was generally bulk samples at 4m intervals with 1m resplits being taken from significantly mineralised zones. All samples were sent to Analabs in Mt Magnet and analysed by 50gm fire assay to a lower detection limit of 0.01ppm Au. <p>Gold and Mineral Exploration NL (1988-1990)</p> <ul style="list-style-type: none"> Samples were collected by reverse circulation (RC) drilling. 1m samples collected in plastic bags attached to a cyclone. 2m composite samples were prepared for the upper parts of the RC drill holes. Mineralised intersections were later resampled at 1m intervals. All samples were submitted to Minlabs in Perth and analysed by 50gm fire assay to a lower detection limit of 0.01ppm Au. <p>Homestake Australia Limited (1986)</p> <ul style="list-style-type: none"> Samples were collected by diamond (DD) drilling. Pre-collar drill samples and NQ diamond drill core samples were assayed by Australian Assay Laboratories in Perth by fire assay of a 50gm charge followed by AAS finish. <p>Westmex Limited (1979-1980)</p> <ul style="list-style-type: none"> Reverse Circulation (RC) drilling was used with either a roller bit or a hammer bit to collect samples over selected 1m intervals. Drill samples were reportedly analysed for gold only by mixed acid digestion (ie aqua regia) with Atomic Absorption Spectroscopy (AAS) finish at Genalysis Laboratory in Perth.

Criteria	Commentary
Drilling techniques	<p>Alto Metals</p> <ul style="list-style-type: none"> RC drilling program used a KWL 350 drill rig with an onboard 1100cfm/350psi compressor and a truck mounted 1000cfm auxiliary and 1000psi booster. The sampling hammer had a nominal 140 mm hole. <p>Troy Resources</p> <ul style="list-style-type: none"> Troy RC drilling was carried out by Boart Longyear. <p>Herald Resources Limited</p> <ul style="list-style-type: none"> Herald engaged Strange Drilling of Kalgoorlie to carry out RC drilling using a hollow face sampling hammer bit. <p>Gold and Mineral Exploration NL</p> <ul style="list-style-type: none"> GME engaged Davies Drilling to carry out RC drilling. <p>Homestake Australia Limited</p> <ul style="list-style-type: none"> Homestake engaged Corewell Pty Ltd of Perth to carry out NQ diamond drilling (DD) with pre-collars drilled using percussion methods. <p>Westmex Limited</p> <ul style="list-style-type: none"> Reverse Circulation (RC) drilling was used with either a roller bit or a hammer bit.
Drill sample recovery	<p>Alto Metals</p> <ul style="list-style-type: none"> Recovery was estimated as a percentage and recorded on field sheets prior to entry into the database. Alto RC samples generally had good recovery with the exception of drill intervals which intersected historic underground workings. The workings were evident as a void with no backfill or other material present. The cyclone was routinely cleaned at the end of each rod. There does not appear to be a relationship with sample recovery and grade and there is no indication of sample bias. No relationship between recovery and grade has been identified. <p>Previous companies</p> <ul style="list-style-type: none"> Alto has no quantitative information on the Westmex, GME, Herald or Troy RC sample recovery. Drill core recovery was documented for the Homestake DD holes. Alto reviewed the geological logging sheets and assay data to determine if a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. The review concluded that there were no issues.
Logging	<p>Alto Metals</p> <ul style="list-style-type: none"> Westmex drill holes were logged to provide information on rock type and depth and if historic workings were intersected. The logs also indicated whether a roller bit or hammer bit was used. The Homestake DD holes were logged in detail for each metre and at sub-metre intervals where it was considered appropriate or relevant. GME reported that the RC drill holes were geologically examined and logged in the field. The logging was commentary based with no specific geological codes used for events such as top of fresh rock, base of oxidation etc. However, the logging and descriptions are of sufficient quality that the lithologies drilled can be correlated with later logging carried out by Herald and Troy, who used detailed logging codes. Herald and Troy logged all drill holes however no detailed information is available on the logging methods. Detailed logging codes were used, and it is considered that the drill holes were logged with a sufficient level of detail to support a mineral resource estimate Alto's RC drill chips were sieved from each 1m bulk sample and geologically logged. Washed drill chips from each 1m sample were stored in chip trays. Geological logging of drillhole intervals was carried out with sufficient detail to meet the requirements of resource estimation.

Criteria	Commentary
Subsampling techniques and sample preparation	<p>Alto Metals</p> <ul style="list-style-type: none"> Alto's 4m and 1m RC samples were transported to either MinAnalytical or Intertek, located in Perth, Western Australia, who were responsible for sample preparation and assaying for all RC drill hole samples and associated check assays. MinAnalytical and Intertek are NATA certified for all related inspection, verification, testing and certification activities. Samples submitted for analysis via Photon assay technique were dried, crushed to nominal 85% passing 2mm, linear split and a nominal 500g sub sample taken (method code PAP3502R). The 500g sample is assayed for gold by Photon Assay (method code PAU2) along with quality control samples including certified reference materials, blanks and sample duplicates. Intervals of 4m composite samples reporting greater than 0.2 g/t Au (with constrain intervals) were selected for re-assay, and 1m re-split samples were submitted for 50g fire assay. Samples prepared by Intertek Genalysis Laboratory in Maddington. Samples are dried, pulverised to 90% passing -75um then analysed using 50g fire assay with AAS finish. Sample sizes are appropriate to give an indication of mineralisation. The techniques are appropriate for the material and style of mineralization. <p>Troy Resources</p> <ul style="list-style-type: none"> RC samples were submitted to Genalysis Laboratory in Perth for analysis of gold analysis by fire assay. The 1m splits were submitted for analysis by fire assay where the composite sample returned gold assay values >0.2 ppm Au over anomalous zones. <p>Herald Resources</p> <ul style="list-style-type: none"> All samples were sent to Analabs in Mt Magnet and analysed by 50gm fire assay to a lower detection limit of 0.01ppm Au. <p>Gold and Mineral Exploration NL</p> <ul style="list-style-type: none"> All samples were submitted to Minlabs in Perth and analysed by 50gm fire assay to a lower detection limit of 0.01ppm Au. <p>Homestake Australia Limited</p> <ul style="list-style-type: none"> Samples were assayed by Australian Assay Laboratories in Perth by fire assay of a 50gm charge followed by AAS finish. <p>Westmex Limited</p> <ul style="list-style-type: none"> Drill samples were reportedly analysed for gold only by mixed acid digestion (ie aqua regia) with Atomic Absorption Spectroscopy (AAS) finish at Genalysis Laboratory in Perth.
Quality of assay data and laboratory tests	<p>Alto Metals</p> <ul style="list-style-type: none"> The Fire Assay method is considered to be a total extraction technique. There are no deleterious elements present which could affect the technique. There is no information available to Alto to indicate that the gold is refractory gold. Field blanks and industry purchased Standards and are inserted by Alto at a rate of 1 per 20 samples. Field duplicates are inserted by Alto at a rate of 1 every 60 samples. In the case of drill core duplicates, the core is quartered, and quarter core is sampled. Laboratory Certified Reference Materials and/or in-house controls, blanks, splits and replicates are analysed with each batch of samples by the laboratory. These quality control results are reported along with the sample values in the final report. Selected samples are also re-analysed to confirm anomalous results. Laboratory and field QA/QC results are reviewed by Alto Metals personnel. <p>Troy Resources</p> <ul style="list-style-type: none"> An average of 1 field duplicate, 1 blank and 1 standard was submitted for every 50 samples. Field duplicates and standards were used at 1:50 however no blank samples were routinely used in RAB or AC drilling. Troy engaged Maxwell to undertake periodic audit of the exploration QAQC data on a monthly basis. Laboratory Blank, Standards and Repeat assays were reported for Troy drill assays. The results of the QC standards were assessed by Troy on a batch-by-batch basis. Batches of samples where the results of the submitted standards differ from the expected value by more than $\pm 10\%$ were

Criteria	Commentary
	<p>re-analysed by the laboratory. Troy had independent checking of all QC sample results carried out by Maxwell Geoservices (Maxwell) on a monthly basis. Maxwell monitored the laboratory performance over the longer period and liaised with the laboratory and with Troy when QC problems were detected. Maxwell reported that all standards and blanks fell within the expected limits. The field duplicate results show that 20–25% of the repeat samples are outside of $\pm 10\%$ compared to the original sample values with no apparent bias. This is to be expected given the style of mineralisation.</p> <p>Westmex, Homestake, GME and Herald</p> <ul style="list-style-type: none"> • There is no available information on the protocols used by Westmex, Homestake, GME and Herald. • Where reported, Laboratory Repeat assays were reviewed by Alto. • Where Troy drill holes were identified within close proximity to earlier drill holes the drilling assay data showed an acceptable correlation. • There were no anomalous assays reported that could not be explained.
Verification of sampling and assaying	<ul style="list-style-type: none"> • Drilling carried out by previous explorers was compiled by Alto from WA Dept Mines Open File records. • Data was transferred from WAMEX digital files to Alto's database. The original WAMEX files were generally in excel or text format and were readily imported into Alto's database. For some of the earlier reports (ie Westmex drilling) the data was manually entered into Excel. • All significant intersections are reviewed by alternative company personnel. • Field data is recorded on logging sheets and entered into excel prior to uploading to and verification in Micromine and Datashed. • Laboratory data is received electronically and uploaded to and verified in Micromine and Datashed. • Values below the analytical detection limit were replaced with half the detection limit value. • Several RC holes drilled by previous companies have been twinned with Alto RC drill holes and the results were considered satisfactory. • Other drill holes were identified that occur proximal to each other and were drilled by different companies. The geological logging and the mineralised intervals and in particular the high-grade intersections showed an acceptable correlation.
Location of data points	<p>Alto Metals</p> <ul style="list-style-type: none"> • All data is reported based on GDA 94 zone 50. • Alto used handheld Garmin GPS to locate and record drill collar positions, accurate to ± 5 metres (northing and easting), which is sufficient for exploration drilling. • Subsequently RM Surveys (licensed surveyor) carry out collar surveys with RTK GPS with accuracy of ± 0.05m to accurately record the easting, northing and RL prior to drill holes being used for resource estimation. • Downhole surveys are undertaken by the drilling contractor at 30m intervals using a true north seeking gyro. • Alto has previously engaged an independent downhole survey company to carry out an audit of downhole surveys and the results were considered satisfactory. <p>Previous companies</p> <ul style="list-style-type: none"> • Alto carried out a desktop check of all drill hole collars using satellite and aerial drone imagery. • Alto carried out field checks using a DGPS on 24 randomly selected drill holes in November 2018 to confirm the locations of the drill hole collars. • Westmex, GME, Homestake and Herald drilling was originally located in local grid format. • Contract surveyors were engaged by previous explorers to accurately locate the surface location of drill collars and historic workings in local grid format. • Troy drilling was located with a Differential Global Positioning System unit (DGPS). • The Westmex drill holes were all vertical and no survey data was reported. • The downhole dip and azimuth of the Homestake diamond drill holes were determined using an Eastman camera. • The dip and azimuth of all GME and Herald drill holes were reported however there are no details available on the method used to determine the dip and azimuth. • A compass and clinometer were used by Troy to set up the dip and azimuth of Troy drill holes. • There are no outstanding issues with respect to collar survey locations.

Criteria	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> RC and DD drill collar spacing is sufficient to establish the degree of geological and grade continuity appropriate for a mineral resource estimation. The drilling was composited downhole for estimation using a 1m interval. The drill hole orientation is typically vertical or at -60 degrees dip to 180 degrees. The shallow, vertical Westmex RC drill holes were drilled on a 20m x 20m and a 10m x 10m pattern. The Herald RC drilling was carried out on a 20m x 40m pattern. Troy RC drilling was designed to test historical drilling results and infilling anomalous intersections and did not conform to a particular pattern.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Geological structures have been interpreted from drilling and detailed surface geological mapping. Drill orientation was typically -60° to 180° which was designed to intersect mineralisation perpendicular to the strike. Sample bias is not considered to be an issue due to the geological structures and appropriate orientation of drilling.
Sample security	<p>Alto Metals</p> <ul style="list-style-type: none"> For Alto, RC 4m composite and 1m original RC drill samples comprised approximately 3 kg of material within a labelled and tied calico bag. Individual sample bags were placed in a larger plastic poly-weave bag then into a bulka bag that was tied and dispatched to the laboratory via freight contractors or company personnel. Sampling data was recorded on field sheets and entered into a database then sent to the head office. Laboratory submission sheets are also completed and sent to the laboratory prior to sample receipt. <p>Previous companies</p> <ul style="list-style-type: none"> Troy reported that their drill samples were collected in a labelled and tied calico bag. Up to six calico bags are then placed in a larger polyweave bag that is labelled with the laboratory address and sender details and tied with wire. The polyweave bags were picked up by a courier firm who counted the number of polyweave bags before taking them to the Mt Magnet depot. The samples were picked up by the courier's road train and transported to Perth. Upon receipt of the samples the laboratory checked the sample IDs and total number of samples and notified Troy of any differences from the sample submission form. No sample security details are available for Westmex, Homestake, GME or Herald drill samples.
Audits and reviews	<ul style="list-style-type: none"> Alto's Exploration Manager and Chief Geologist attended the RC drilling programs and ensured that sampling and logging practices adhered to Alto's prescribed standards. Alto's Chief Geologist has reviewed the laboratory assay results against field logging sheets and drill chip trays and confirmed the reported assays occur with logged mineralised intervals and checked that assays of standards and blanks inserted by the Company were appropriately reported. Alto has reviewed and compiled the technical data internally. Troy engaged Maxwell to undertake periodic independent audit of Troy's exploration QAQC data on a monthly basis. A Mineral Resource Estimate has previously been carried out at Havilah by; <ul style="list-style-type: none"> Herald (2000) Troy (2002) A Mineral Resource Estimate has previously been carried out at Maninga Marley by; <ul style="list-style-type: none"> Herald (2000)

JORC (2012) Table 1 – Section 2 Reporting of Exploration Results

Item	Comments												
Mineral tenement and land tenure	<ul style="list-style-type: none">Alto’s Sandstone Project is located in the East Murchison region of Western Australia and covers approximately 900 km² with multiple prospecting, exploration and mining licenses all 100% owned by Sandstone Exploration Pty Ltd, which is a 100% subsidiary of Alto Metals.The Havilah and Maninga Marley deposits are located within granted mining lease M57/650.All tenements are currently in good standing with the Department of Mines, Industry Regulation and Safety and to date there has been no issues obtaining approvals to carry out exploration.Royalties include up to 2% of the Gross Revenue payable to a third party, and a 2.5% royalty payable to the State Government.												
Exploration done by other parties	<ul style="list-style-type: none">The first recorded production from the Maninga Marley area was in 1904 and a total of 47,106oz were produced from the Havilah and Maninga Marley mines up until 1929. The bulk of the production was recovered during the period 1907 - 1911. The production figures for each mine are tabulated below.<table><tr><th>Mine</th><th>Tonnes</th><th>Grade g/t Au</th><th>Ounces</th></tr><tr><td>Havilah</td><td>48,497</td><td>21.8</td><td>33,871</td></tr><tr><td>Maninga Marley</td><td>10,889</td><td>37.9</td><td>13,235</td></tr></table>In the 1970s, Seeko Nickel carried out nickel exploration within the general area.Between 1979 and 2009, geological mapping, surface sampling, geophysical surveys and drilling was carried out by Westmex Limited, Homestake Australia Limited, Gold and Mineral Exploration NL, Carpentaria Exploration Company Pty Ltd, Herald Resources Limited and Troy Resources NL.Mineral resource estimates were carried out by Herald Resources Limited and Troy Resources NL.	Mine	Tonnes	Grade g/t Au	Ounces	Havilah	48,497	21.8	33,871	Maninga Marley	10,889	37.9	13,235
Mine	Tonnes	Grade g/t Au	Ounces										
Havilah	48,497	21.8	33,871										
Maninga Marley	10,889	37.9	13,235										
Geology	<ul style="list-style-type: none">Detailed surface geological mapping by Homestake and interpretation of drilling data by Homestake and other explorers has shown that the area of the Havilah and Maninga Marley mines is underlain by a NW striking dolerite unit, bounded to the northeast by pillowed and amygdaloidal basalt, and to the southwest by ultramafic rocks.<p>Havilah</p><ul style="list-style-type: none">Mineralisation is confined to the dolerite close to the dolerite/basalt contact and is associated with quartz veins and stockworks within a north-dipping, NW striking mineralised shoot with a plunge of approximately 20 degrees to the north-westWithin the mineralised part of the dolerite, drilling has intersected dolerites and basalts of similar mineralogy suggesting the presence of a differentiated mafic unit. Granophyric quartz dolerite has also been identified in historic mullock dumps. Based on petrology of thin sections of diamond drill core, previous explorers reported a similarity between the dolerite and the lower units of the Golden Mile Dolerite.Quartz-carbonate veins up to 0.5m wide have been intersected in drill core with recognisable selvages to the mineralisation up to 10m in width. Sulphides occur both in the veins and the adjacent wall rocks and consist of dominant pyrite and arsenopyrite with minor pyrrhotite and trace chalcopyrite.<p>Maninga Marley</p><ul style="list-style-type: none">Mineralisation at the Maninga Marley mine is mostly within sheared talc carbonate rocks (ultramafic) close to the dolerite contact.The mineralised zones are represented as a series of shoots within an EW trending shear zone. The shoots are described as up to 25m length, dipping steeply north and plunging approximately 45° to the east-northeast.												
Drill hole information	<ul style="list-style-type: none">All drill hole information and significant mineralised intercepts and widths have been reported in previous reports which can be found on the Company website or ASX site.												
Data aggregation methods	<ul style="list-style-type: none">Reported mineralised intervals +0.2 g/t Au may contain 2 to 4 metres of internal waste (or less than 0.2 g/t Au low grade mineralisation interval).No metal equivalent values have been reported.The reported grades are uncut.												

Item	Comments
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> DD drill holes were angled at -60° and designed to intersect perpendicular to the mineralisation. RC drill holes were angled at -60° and designed to intersect perpendicular to the mineralisation. Downhole intercepts are not reported as true widths however are considered to be close to true widths based on the drill orientation and current understanding of the mineralisation.
Diagrams	<ul style="list-style-type: none"> Relevant sections and plans have been included in the main report and in previous reports which can be found on the Company website or ASX site.
Balanced reporting	<ul style="list-style-type: none"> All drill hole information and significant mineralised intercepts and widths have been reported in previous reports which can be found on the Company website or ASX site.
Other substantive exploration data	<ul style="list-style-type: none"> All material information has been included in the report. Preliminary gold recovery testwork has been carried out by Alto in addition to the historical mining and production records. There are no known deleterious elements. <p>Historic Underground Workings</p> <ul style="list-style-type: none"> GME produced Plans and Sections in local grid format showing the historical underground workings for the Havilah Mine. The surface locations of shafts and pits were surveyed by Homestake contract surveyors. Homestake obtained the mine development and stope outlines from Plans and Sections produced by the Havilah Gold Mining Company in April 1912. The historic information was sourced from the WA Mines Department and the Alexander Library in Perth. Alto georeferenced the GME Plans and Sections and produced a 3D GIS model of the underground workings. The surface locations of the historic workings were checked using Alto's aerial drone imagery. The model was then checked against the lithological logs of available drill holes and amended to take into account additional stopes etc not shown on the GME Plans and Sections. No reliable historical sections or plans are available for the Maninga Marley Mine. Aerial drone imagery and ground inspection were used to identify historical workings.
Further work	<ul style="list-style-type: none"> Alto has planned further RC infill and extension drilling.

JORC (2012) Table 1 – Section 3 Estimation and Reporting of Mineral Resources

Item	Comments
Database integrity	<ul style="list-style-type: none"> Sample data used for the MRE was obtained from various drilling programs carried out since 1979 including Westmex, Homestake Australia Ltd (Homestake), Gold and Mineral Exploration (GME), Herald Resources Ltd (Herald) and Troy Resources NL (Troy). Alto have undertaken drill campaigns in the Havilah and Maninga Marley area since 2017. Alto carried out verification checks on the historic database including locations checks, downhole surveys and assay checks. Drilling undertaken by Alto is recorded in a separate secure Datashed database. Some historic collars have been pressed to the topographic surface. All Alto collars have been picked up. Validation checks showed all surveyed collars were within 2.5 m of the topographic surface. Snowden Optiro undertook a basic check of the data for potential errors as a preliminary step to compiling the resource estimate. No significant flaws were identified.
Site visits	<ul style="list-style-type: none"> The Snowden Optiro CP responsible for the mineral resource estimate visited the Havilah and Maninga Marley Project area on 7 and 8 October 2021, observing the local geology, recent drill holes and general site layout. Staff from Alto, who accept responsibility for the reliability of the underlying drillhole data, have been to site multiple times and have been present during the drilling programs.
Geological interpretation	<ul style="list-style-type: none"> Alto staff are responsible for all aspects of the geological interpretation used for the MRE and modelled the interpretation. Snowden Optiro believes that the local geology is reasonably well understood. All available drillholes (AC, RC, RAB and DD) were used in the interpretation. For the estimation, all AC and RAB holes were excluded, only RC and Diamond drilled holes were used. Historic drillholes prior to 2016 have been vetted by Alto to ensure they meet minimum drilling and sampling requirements for resource estimation.

Item	Comments
	<ul style="list-style-type: none"> • Historic drillholes with unsampled intervals have been left as null in the database. Some of these null values represent voids from historic workings that have been intersected when drilling. • Faulting. There are at least two faults in the Havilah Camp area which post-date the mineralisation. Havilah West is offset from the main Havilah mineralisation by approximately 400 m. <p>Havilah</p> <ul style="list-style-type: none"> • Mineralisation has been modelled for continuous grade. No specific cut-off has been used. In total 10 mineralised domains have been interpreted. The interpreted domains include: <ul style="list-style-type: none"> ○ The main domain, 50020, is a zone of continuous mineralisation striking northwest and plunging to the northwest with variable dip. ○ Domains 50010 and 50030 are steeply dipping continuous mineralisation in the hangingwall to the main domain. ○ Domain 50040 is flat lying mineralisation near surface. ○ Domains 50050 and 50060 are discontinuous mineralisation pods in the hangingwall to the main domain. ○ Domains 50070 to 50100 are the Havilah west mineralisation, offset by 400 m from main mineralisation domain. These four discontinuous domains dip steeply to the north. <p>Maninga Marley</p> <ul style="list-style-type: none"> • Mineralisation at Maninga Marley has been modelled as a series of offset small discontinuous veins. No specific cut-off has been applied, just elevated grade from the background. In total 16 mineralised domains have been interpreted. The interpreted domains include: <ul style="list-style-type: none"> ○ Domains 60010 to 60060, 60110 to 60130 and 60150 are mineralisation striking along the contact of the ultramafic-mafic boundary. ○ Domains 60070, 60080, 60090, 60100, 60140, 60160 are very small, discontinuous mineralisation pods in the hangingwall of ultramafic -mafic contact. • Alternative interpretations of the mineralisation are possible, however, are unlikely to significantly change the overall volume of the mineralised envelopes in terms of the reported classified resources.
Dimensions	<p>Havilah</p> <ul style="list-style-type: none"> • The main Havilah mineralisation covers an area of around 400 m along strike by 150 m across strike (in plan projection) and extends to approximately 140 m below surface. Havilah West is offset to the northwest by 400 m from the main Havilah deposit. Havilah west mineralisation extends approximately 200 m along strike and 50 m across strike in plan projection extending to 70 m below surface • The main mineralisation is open along strike and up and down dip. <p>Maninga Marley</p> <ul style="list-style-type: none"> • The Maninga Marley gold mineralisation comprises small discontinuous, offset veins that cover an area of around 900 m along strike by 30 m across strike and extends to approximately 140 m below surface. • The mineralisation is open down dip and along strike in some areas.
Estimation and modelling techniques	<p>Havilah Camp</p> <ul style="list-style-type: none"> • Snowden Optiro estimated gold grades using ordinary block kriging (parent cell estimates) using Datamine Studio RM software. Due to the variable dip of the mineralisation at Havilah, dynamic anisotropy was used to locally adjust the orientation of the search ellipse and variogram models. At Maninga Marley a fixed search ellipse orientation was used. A three pass search strategy has been used. • The statistical analysis shows that the main mineralised domains have positively skewed gold distributions with high coefficients of variation (CVs), indicating there are outliers in the domains which have the potential to cause local over estimation. Top cut levels have been determined using

Item	Comments
	<p>a combination of histograms, log probability and mean variance plots on a domain by domain basis. Top cuts (ranging from 2 g/t Au to 25 g/t Au depending on domain) were applied prior to estimation.</p> <ul style="list-style-type: none"> Based on the statistical analysis, Snowden Optiro considers that ordinary kriging with a top cut is an appropriate estimation technique for these domains. Boundaries between the mineralised domains were treated as hard for estimation. Two check estimates were undertaken using inverse distance to the power of 2 (ID2) and nearest neighbour (NN) for gold and reviewed in the validation steps. No assumptions have been made regarding recovery of any by-products. A block model was constructed using a parent block size of 10 m(E) by 10 m(N) by 5 m(RL) based on the nominal drillhole spacing along with an assessment of the grade continuity using a kriging neighbourhood analysis.
	<ul style="list-style-type: none"> For Havilah, the initial search ellipse for all mineralisation of 40 m by 30 m by 12 m was defined based on the results of the variography and assessment of the data coverage for the main lode 50020. For the flat lying mineralisation (50040) an initial search ellipse of 40 m by 30 m by 6 m was applied. A minimum of ten and maximum of 22 samples was used for the initial search pass for all domains. Second pass was two times the initial search ellipse with a minimum of ten and maximum of 22 samples. Third pass was three times the initial search with a minimum of four and maximum of 15 samples. All passes had a maximum of four samples per drillhole applied. For Maninga Marley, the initial search ellipse of 35 m by 30 m by 10 m was defined based on the results of the variography for all combined domains and assessment of the data coverage. A minimum of ten and maximum of 22 samples was used for the initial search pass for all domains. Second pass was two times the initial search ellipse with a minimum of ten and maximum of 22 samples. Third pass was three and a half times the initial search with a minimum of four and maximum of 15 samples. All passes had a maximum of four samples per drillhole applied. No selective mining units are assumed in this estimate. Grade estimates were validated against the input drillhole composites (globally and using grade trend plots) and show a good comparison. Visual comparison between estimated blocks and composites on sections through the deposit have been undertaken. Three small domains in Maninga Marley did not estimate due to low sample numbers, (60070, 60080, 60100) these have been assigned the mean grade of the top-cut composites in the appropriate domain. The previous Mineral Resource for Havilah was estimated in 2019 (Carras Mining Pty Ltd) and reported in accordance with the 2012 Edition of the JORC Code. For comparison purposes Snowden Optiro compared the 2022 Mineral Resource to the 2019 Mineral Resource. No mining since the reporting of the previous Mineral Resource has taken place in the area, however, historic mining has taken place at Havilah and Maninga Marley. <p>Havilah</p> <p>The comparison of the 2022 MRE to the 2019 MRE shows a significant increase of 490 kt (+130%) with a decrease of 0.35 g/t Au (-20%) for an overall increase of 17,000 oz Au (+85%). The increase in Mineral Resources in 2022 is partly due to an increase in total volume of the mineralisation. The main reason for the increase is the reporting of the Mineral Resource within a larger pit shell, based on a higher gold price (from A\$2,000 to A\$2,500). Snowden Optiro consider the gold price of A\$2,500 to be appropriate for RPEEE purposes.</p> <p>For the Havilah deposit, the interpretation of the mineralised structures has been updated with information from 11 additional RC drill holes extending the mineralisation along strike and at depth. The interpretation, estimation methodology, block size, search strategy and gold price used for pit optimisation are substantially different from the 2019 MRE.</p>
Moisture	<ul style="list-style-type: none"> All tonnages have been estimated as dry tonnages.
Cut-off parameters	<ul style="list-style-type: none"> For the reporting of the Mineral Resource Estimate, a 0.5 g/t Au cut-off grade inside an optimised pit shell has been used for potential open cut resources.
Mining factors and assumptions	<ul style="list-style-type: none"> It is assumed the deposit will be mined using conventional open cut mining methods.

Item	Comments								
	<ul style="list-style-type: none"> The Mineral Resource has been reported within a pit shell generated by Snowden Optiro using an input gold price of A\$2,500 with all cost and recovery assumptions provided by Alto based on their bench marking against deposits of a similar scale and geological nature. 								
Metallurgical factors and assumptions	<ul style="list-style-type: none"> Processing recoveries of 92% for oxide, transitional and fresh mineralisation have been applied to the optimisation. The recoveries are based on preliminary metallurgical test work undertaken by Alto in 2020. These results are preliminary and Snowden Optiro recommends further metallurgical test work be undertaken at Havilah. 								
Environmental factors and assumptions	<ul style="list-style-type: none"> It is assumed that no environmental factors exist that could prohibit any potential mining development at the Havilah and Maninga Marley deposits. The Sandstone area has a strong history of mining and several prospecting leases are currently being worked. Anecdotal evidence suggests strong local support for mining in the area. 								
Bulk density	<ul style="list-style-type: none"> At Havilah Camp, bulk density values have been assigned based on assumed regional values. Assigned bulk density values provided below. <table border="1"> <thead> <tr> <th>Bulk Density Assigned t/m3</th><th>Description</th></tr> </thead> <tbody> <tr> <td>1.8</td><td>All transported and oxide material</td></tr> <tr> <td>2.2</td><td>Transitional (all rock types)</td></tr> <tr> <td>2.8</td><td>Fresh (all rock types)</td></tr> </tbody> </table> <ul style="list-style-type: none"> Snowden Optiro recommends undertaking bulk density measurements. 	Bulk Density Assigned t/m3	Description	1.8	All transported and oxide material	2.2	Transitional (all rock types)	2.8	Fresh (all rock types)
Bulk Density Assigned t/m3	Description								
1.8	All transported and oxide material								
2.2	Transitional (all rock types)								
2.8	Fresh (all rock types)								
Classification	<ul style="list-style-type: none"> The classification has been applied to the Mineral Resource estimate based on the drilling data spacing, grade and geological continuity, data integrity and reflects uncertainty in the extents of the historic workings. <p>Havilah</p> <ul style="list-style-type: none"> No areas of the in situ Mineral Resource satisfied the requirement to be classified as Measured or Indicated Resources. The Mineral Resource has been classified as an Inferred Resource where the mineralisation is supported by up to 40 m by 40 m drill data. Extrapolation beyond the drilling is limited to approximately one drill section. <p>Maninga Marley</p> <ul style="list-style-type: none"> No areas of the in situ Mineral Resource satisfied the requirement to be classified as Measured or Indicated Resources. The Mineral Resource has been classified as an Inferred Resource where the mineralisation is supported by up to 50 m by 50 m drill data. Extrapolation beyond the drilling is limited to approximately one drill section Domains that did not estimate due to low number of composites had grade assigned are classified as Inferred. The extent of the extrapolation is not considered material to the estimate. The Mineral Resource classification appropriately reflects the view of the Competent Person. 								
Audits and reviews	<ul style="list-style-type: none"> The MRE has been peer reviewed as part of Snowden Optiro's standard internal peer review process. Snowden Optiro is not aware of any external reviews of the Havilah and Maninga Marley MREs. 								
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. The Mineral Resource has been validated both globally and locally against the input composite data. No historic mining shapes are available to deplete Maninga Marley, as such, the Resource is reported without any depletion applied. Historic mining shapes have been used to deplete Havilah. The shapes have been constructed from old plans and reports, whilst the best efforts have been made in their construction there may be uncertainty in the exact location. 								

Item	Comments
	<ul style="list-style-type: none"> The statement relates to a global estimate of tonnes and grade with an open pit cut-off of 0.5 g/t Au.