Jadar Resources

ASX RELEASE: 5 October 2021

ACQUISITION OF KHARTOUM TENEMENTS COMPLETE

Highlights:

- **Transfer of Khartoum tenements to Jadar complete.**
- **Project favourably located approximately 100km South-West of Cairns city and within 20km of the regional centres Atherton and Mt Garnet.**
- **Numerous historic mines and tin occurrences within tenements with only a few prospects drill tested.**
- **Project also hosts previously exploited lead-zinc-silver, tungsten, copper and gold occurrences. Rock chip sampling has returned elevated indium values to 480ppm[1].**
- **Jadar currently compiling all historic data and prioritising targets for immediate work.**
- **Demonstrated potential for both economic low-grade, bulk tonnage greisen-style mineralisation and high-grade vein-style mineralisation within the Project.**
- **Several walk-up drill targets already identified.**
- **Mt Veteran tin processing plant, recently upgraded in late 2019, located adjacent to Khartoum tenements.**

Jadar Resources Limited (ASX:JDR) ("**Jadar**", the "**Company**") is pleased to announce the transfer of the Khartoum tenements to the Company, thus concluding acquisition of the Project. The Khartoum Project comprises five granted Exploration Licence for Minerals (EPM) and one EPM application covering 390 square kilometres.

The tenements host a large number of historic mines, primarily for tin, although lead-zinc-silver, tungsten and minor amounts of copper and gold have also been won. Recent sampling has also returned elevated indium results.

Jadar is currently compiling the large amount of available historic exploration and mining data to define an exploration strategy for the Project. Work by previous explorers has already outlined several drill targets with only one prospect tested by recent drilling. Historic drilling has returned significant results at several prospects, however exact collar locations are unknown.

Numerous outcropping occurrences tin-greisen mineralisation have previously been mapped and sampled within the Khartoum Project. The greisen-style mineralisation provides an attractive low-grade, bulk tonnage Mineral Resource target, particularly with tin prices over $US35,000/tonne[2]. Potential also exists for smaller high-grade (>1% Sn) Mineral Resources associated with historic workings that could be blended with the greisen mineralisation to increase mill head grade.

[1] ASX Announcement 30 March 2021 – Due Diligence Completed and Moving Towards Settlement of Khartoum Tin-Silver-Tungsten Project
[2] London Metal Exchange - 1 October 2021

Mineralisation and Exploration Targets

Tin mineralisation in the Khartoum-Kitchener area occurs mainly as fracture-controlled fissure filling associated with quartz veining, or replacement greisen bodies. Figure 1 shows historic mine production within the Khartoum area. It should be noted that **all** the historic production is from higher-grade (typically greater than 1% tin) vein-associated mineralisation. Greisen mineralisation was too low grade for historic production.

There is demonstrated potential for both economic low-grade, bulk tonnage greisen-style mineralisation and high-grade vein-style mineralisation within the Khartoum Project.

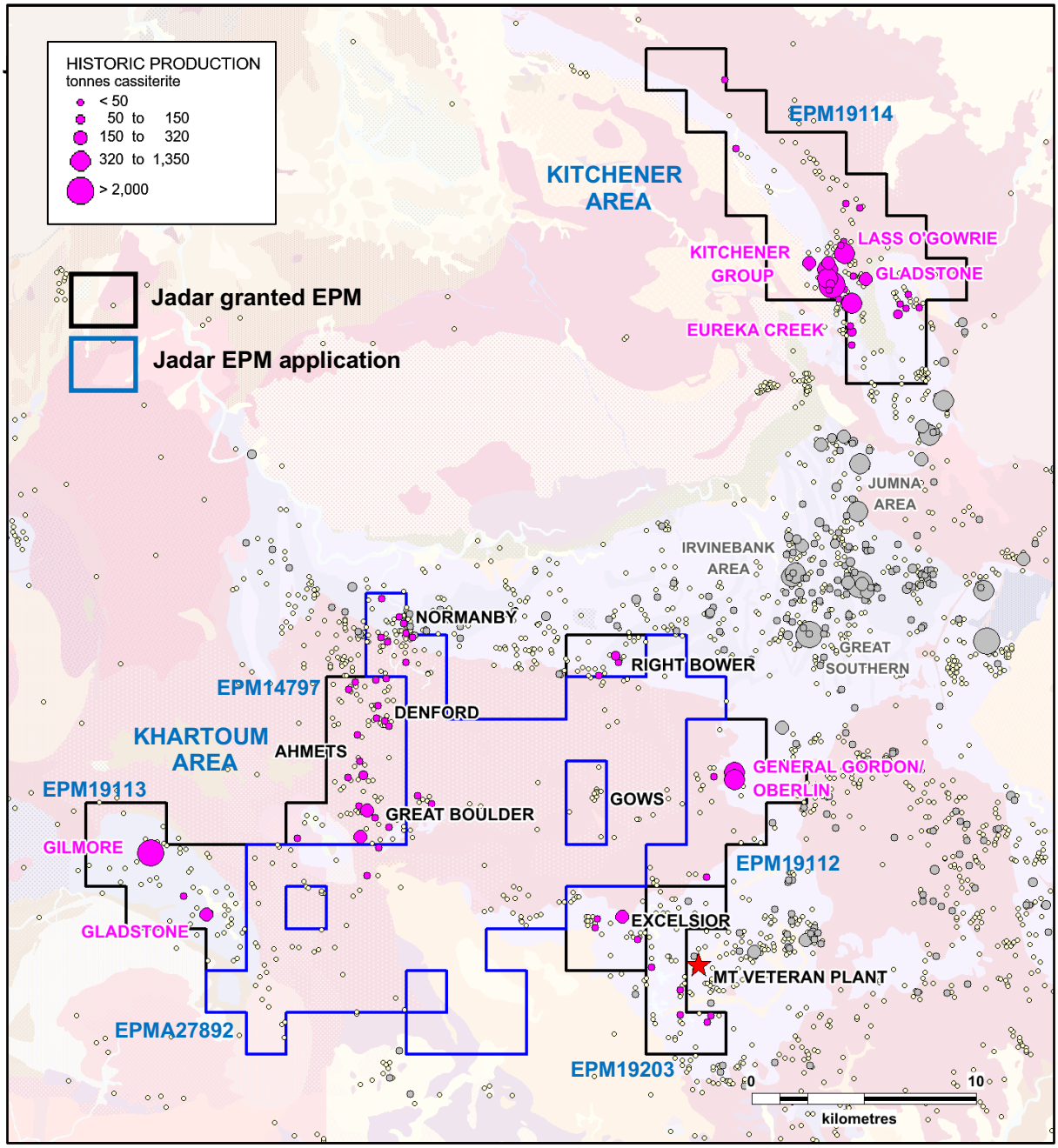

Figure 1. Historic production in the Khartoum-Kitchener area.

Mineralisation in the Kitchener area is of the higher-grade, quartz vein-hosted style. Host lithologies are sediments of the Hodgkinson Formation, with metalliferous veining infiltrating fissures within the sediment carapace from the underlying tin-granite source. Mineralisation is generally less continuous however grades are greater than 1% Sn. An example is the Kitchener line of lode that includes the Black Rock, Central Hill, Kitchener, Kitchener Extended, Ivanhoe and Eclipse quartz reef workings, and extends further north to the You and Me open pit, a line of lode that extends for 1.3km (Figure 2). The major years of production were from 1903-1910 when approximately 144,000t of ore was mined at an average grade of 1.7% Sn (Blake, 1970)[3]. The You and Me Mine was the last of the deposits to be worked - between November 1964 and July 1969, the mine produced approximately 3,090 tons of greater than 2% Sn ore. The Ivanhoe Mine accounted for almost half the historic tin production with 32,364 tons of ore produced at 3.26% Sn.

The Kitchener trend presents a compelling drill target for immediate exploration work. Limited surface and underground drilling was undertaken during the 1960s to 1970s, however available records are incomplete. Apart from the Ivanhoe workings, most of the underground development is less than 100m from surface and stoping of ore was not comprehensive, providing both shallow and deeper drill targets.

Other immediate targets in the Kitchener area include the Lass o'Gowrie (6885 ton at 7.6% Sn), Gladstone (804 ton at 23.38% Sn), Young Australian (323 ton at 4.2% Sn), Rose of England (246 ton at 3.2% Sn) and Last Chance (452 ton at 3.61% Sn) (production figures from Blake, 1970)[3].

Greisen style mineralisation in the Kitchener area is yet to be assessed. Dependent on the thickness of the sediment carapace, there may be potential for greisen mineralisation at depth, at the sediment-granite contact.

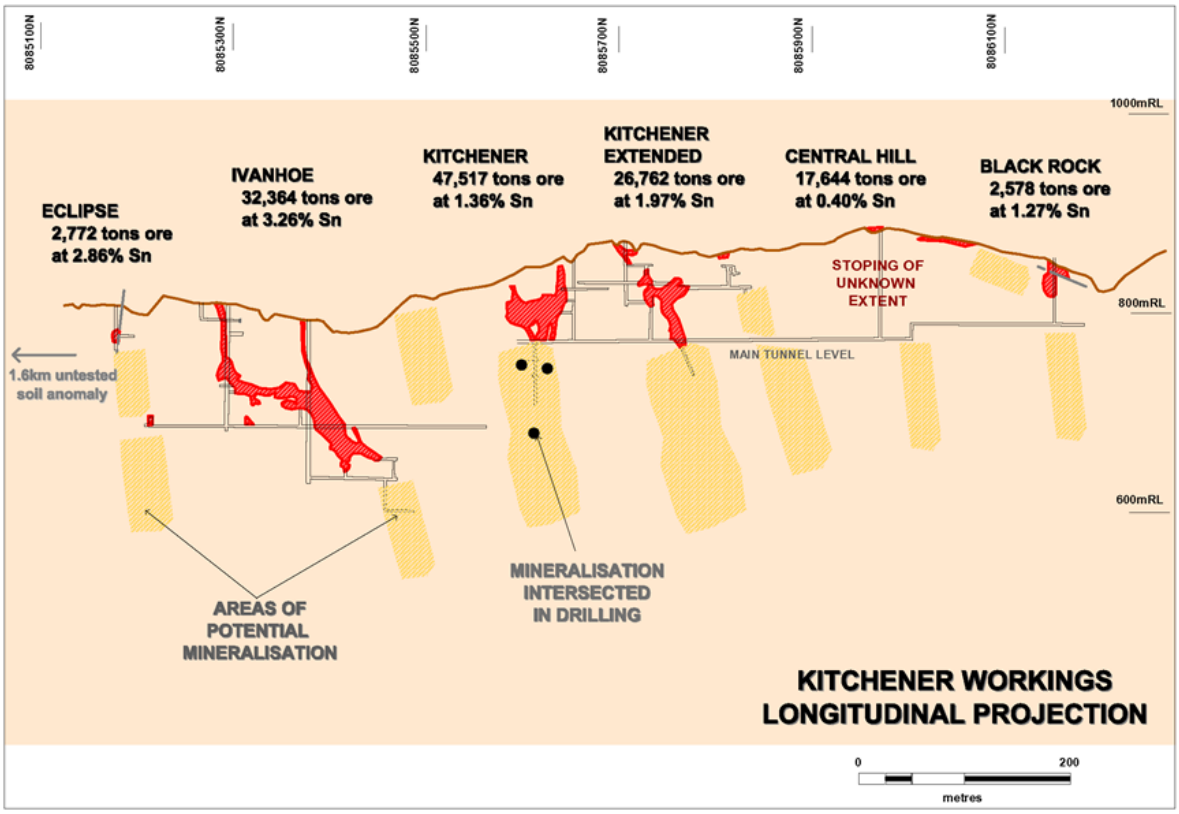

Figure 2. Long section through Kitchener line workings and historic production[3].

[3] Blake, DH. Geology and mineral deposits of the Herberton Tinfield, north Queensland. Queensland Government Mining Journal. 1970

Recent exploration in the Khartoum area has targeted the potential for bulk tonnage greisen-style mineralisation. Multiple layer prospectivity modelling was undertaken utilising magnetic, radiometric and gravity data to refine mineralisation interpretation with source granites mapped in 3D, highlighting target areas, and faults mapped showing vital fluid pathways.

Mapping and outcrop geochemistry defined a number of tin mineralised greisen targets in the west of the Khartoum tenements over a zone of 9km by 3km. Alteration is mostly focused around shears in the granite and occurs as flat and steeply dipping, intensely silica altered (greisen) zones, sometimes containing mineralized quartz. Broad alteration halos also occur around quartz pipes that stand out as small hilltops.

Follow up soil sampling delineated a 8.5km >100ppm Sn anomalous zone within which were several elevated zones of > 500ppm Sn defining targets for further mapping, outcrop sampling and trenching. The Boulder-Ahmets-Khan prospects produced the strongest anomalies. Rock chip channel sampling was completed over 12 selected greisen bodies to assess potential grade and widths of tin mineralisation in the near surface. Results were very encouraging with six of the ten pipes sampled averaging greater than 0.1% tin. The pipes also contain anomalous Ag, As, Bi, Cu, In, Pb and W.[4]

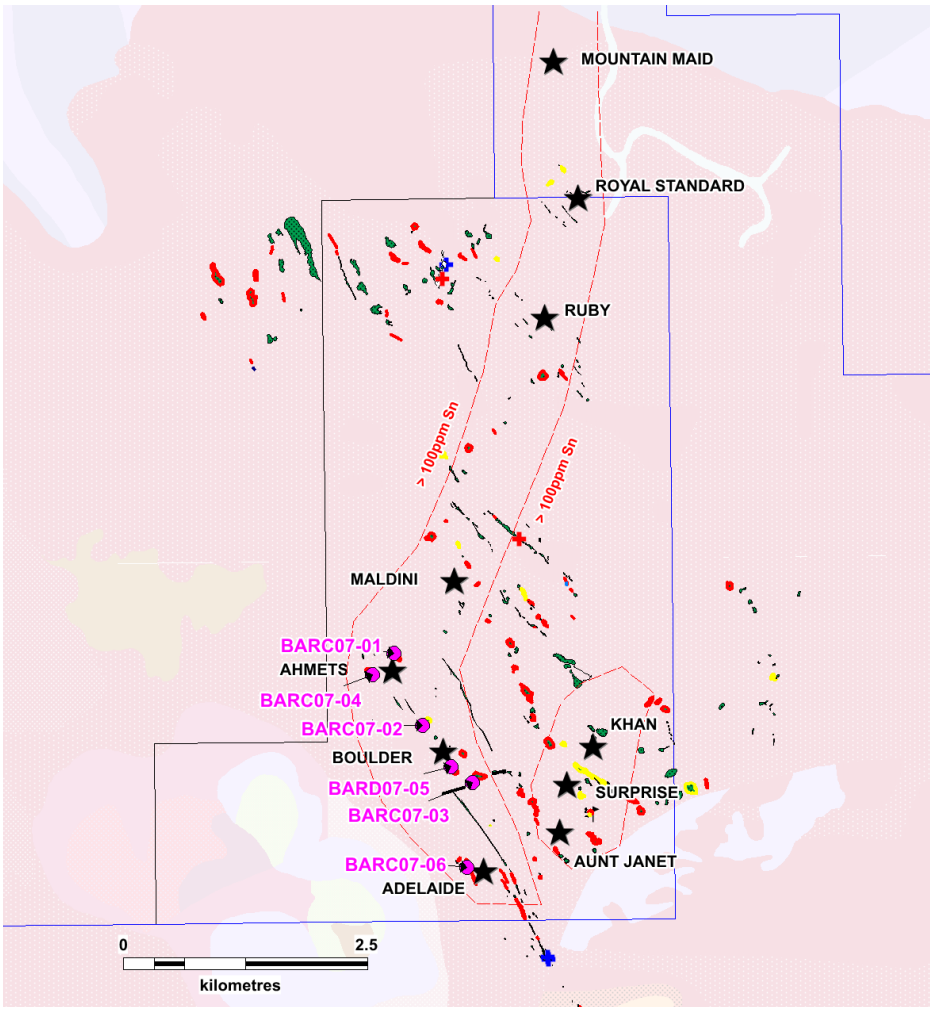

Figure 3. Mapped outcropping greisen zones, soil geochemistry anomalies and main prospects and Ahmets-Boulder drill hole locations.

[4] ASX Announcement 30 March 2021 – Due Diligence Completed and Moving Towards Settlement of Khartoum Tin-Silver-Tungsten Project

A six hole drilling program targeted the most prospective greisens in the Boulder-Ahmets prospect, returning assay results over several wide intervals from 24 to 34m with significant tin mineralisation between 0.14% and 0.26% Sn from three RC drillholes. The single core hole BARD07-05 returned the most encouraging results with 104m at 0.21% Sn from 12m[5].

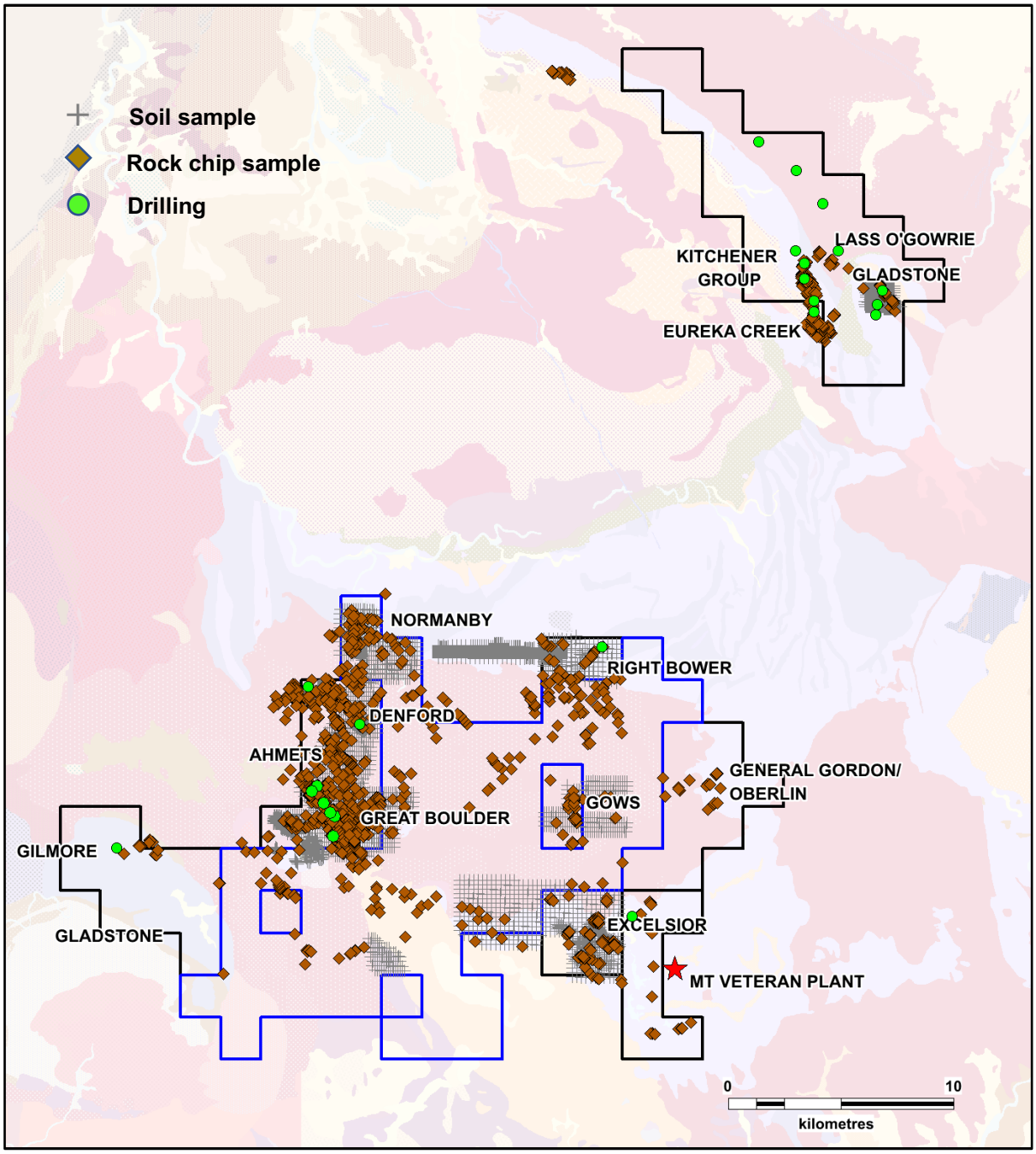

Figure 3. Historic exploration coverage as compiled to date.

[5] ASX Announcement 30 March 2021 – Due Diligence Completed and Moving Towards Settlement of Khartoum Tin-Silver-Tungsten Project

JADAR PROPOSED EXPLORATION

Greisen outcrop mapping and channel sampling by previous tenement holders has resulted in the identification of 107 tin greisen zones of various sizes that have significant tin grade or tonnage potential in the Great Boulder, Denford, Normanby and Right Bower prospect areas.

Assessment of greisen bodies that have greater than 1000m² surface area and surface geochemistry sampling returning greater than 0.15% Sn has identified 22 prospects for further work. This includes the drill tested Ahmets-Boulder prospects.

It should be noted that greisen reconnaissance work has only been undertaken within EPM14797, hence a significant proportion of the Khartoum Project tenure has not been assessed for bulk tonnage, greisen-style mineralisation, particularly the Kitchener area and eastern portions of the Khartoum area.

There are also numerous significant high-grade historic tin producing mines that warrant further attention, particularly the Gilmore Mine that produced 2,000t of cassiterite (SnO_2) concentrate at 7.64% Sn, Right Bower (107t SnO_2 at 13.4% Sn), Omeo (42t SnO_2 at 14.2% Sn) Excelsior (171t SnO_2 at 1.22% Sn), Federal (17.4t SnO_2 at 4.7% Sn), and the previously mentioned mines in the Kitchener area.

Jadar is currently compiling all historic exploration data, including geochemistry, drilling, geophysics and geological mapping, into a centralised database to aid target identification and prioritisation.

As the Khartoum tenements have now been transferred to Jadar, field assessment of previously identified higher-priority prospects can be undertaken. Initial work will be determining greisen zones with greatest potential based on surface geochemistry for drill testing to determine the depth of alteration and tin mineralisation. Previous explorers have demonstrated that surface tin grades are generally comparable at depth, hence only one or two holes should be required at each prospect to determine economic potential and whether further drilling will be warranted.

An assessment of higher-grade mineralisation associated with historic workings will be undertaken once all historic data has been compiled. This will potentially allow for low-grade bulk greisen mineralisation providing long term mill feed, with blending of ore from smaller high-grade deposits to increase head grade.

Other historically exploited commodities present in the Project area, such as tungsten, silver-lead-zinc and gold, will eventually be assessed, however the initial focus will be the delineation of tin Mineral Resources. The Mt Veteran Plant, adjacent to the Khartoum Project (not owned by Jadar), presents an immediate option for toll treating.

For further information on the Khartoum Project, refer to Jadar ASX releases dated 9 February 2021, 30 March 2021 and 9 July 2021.

ENDS

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

Compliance Statement

This announcement contains information on the Khartoum Project extracted from an ASX market announcements dated 9 February 2021 and 30 March 2021 and reported in accordance with the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" ("2012 JORC Code"). JDR confirms that it is not aware of any new information or data that materially affects the information included in the original ASX market announcement.

Competent Person's Statement

The information in this announcement that relates to the Khartoum Project, is based on information compiled by Mr Erik Norum who is a Member of the Australian Institute of Geoscientists. Mr Norum is contracted to Jadar. Mr Norum has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Norum consents to the inclusion in this announcement of the matters based on information in the form and context in which it appears.

Forward Looking Statement

Forward Looking Statements regarding Jadar´s plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that Jadar's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that Jadar will be able to confirm the presence of additional mineral resources, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of Jadar's mineral properties. The performance of Jadar may be influenced by a number of factors which are outside the control of the Company and its Directors, staff, and contractors. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.