

# 24 January 2022

# **Exploration Update - Nickel**

- Exploration underway for 2022 with gravity survey, and focussed soil sampling for future drilling orientation
- Target 7 prospect within the larger scale, prospective Luhuma corridor prioritised for continued exploration activities and drilling
- Recent results confirm positive correlation with Mafic/Ultramafic intrusions and, gravity signatures with Ni Sulphide intercepts

Adavale Resources Limited (ASX: ADD) ("Adavale" or "the Company") is pleased to provide an update on the Company's early 2022 exploration plans, outcomes from the recent field exploration activities, including the maiden drill program completed in 2021.

Planning for exploration activities are currently being finalised for 2022, however initial field activities customised for the prevailing seasonal weather conditions commenced on 20 January 2022.

These initial exploration activities will focus on two prospective mafic – ultramafic intrusion bodies identified in 2021 (the prerequisite host rocks for a nickel sulphide deposits), together with orientation geochemical soil sampling programs over several strong gravity anomalies known to be underlain by prospective mafic-ultramafic intrusions.

The successful introduction of gravity surveying in September 2021 led to the identification of two previously unknown prospective mafic – ultramafic intrusions ("intrusions"). Initial exploration activities for 2022 will be directed towards the completion of extensive gravity surveys, with the objective of better defining the newly discovered intrusions extent, as well as identifying new intrusions on a more regional basis.

Intrusions identified will be further explored with detailed electromagnetic (EM) surveys to prioritise targets for Adavale's next drilling campaign.

#### **2022 EXPLORATION STRATEGY**

The following is an overview of Adavale's exploration strategy and plans for the resumption of exploration activities in 2022.

The strategy is based on the keys learnings from the exploration programs conducted in 2021 and which resulted in the discovery of two large previously unknown mafic bodies at Target 7 and 21. (See Map 1)

Adavale is very encouraged by this development and believe more prospective mafic – ultramafic bodies will be identified in 2022 with the adoption of this strategy.



**ASX: ADD** 

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#### **ISSUED CAPITAL**

Shares: 352 million Unlisted options: 26.5 million Performance rights: 17 million

#### ABOUT ADAVALE

Adavale Resources is an ASX-listed exploration company targeting projects in the 'battery materials' space. The company is currently focussed on its 100% owned Kabanga Jirani Nickel Project adjacent and along strike from the world's largest undeveloped high grade NiS resource of 58Mt @ 2.62% Ni. Adavale is also progressing exploration on its 100% owned uranium tenements in South Australia

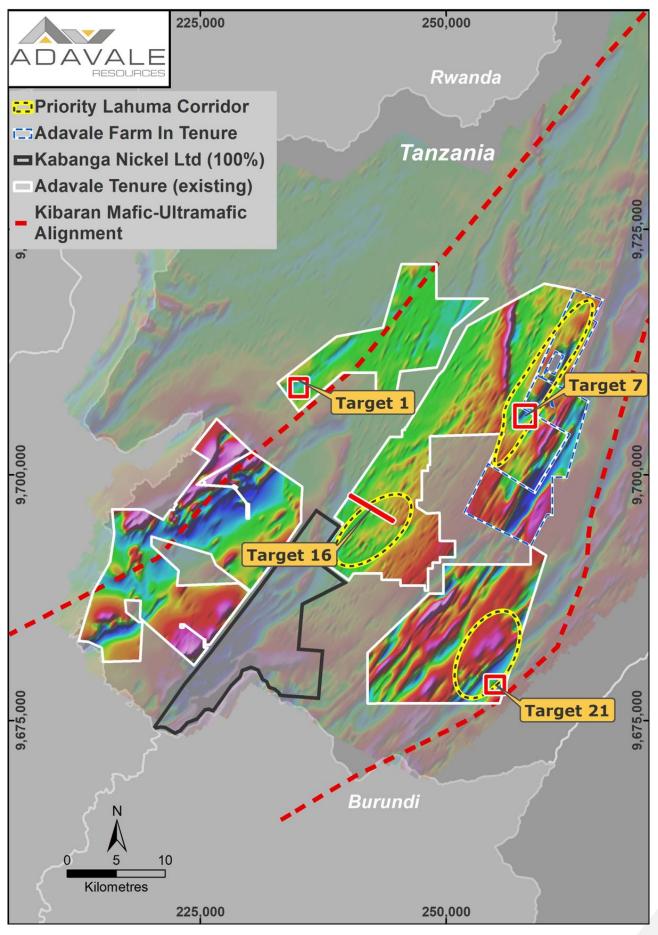
MORE INFORMATION adavaleresources.com

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Map 1 – Current priority target areas Targets 1, 7, 16 and 21

## **Luhuma Corridor - Emerging Highly Prospective Trend**

The Luhuma Corridor currently encompasses Adavale North-eastern and Eastern Prospecting Licences and the Farm-In Agreement tenement to the NE of Target 7. It contains the Luhuma mafic/ultramafic intrusion, a chonolith-like body that has been identified over a strike length of 5km.

The Farm-In Agreement gives Adavale access to this key exploration ground around Luhuma and further expands the Company's effective footprint, around the eastern limb of our Kabanga Jirani Nickel Project.

Adavale has always considered the region prospective, which is now being confirmed with the exploration outcomes at Target 7 and 16 along what is now potentially a highly prospective emerging new trend.

A historical massive sulphide intersection of 8.4m @ 1.1% Ni is recorded in drill hole LUH06<sup>1</sup> at Luhuma. Apart from this historical intersection, little is known about the Luhuma mafic-ultramafic intrusion. The Luhuma LUH06 intersection falls within a small 3.74km<sup>2</sup> area ("LUH06 Area") held by the Tanzanian Government and is not part of the Adavale Farm-In Agreement.

The 2021 field season included the completion of a gravity survey to the south of the LUH06 Area, which suggests that the mafic-ultramafic body identified at Target 7 may in fact be an extension of the mineralised Luhuma intrusion, the southern boundary of which is located 2km to 3km to the NE of Target 7. If proven to be the case, the actual strike extent of the Luhuma intrusion would approach 8km in length (see *Figure 1 below*).

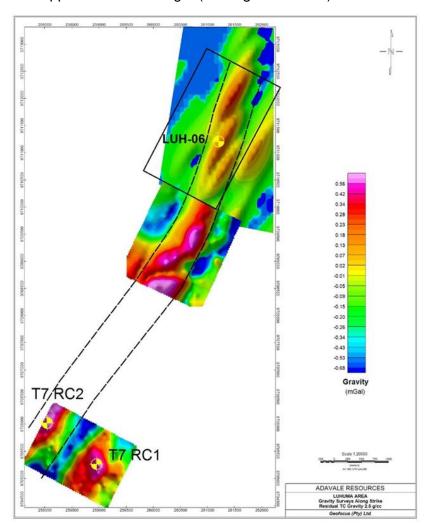


Figure 1– Plan showing relative location between Target 7 and historic Luhuma drill hole LUH-06. Also shown is the possible strong gravity connection between Target 7 and the mineralised Luhuma intrusion

Investigation of this possible extension will be a major priority of the 2022 exploration program. Detailed gravity surveys have been planned to cover this entire Luhuma trend, extending initially 2km north of the LUH06 Area to 2km south of Target 7. The surveys will begin as soon as weather conditions permit following the wet season (estimated to be March 2022).

<sup>1</sup> Evans, D. M., Hunt, J. P. P. M. and Simmonds, J. R., 2016. An overview of nickel mineralization in Africa with emphasis on the Mesoproterozoic East African Nickel belt (EANB). Episodes, 39/2, 319-333. DOI: 10.18814/epiiugs/2016/v39i2/95780

## **Downhole Electromagnetic Surveys (DHEM)**

DHEM surveys are being considered at Targets 7, 16 and 21 where drill holes completed in 2021 intersected significant mafic – ultramafic bodies (See Map 1 and Map 3). The Company is currently seeking the services of a suitable contractor with the appropriate equipment to complete these surveys.

Interpretations of the data collected and coordinated follow up actions (including possible drilling recommendations) will be reported once the surveys are completed.

## **Orientation Soil Sampling Program**

Orientation soil sampling programs have commenced over the anomalies that have exhibited strong gravity signatures at Luhuma and Target 7.

The aim of the program is to investigate whether the highly prospective underlying mafic – ultramafic bodies at these locations can also be defined by geochemical means. This will be through targeted "pathfinder" mineral elements within the soil and weathered cover sequences overlaying the bedrock geology. This is considered to be a cost effective exploration tool that can be quickly conducted in the current wet season (Jan/Feb).

If the outcomes show good correlation to the mafic – ultramafic intrusions and pathfinder indices, then the same indices and template will be applied across Adavale's existing geochemical database and for more regional scaled programs.

Initial pXRF results for the program will be available in February with confirmatory assay result expected early in the June quarter.

#### Regional Gravity Surveys - Luhuma Corridor

In addition to the detail gravity surveys that are scheduled to be completed along the "Luhuma corridor", regional gravity surveys are being planned to cover most of the project area in search of previously unrecognised mafic-ultramafic bodies hidden beneath the extensive cover sequences.

The Company is considering the option to employ either ground-based survey teams or an airborne gravity gradiometer (AGG) system, to complete the task. Cost considerations, availability of the AGG system option and timelines for completion, are being evaluated with a final decision to made shortly.

Areas identified by the regional surveys of elevated gravity signatures can be infilled with more detail (airborne or ground based) surveys. This will enable the prioritisation of anomalies for follow-up testing that can be covered by detailed EM (either airborne or ground based) surveys prior to prioritising those targets for drill testing.

#### Further Updates for Exploration during 2022

In summary, the regional scale initial exploration activities of 2021 have resulted in changes to the targeting criteria of future RC and DD drilling programs.

The template of strong correlation between ultramafic /mafic intrusion and gravity high anomalous readings supported with low cost, high impact (orientation and pathfinder elements) soil sampling, will be used to prioritise drill targets. Initial outcomes from the orientation soil sampling programs currently being undertaken are expected to be released in February 2022.

This template being used on the Kabanga Northeast and East Licence package (including the Luhuma corridor and Target 7) can be modified to support an expanded regional scale program that can be accelerated with the use of Airborne survey options. This is expected to identify additional intrusions and when confirmed with localised ground surveys, generate the hierarchy of priorities for the Company's West, East and remaining Licences (Burigi North Burigi, and Ruiza NE).

A more comprehensive drilling program will be generated and released to ASX in due course.

#### **SUMMARY OF EXPLORATION ACTIVITIES IN 2021**

Adavale's maiden diamond drilling ("DD") program commenced in June 2021 and was paused in late December 2021 due to the onset of the wet season.

Eight dedicated DD drill holes (and one extension to a RC hole) were completed in this period for a total of 3,013 drill metres. The drillhole target selection criteria evolved considerably during this period with the introduction of gravity surveying into the targeting criteria in September 2021.

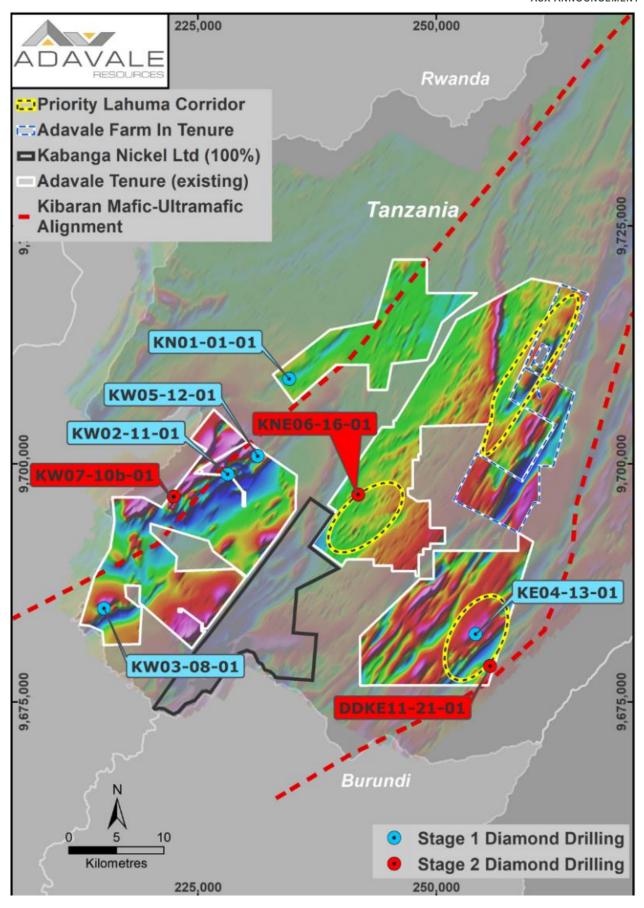
Early DD target selection criteria, focussed on identifying coincident soil geochemical, airborne magnetic and electromagnetic (EM) anomalies to select targets.

Visual logging, confirmed by assay results now received for the initial 5 holes of the program confirms the presence of extensive, sediment hosted pyrrhotite/pyrite rich veinlets in all 5 holes. This explains the coincident basis of the EM and magnetic anomalies used to target the drill holes. These initial outcomes were released on the ASX (Announcement dated 26 July 2021 titled "Maiden Drillhole Intercepts Ni and Cu bearing Sulphide Veins"; Announcement dated 16 September 2021 "Adavale Exploration Tightens the Net: 3 Drill Holes Complete") and has supported the fact that no significant Ni assay results were reported for these 5 holes. Drill results for the remaining three DD holes and RC (RCDD) drill program will be released when received.

These initial 5 holes did not intersect significant mafic – ultramafic bodies (a prerequisite for a nickel sulphide discovery) during this early drilling phase. The availability of gravity survey data, as part of the DD target selection criteria from September 2021 onwards, resulted in the reprioritisation of targets for the remaining holes of the maiden DD program. Assay results are awaited and expected in the March quarter for these 3 drill holes. (See plan view Map 2 below)

From September 2021, gravity surveys were completed over a total of 14 targets areas in 2021.

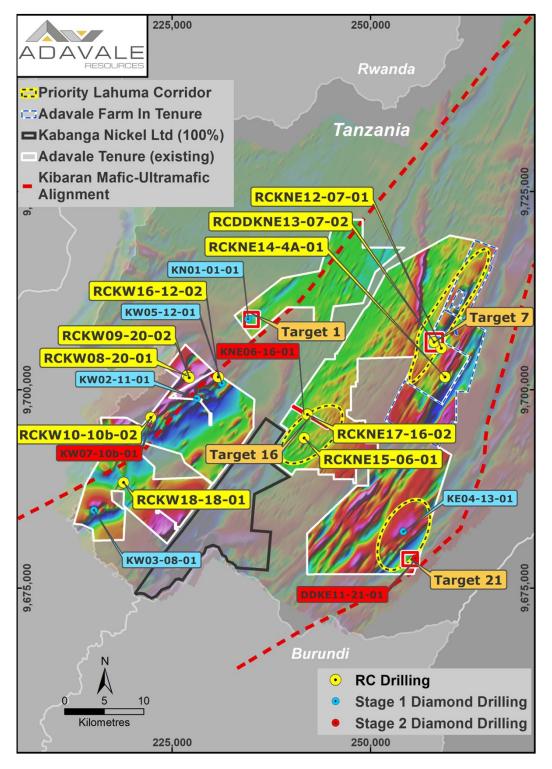
The anomalies identified ranged from weak 0.2 mGal to very strong plus 1.0 mGal anomalies as a reference. To expedite the program to test several anomalies before the end of the 2021 field season a dedicated RC drill rig and RC drilling program was instigated during November 2021.



Map 2 Plan view of the initial Stage 1, 5 holes of the Diamond Drilling (DD) program and Stage 2 three DD Holes

Eight targets were tested based on a mix of the strength of the gravity anomaly and the characteristics of the existing geochemical, EM and magnetic signatures at each target area.

In all, 10 RC holes (see Map 3) were completed for a total of 1,435 drill metres. Importantly, following the introduction gravity data into the targeting mix, significant mafic lithologies were intersected by drill holes (both RC and DD) at Targets 7, 16 and 21. Thinner, less significant mafic bodies were intersected several other drill holes.



Map 3: DD and RC dill hole collar locations and key target areas in proximity to Luhuma corridor

Drill hole RCDDKNE13-07-02 at Target 7 which targeted a partially defined, strong 1.0 mGal gravity anomaly was the standout drilling outcome, intersecting a large previously unknown mineralised mafic – ultramafic body. RC holes that targeted gravity anomalies of 0.7 mGal or greater, generally intersected mafic – ultramafic lithologies over part of the hole length, confirming the benefit of using gravity in the target selection criteria.

#### Target 7 Disseminated Sulphides (RC and Diamond drill hole RCDDKNE 13-07-02)

Drill hole RCDDKNE 13-07-02 (Target 7) was collared to test a partially defined, strong (1.0 mGal) gravity anomaly (refer to Company ASX announcement dated 16 December 2021).

From a depth of 83m to the end of hole depth at 330.9m, the drill hole intersected a previously unknown mafic/ultramafic body containing fine grained, pyrrhotite dominant, disseminated sulphides over much of its length. Two zones containing more elevated concentrations (~10%) of disseminated and blebby sulphides were intersected between 148 to 161m and 172 to 182m and fine disseminated sulphides ranging to ~5% from 240m to 330m.



Figure 2 – Zoomed in image of core showing disseminated character of sulphides throughout 148 to 161m interval.



Figure 3 – Showing coarser blebby sulphides from 130.2 and 132m on left and disseminated sulphides on broken face of core on the right.

Visual mineralogical logging suggests the body is a medium grained, olivine gabbro to gabbronorite. Portable XRF readings performed on the core returned MgO values ranging between 10 to 24%. Nickel readings typically ranged between 500ppm to over 0.9% over most of the core with a coarse blebby sulphide recording an individual high reading of 1.7% Ni.

The hole has been sampled from 122m to 331m with samples submitted to SGS in Tanzania for assay. Assay results are anticipated in the March quarter. A downhole electromagnetic survey of the hole is scheduled for completion in February 2022.

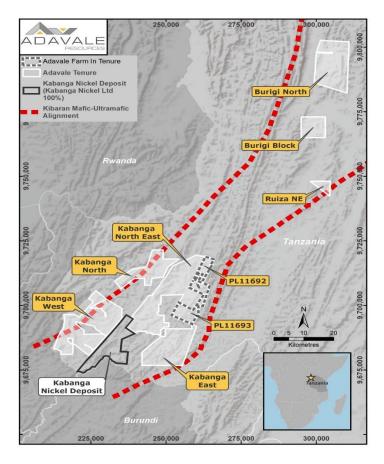
Target 7 is close to the tenement boundary with ground recently accessed by Adavale through a Farm-in Agreement with Ally Mbarak Nahdi (*refer to Company ASX announcement dated 15 December 2021*).

This announcement has been authorised for release by The Board of Adavale Resources Limited.

# For further information please contact <a href="mailto:investor@adavaleresources.com">investor@adavaleresources.com</a> or visit www.adavaleresources.com

#### **About Adavale**

Adavale Resources Limited (ASX:ADD) is a nickel sulphide exploration company that holds 100% of the Kabanga Jirani Nickel Project, a portfolio of 7 highly prospective granted licences covering ~ 1,145km2 along the Karagwe-Ankolean belt in Tanzania. The 4 southernmost licences are proximal to the world class Kabanga Nickel Deposit (58Mt @ 2.62% Ni). Adavale has Farmed-In two (2) more highly prospective licences contiguous to our four (4) southernmost licences, adding a further 99km2 to the portfolio. Adavale's licences were selected based on their strong geochemical and geophysical signatures from previous exploration undertaken by BHP Billiton.



Adavale also holds three exploration licences for their sedimentary uranium potential within the northern part of the highly prospective Lake Frome Embayment in South Australia.

#### **Competent Persons Statement**

The information in this release that relates to "exploration results" for the Kabanga Jirani Nickel Project and Luhuma Nickel Project is based on information compiled or reviewed by Mr David Dodd of MSA, South Africa. Mr Dodd is a consultant for Adavale Resources Limited and is a member of the SACNASP. Mr Dodd has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration as well as to the activity that is being undertaking to qualify as a Competent Person under the ASX Listing Rules. Mr Dodd consents to this release in the form and context in which it appears.

#### pXRF Analyses

The Ni and MgO readings reported in this announcement and earlier announcements by the Company are based on hand-held (portable pXRF) and desktop XRF devices. While the Company takes every reasonable measure to ensure the reliability and accuracy of the XRF devices by regular calibration checks against certified standards and is confident of the reported values, the readings are point measurements on core or core chips and therefore may not reflect the assayed grade of the broader sampled interval.

#### **Forward Looking Statements**

This document contains forward looking statements concerning Adavale. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on Adavale's beliefs, opinions and estimates of Adavale as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments. Although management believes that the assumptions made by the Company and the expectations represented by such information are reasonable, there can be no assurance that the forward looking information will prove to be accurate.

Forward-looking information involves known and unknown risks, uncertainties, and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any anticipated future results, performance or achievements expressed or implied by such forward-looking information. Such factors include, among others, the actual market price of nickel, the actual results of future exploration, changes in project parameters as plans continue to be evaluated, as well as those factors disclosed in the Company's publicly filed documents. Readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws. No representation, warranty or undertaking, express or implied, is given or made by the Company that the occurrence of the events expressed or implied in any forward-looking statements in this presentation will actually occur.