KING RIVER RESOURCES LIMITED

QUARTERLY ACTIVITIES REPORT 31 DECEMBER 2020

Australian Securities Exchange Announcement **27 January 2021**

Summary

Prefeasibility focus on producing High Purity Alumina products (HPA) has shifted from a mine operation based at Speewah towards a more direct industrial aluminum feedstock project based at Kwinana.

A simpler flowsheet offers potential advantages and economic benefits in Capex and Opex savings and fewer process and development risks.

Laboratory test results have already confirmed the production of a high purity precursor compound suitable for calcining into HPA.

KRR engaged an environmental consultant with experience in the Kwinana industrial area to assist with site selection and permitting requirements for the type of chemical processing required for a HPA operation. The environmental and permitting investigation should be finalised in January 2021.

The completion of the metallurgical testwork and engineering studies to finalise the PFS is now expected in Q1 2021.

The alternative Speewah mine testwork and studies will also continue, but that focus now shifts towards a broader range of high purity battery metals and master alloy compounds.

Drilling of 2,376m at the Lone Star Trend and Commitment IOCG prospects at Tennant Creek in the NT was completed with anomalous indicator elements were identified in ironstones.

Drilling about 2,500m at the Mt Remarkable Gold Project in WA was completed with assays pending.

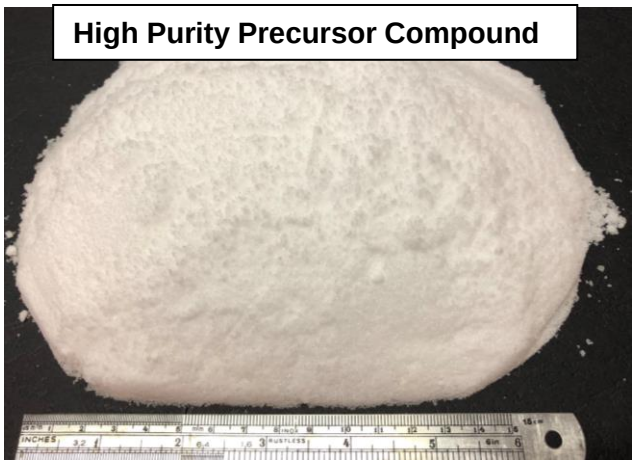
HPA PFS Update (refer KRR ASX releases 13/10/20, 11/11/20, 19/11/20, 26/11/20 and 15/12/20)

The Speewah Prefeasibility Study (PFS) testwork and studies have now identified a more direct route to complete a process design that outlines a lower risk and faster path towards High Purity Alumina (HPA) production.

Seven tests were completed by TSW Analytical using an Aluminum chemical compound as feedstock that is an internationally traded commodity sourced from industrial chemical processes.

A high purity HPA precursor was made by only two purification process steps, significantly fewer than required for the Speewah feedstock option.

High Purity Precursor Compound



The HPA precursor is of very high purity, with most elements below 1ppm. This precursor may be suitable for the production of 4N (99.99% Al_2O_3) HPA after calcination and washing.

Calcination at 1250°C of HPA precursors is underway. This important final process step will focus on ensuring no contamination is introduced during the heating and assaying processes so 4N (99.99% Al2O3) HPA is produced.

This alternative production circuit is a simpler process than the Speewah process flowsheets and not require the development of associated mining, processing and logistical infrastructure up at Speewah.

Como Engineers continued the process plant and infrastructure design and costings based on the updated HPA flowsheet for the production of 4N HPA.

KRR engaged an environmental consultant with experience in the Kwinana industrial area to assist with site selection and permitting requirements for the type of chemical processing required for a HPA operation. The environmental and permitting investigation is ongoing and should be finalised in January 2021.

KRR has considered several sites in Western Australia and Queensland and has decided on the Kwinana area located within the Western Trade Coast (WTC) industrial area, 30-40 km south of Perth's CBD on the eastern side of Cockburn Sound. The WTC is the State's premier industrial area and is well-served by major transport links, including deep-water bulk port facilities, freight routes and heavy rail. Land sales and leasing is managed through the Department of Jobs, Tourism, Science, and Innovation (JTSI), and Development WA.

CRU International worked on updating the HPA market study to a 2028 dateline and it supports strong future demand and pricing of HPA.

The completion of the metallurgical testwork and engineering studies to finalise the PFS based on a Kwinana operation is now expected in Q1 2021.

KRR is also advancing the Speewah Specialty Metals ("SSM") Project in the East Kimberley of WA. KRR's initial plan was to produce High Purity Alumina (HPA) from the SSM, with Vanadium (V_2O_5), Titanium (TiO_2) and Iron (Fe oxide) as potential co-products at a later stage. With the current plan to develop the HPA operation at Kwinana, the Speewah metallurgical testwork focus has shifted to extract high purity vanadium and titanium products to address the current interest in battery metals and master alloy compounds of the green economy.

Gold Exploration Update

Mt Remarkable

KRR undertook a 2,500m RC drill programme at Mt Remarkable (Figure 1), testing for high-grade gold mineralization at exploration targets as well as follow-up on the encouraging gold results returned from targets drilled in 2018 and 19, including best result of 4m @ 113.29g/t Au including 1m @ 346g/t Au (KRR ASX 4 June 2018). Details of the drill plan were released in KRR ASX announcement 28/10/20. As of 31 December 2020, the drill data had yet to be compiled and assay results were pending.

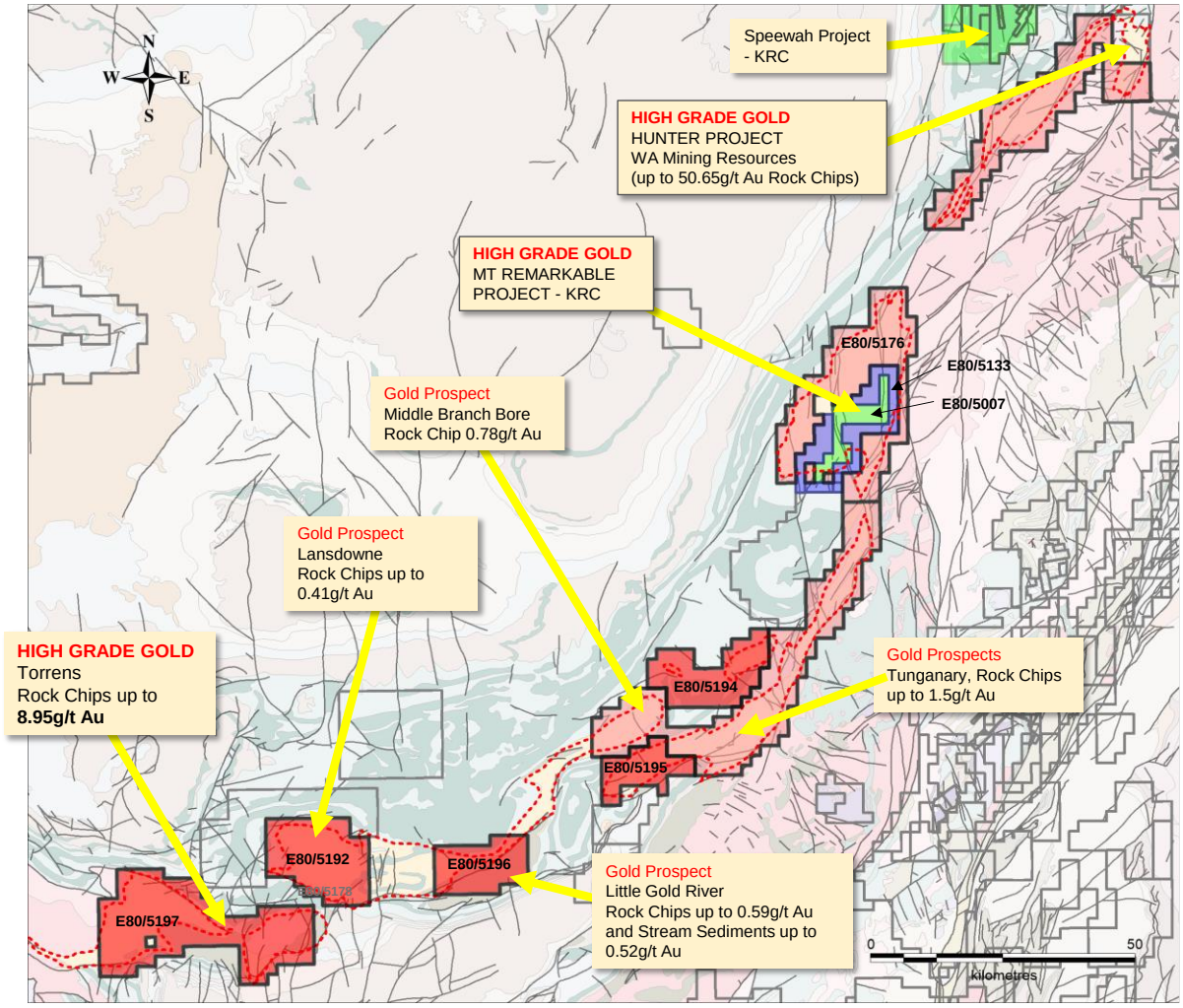


Figure 1: Map showing location of King River Resources exploration holdings at Mt Remarkable and relevant gold prospects.

Trudi Vein

Drilling tested the main Trudi vein where multiple high-grade gold results have been returned including best results of:

- **4m @ 113.29g/t Au including 1m @ 346g/t Au in KMRC78 (refer KRR ASX 4 June 2018)**
- **6m @ 60g/t Au including 2.8m @ 108g/t Au in KMDD01(refer KRR ASX 10 September 2018)**
- **4m @ 39.78g/t Au including 1m @ 82.7g/t Au in KMRC75 (refer KRR ASX 20 June 2018)**
- **4m @ 36.77g/t Au from 7m including 1m @ 70.9g/t Au in KMRC127 (refer KRR ASX 7 August 2018)**
- **3m @ 34.8g/t Au including 1m @ 50.5g/t Au in KMRC0077 (refer KRR ASX 4 June 2018)**

The 4 main targets tested on the Trudi vein (Figure 2) are:

- Trudi Main (strike and dip extensions to the high grade zones delineated in previous grid drilling)
- Trudi Offset (the newly identified mineralization intersected in 2019 approximately 150m east of the main deposit)
- Trudi West (testing of the western extents of the vein 150m from the main deposit)
- Trudi East (where previous KRR drilling returned mineralization in 3 shallow RC holes 500m east of the main deposit).

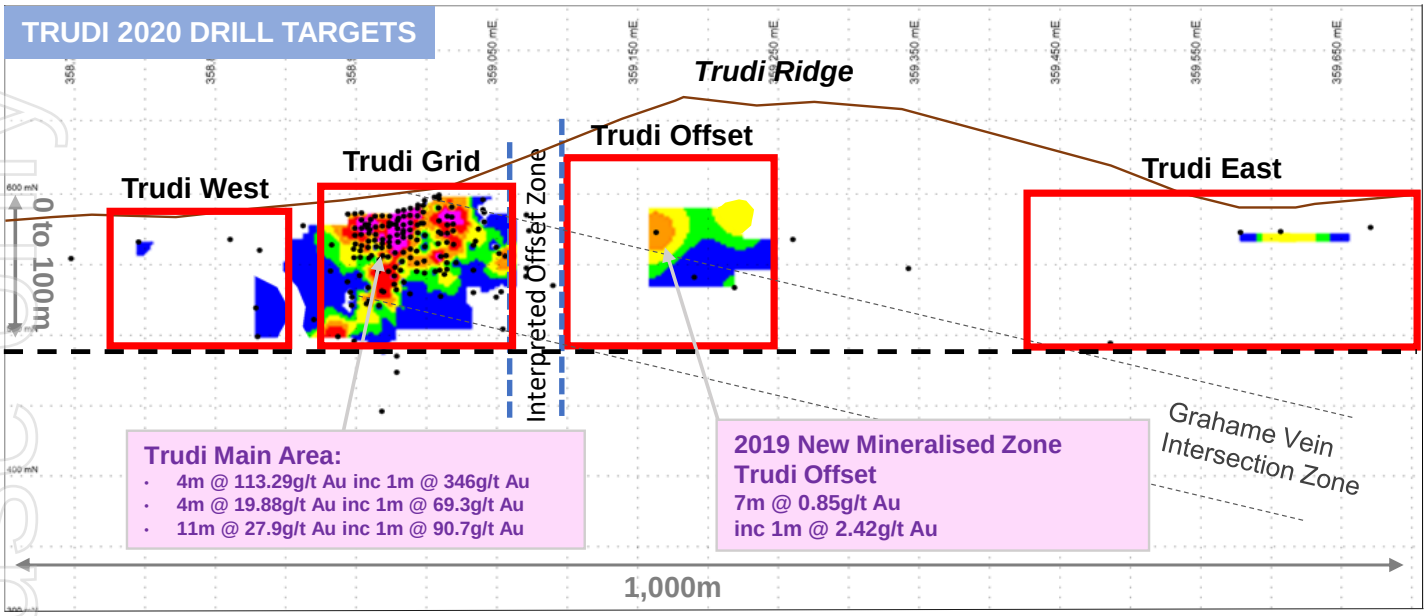


Figure 2: Long projection, looking north, showing the new mineralised zone intersected 150m east of Trudi Main and the multiple very high-grade gold zones within the Trudi Main Grid Area.

Other Veins

Other prospective epithermal veins targeted included:

- The Jeniffer North prospect (where initial drilling in 2019 returned mineralisation in 3 adjacent holes with grades up to 0.64g/t Au),
- The Catherine Vein in a similar litho-structural setting to the Trudi vein where it intersects the Grahame Vein under interpreted cover units. This is 400m north of the main Trudi deposit (Figure 3).
- Gemma Offset Vein where historical sampling returned gold grades up to 0.72g/t in rock chip grab sampling along 300m of strike but the vein was never drilled.
- A quartz adularia vein where previous rock chip grab sampling returned grades up to 30.8g/t in rock chip samples (Figure 3). Drilling is targeting an en-echelon zone of the vein that previous drilling may have missed.

Reconnaissance exploration is planned for early next dry season across KRR's extensive tenement holdings in the region (Figure 1). These tenements cover the prospective Proterozoic Whitewater Volcanic rocks that extend 200km along a NE-SW strike south of the Speewah Dome, and host the high grade gold mineralisation at the Mt Remarkable Project, commonly in anticlinal settings. Past exploration along this prospective trend has been sparse providing excellent opportunity for additional high-grade gold discoveries within the Whitewater unit.

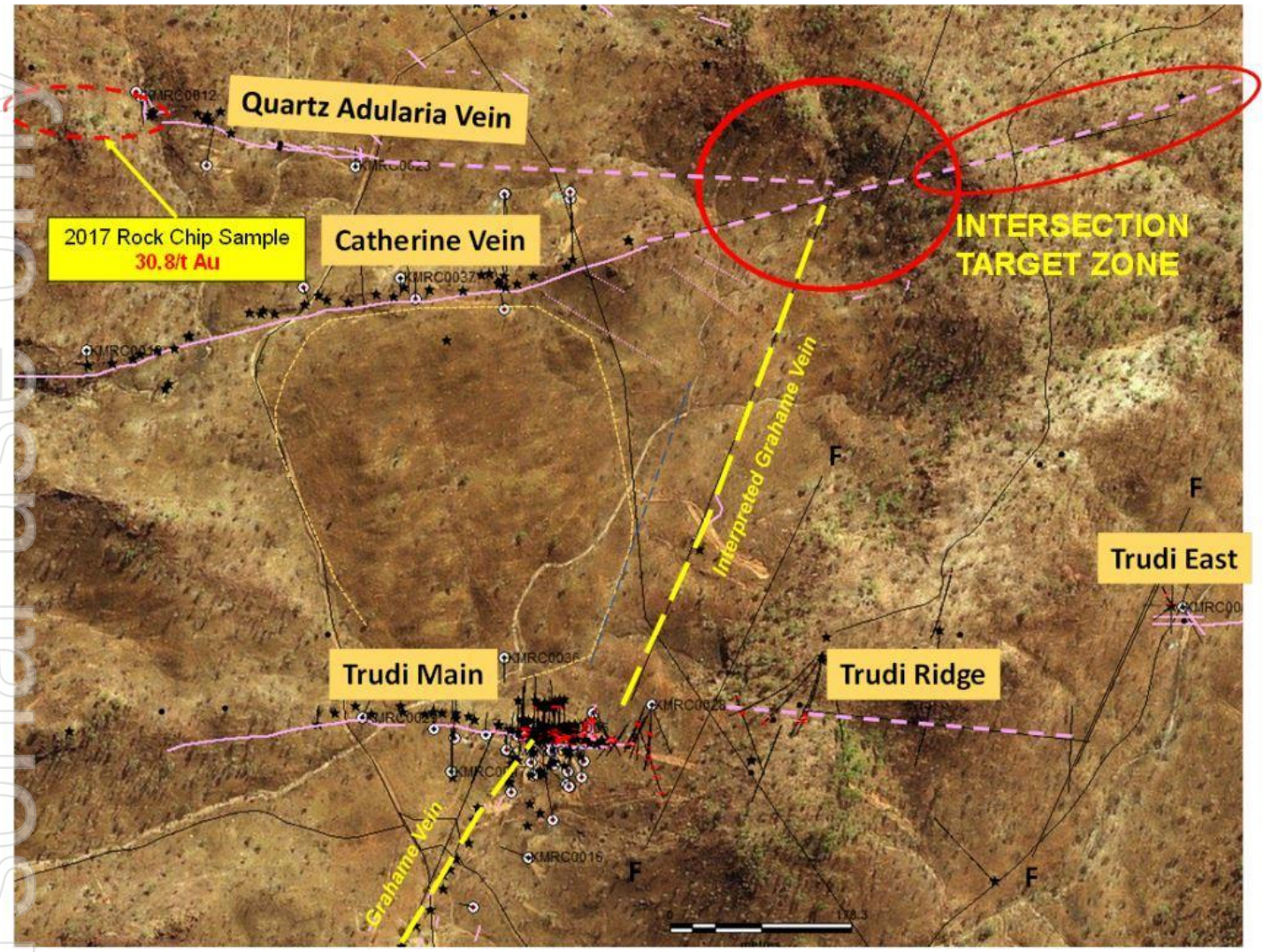


Figure 3: Mt Remarkable Main Zone, New High Grade gold target where the Catherine Vein intersects with the Grahame vein under interpreted cover units – very similar lithostructural setting to the Trudi deposit.

Tennant Creek

KRR completed a total of 11 RC holes for 2,376m at two of KRR's Tennant East prospects, Lone Star Trend and Commitment (Figure 4), with the newly discovered ironstones intersected at Commitment under Cambrian cover rocks of the Georgina Basin. Assay results from the ironstones are geochemically anomalous indicating they are prospective for hosting IOCG gold mineralisation. Details of the RC hole collars and assay results were provided in KRR ASX release 5/11/20.

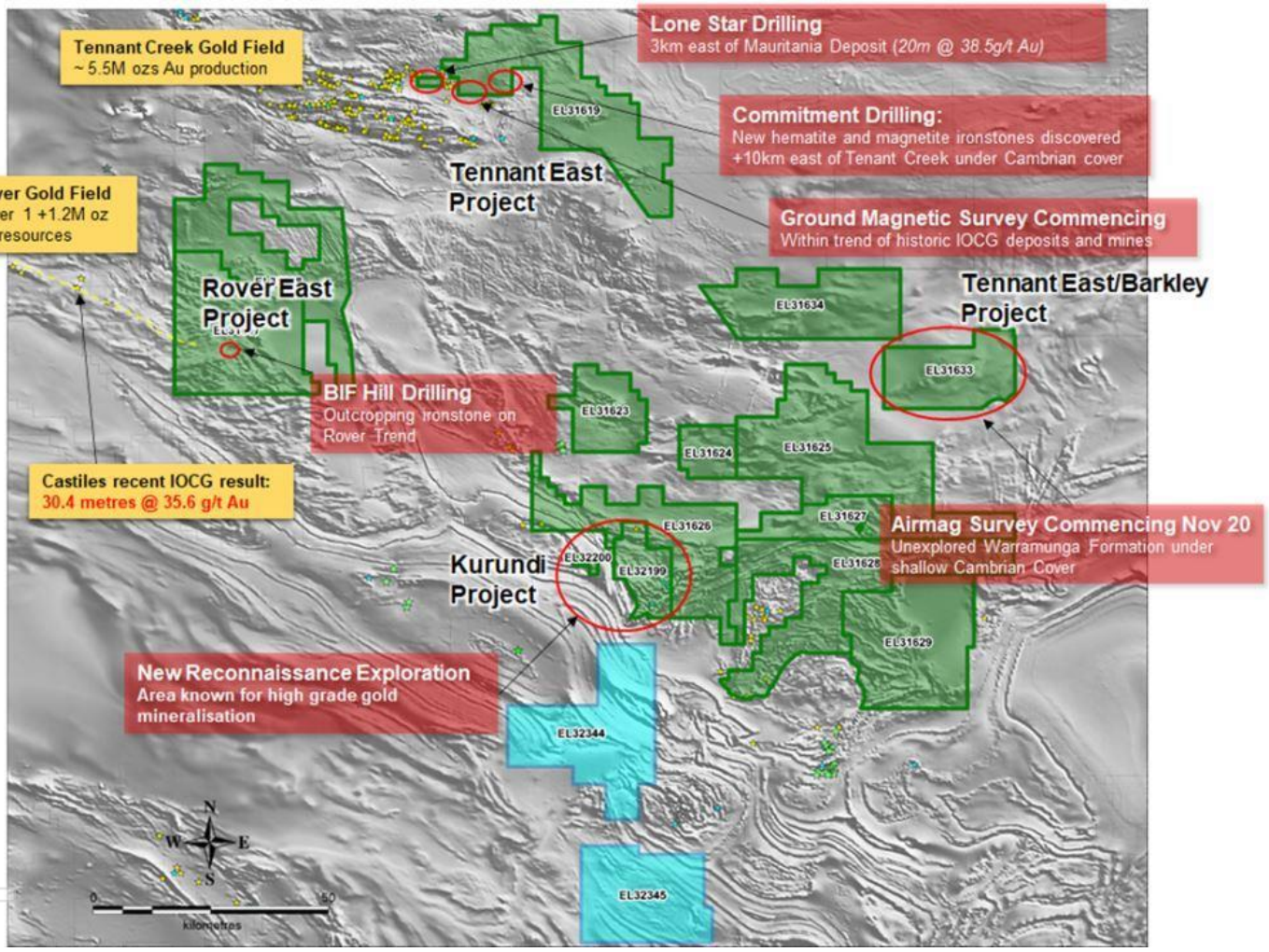


Figure 4: KRR's Tennant Creek Tenements and Project Areas. Green polygons granted, Blue polygons newly granted.

Commitment Drilling

Two holes for 474m targeted a large NW striking airborne magnetic anomaly and coincident gravity anomaly 35km east of Tennant Creek, 10km east of the eastern most known Tennant Creek IOCG deposit, and under Cambrian cover of the Georgina Basin overlooked by previous exploration (Figure 5).

Drilling found the cover to be only 30 to 70m deep with both holes intersecting ironstone in Warramunga Formation basement rocks. The eastern most hole (TTRC009) targeted a gravity anomaly offset from the main airborne magnetic anomaly and intersected hematite rich ironstone. The western most hole targeted the main airborne magnetic anomaly and intersected a hematite/magnetite ironstone surrounded by a broad zone of magnetite alteration (Figures 6 and 7). Both ironstones were geochemically anomalous with Cu, Co, Bi anomalies many times above background, and warrant further exploration.

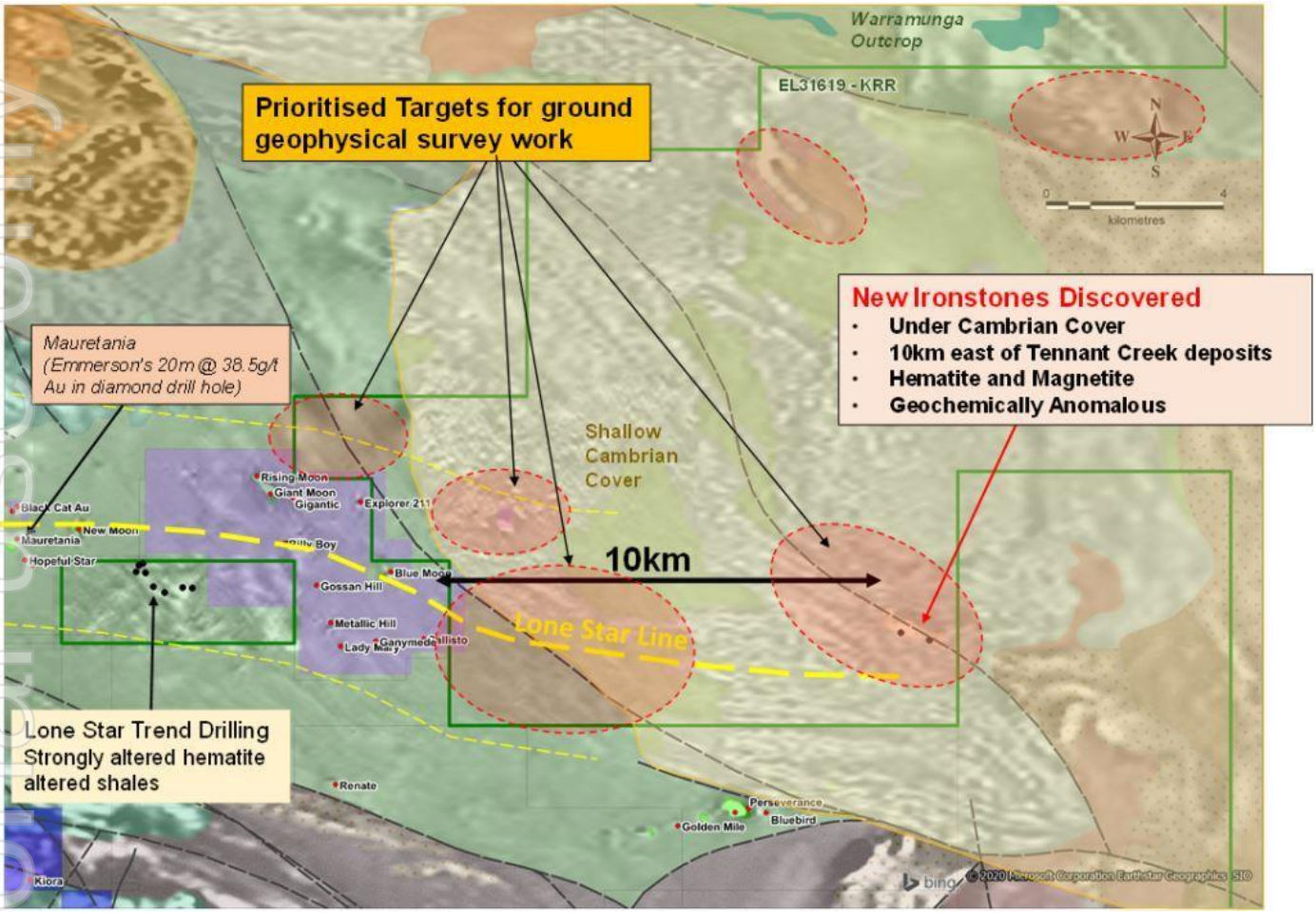


Figure 5: Tennant East Drilling, New ironstones intersected 35km east of Tennant Creek and 10km beyond eastern most deposit on the Lone Star Trend at Tennant Creek.

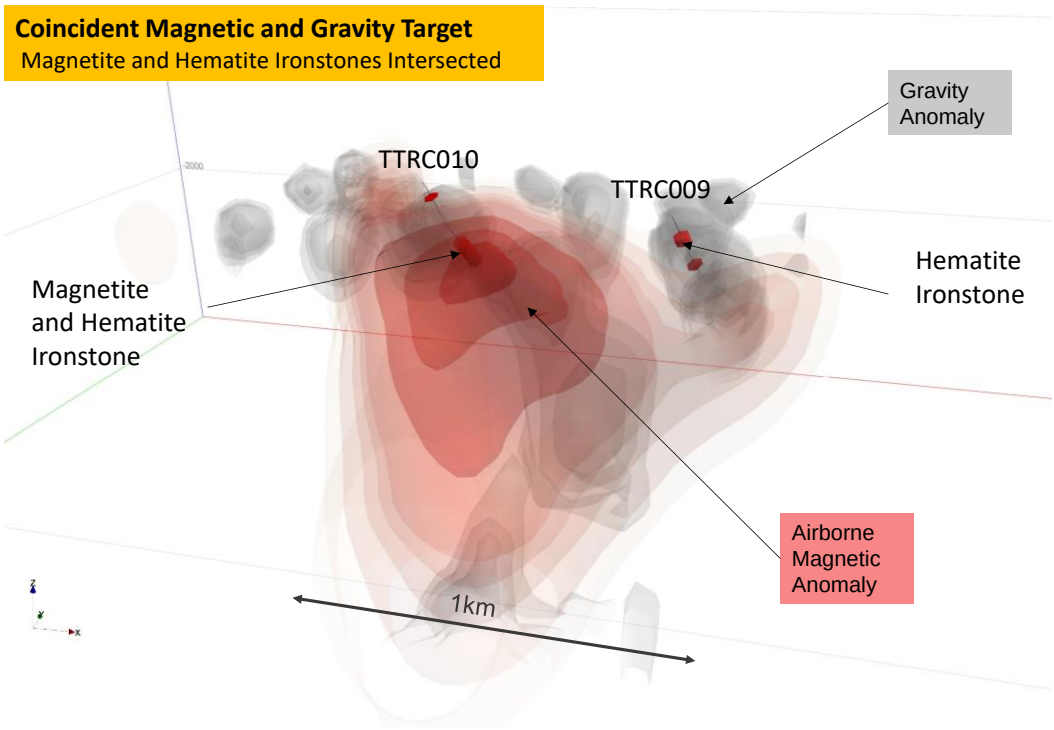


Figure 6: Commitment Drilling, showing targeted airborne magnetic anomaly and gravity anomalies as isosurfaces.

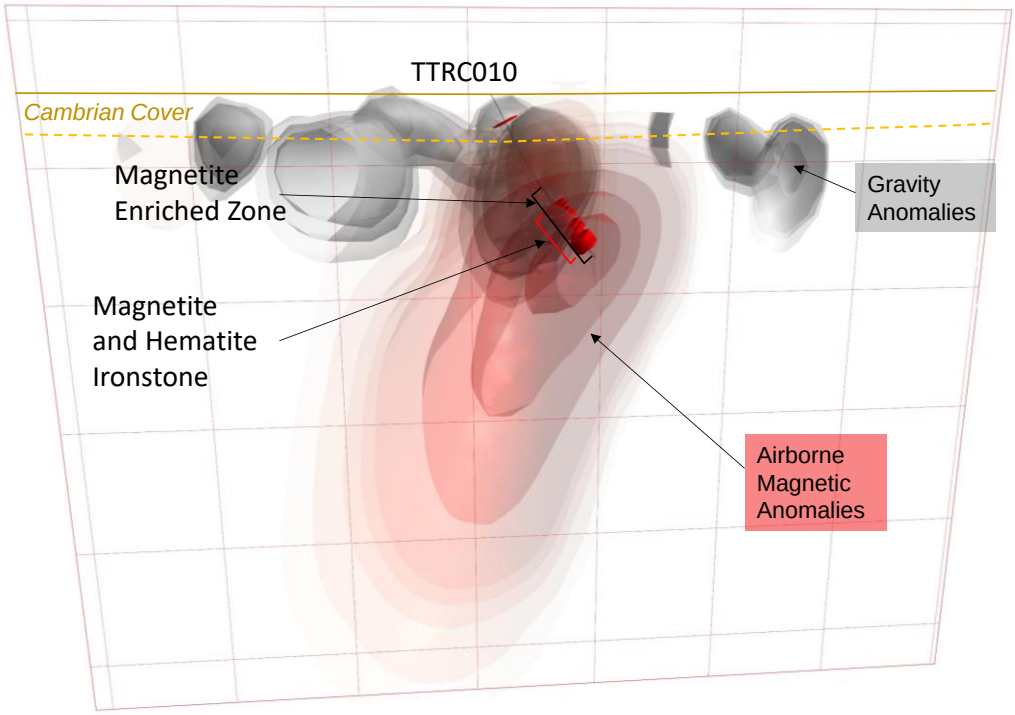


Figure 7: Commitment drill section: TTRC010 with airborne magnetic anomaly/gravity anomalies as isosurfaces.

The main airborne magnetic anomaly is over 1km in strike length. A detailed ground magnetic survey has commenced to help delineate the magnetite rich zones and any relevant structures for more targeted drilling.

The discovery of Warramunga Formation units and geochemically anomalous ironstones under the Cambrian cover demonstrates the potential of KKR's other targets in its Tennant East Project. A selection of targets have now been prioritized for ground magnetic and gravity surveys with five other areas selected for prioritized ground geophysical work (Figure 5 – red ovals), including the areas immediately southwest and northeast of the Metallic Hill, Blue Moon, Lady May, and Gigantic historic IOCG gold mine trends (all between 200-800m of the tenement boundary), where ground magnetic work will be commenced after the Commitment survey is completed.

Lone Star Trend Drilling

Eight holes were drilled to test 3 gravity/magnetic targets at the Lone Star Trend (Figure 8), an area of coincident magnetic and gravity anomalies less than 1km east of Emmerson Resources Mauretania deposit where 20m @ 38.5g/t Au was returned in a diamond drill hole in 2019 (Emmerson Resources ASX announcement 4/7/19). This and other nearby deposits follow NW-SE and EW trends seen in the geophysical results. Two holes were drilled to test the main gravity and magnetic anomaly, three to test a northwest trending zone and three to test an east west trending zone. The drilling intersected strongly hematite altered shales with the best results from the main gravity anomaly where drilling intersected broad veining and zones of very strong hematite alteration with associated elevated values in bismuth, arsenic, antimony and zinc. Work is planned to extend the gravity survey to the edge of the tenement (westward) – to within 700m of Emmerson Resources Mauretania deposit.

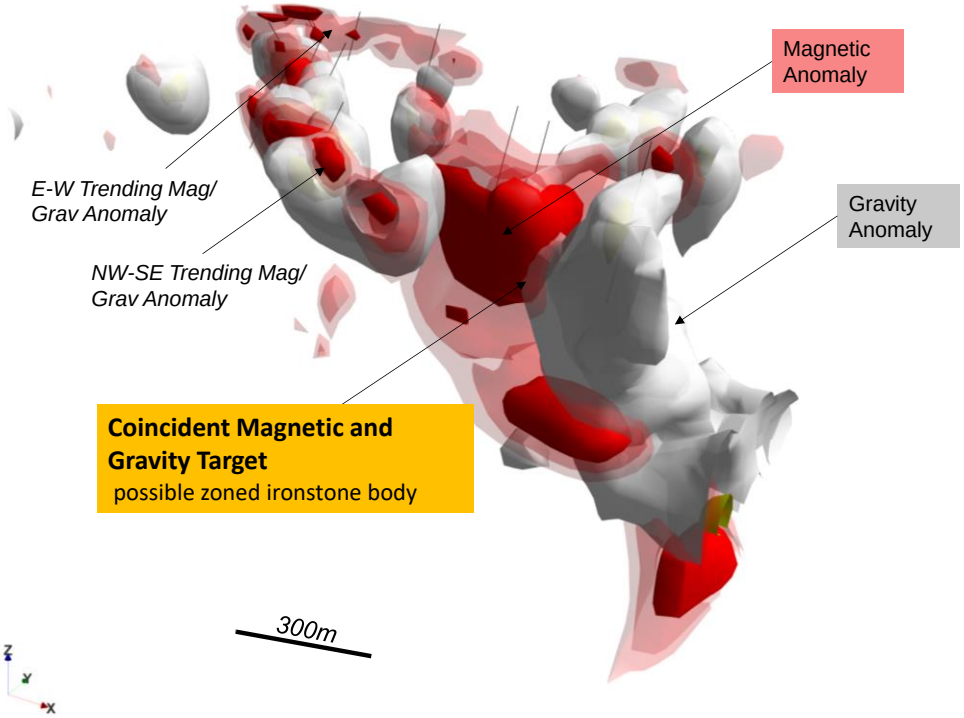


Figure 8: Lone Star Area – 3D view showing magnetic (red) and gravity (grey) isosurfaces of 2019 ground magnetic and gravity survey models. Drilling targeted 3 trends of coincident magnetic and gravity anomalies.

Other Tennant Creek Exploration Plans

The company's subsidiary Treasure Creek Pty Ltd holds 7,900km^2 in 16 tenements in the Tennant Creek Region around the Tennant Creek, Rover and Kurundi Goldfields, covering 4 main project areas: Tennant Creek East, Tennant East/Barkley, Rover East and Kurundi (Figure 4, Table 1).

The Tennant Creek and Rover gold fields are host to high-grade Iron Oxide Copper Gold deposits with over 5.5M ozs Au mined from Tennant Creek and a resource of 1.2M oz Au estimated in 2010 at Rover 1 (Westgold Resources 23/2/10 ASX release). Recent drilling by Castile Resources Ltd at Rover returned stunning gold results of 30.4m @ 35.6g/t Au (CST ASX 14/10/20).

The Treasure Creek holdings cover areas along strike of both the Tennant Creek and Rover Gold Fields with areas of similar stratigraphic and structural settings.

Past exploration in these project areas has been brief, sporadic and disjointed, with many areas under shallow Cambrian cover restricting exploration by historic explorers and preventing discovery. The company believes that, with the application of systematic exploration and new/advanced geophysical techniques to target drilling, significant gold discovery could be made.

Exploration is targeting iron oxide copper gold style mineralization (IOCG) characterized by gold and copper mineralization associated with ironstone bodies, likely of the Tennant Creek Style. These ironstone bodies have varying degrees of hematite and magnetite often forming discrete geophysical targets and are stereotyped by the bonanza gold intersections seen at Tennant Creek.

In the Tennant East/Barkley area KRR has been awarded a grant for funding under Round 13 of the Geophysics and Drilling collaborations program administered by the Northern Territory Geological Survey (NTGS). The co-funded programme (50% of survey costs) includes a ground geophysical and a detailed airborne magnetics survey over EL31633 and a ground geophysical survey over EL31634 to test and define significant magnetic anomalies and depth of cover in a previously unexplored area under the Georgina Basin. These surveys were due to commence in November 2020.

Geophysical review of the Rover East project is underway with multiple geophysical targets already identified. Ground geophysics is planned particularly along the eastern extension of the Rover trend followed by drilling of the best targets. At the BIFF Hill prospect (Figure 5) a single hole was drilled to twin historically reported gold results. The hole intersected ironstones but failed to return any significant gold values suggesting historically reported gold intersections were incorrect – further work is required to identify prospective gold positions along this ironstone trend.

Initial reconnaissance exploration (rock chip sampling and mapping) has also been completed at KRR's Kurundi Project where KRR has 4 exploration licenses over part of the Kurundi Anticline and covers multiple prospects including the Kurundi historic gold mine (historic underground and open pit mining) and the Whistle Duck prospect. The area is known for high grade copper and gold mineralization. Assay results are pending.

Corporate

The Company's cash position as at 31 December 2020 was $7,344,449.

With regards to the item 6.1 of the Appendix 5B, released concurrently to this quarterly activities report, the Company provides the following in relation to payments to related parties that totalled $35,225 for the quarter:

- Office representation expenses of $1,280 are costs paid to an associate entity of Directors; and
- The director fees for the quarter paid of $33,945.

Statement by Competent Person

The information in this report that relates to Exploration Results, Mineral Resources, Metallurgy and Studies is based on information compiled by Ken Rogers (BSc Hons) and fairly represents this information. Mr. Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG) and The Institute of Materials Minerals and Mining (IMMM), and a Chartered Engineer of the IMMM. Mr. Rogers 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 Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Rogers consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

This announcement was authorised by the Chairman of the Company.

Anthony Barton
King River Resources Limited
Email: info@kingriverresources.com.au
Phone: +61 8 92218055

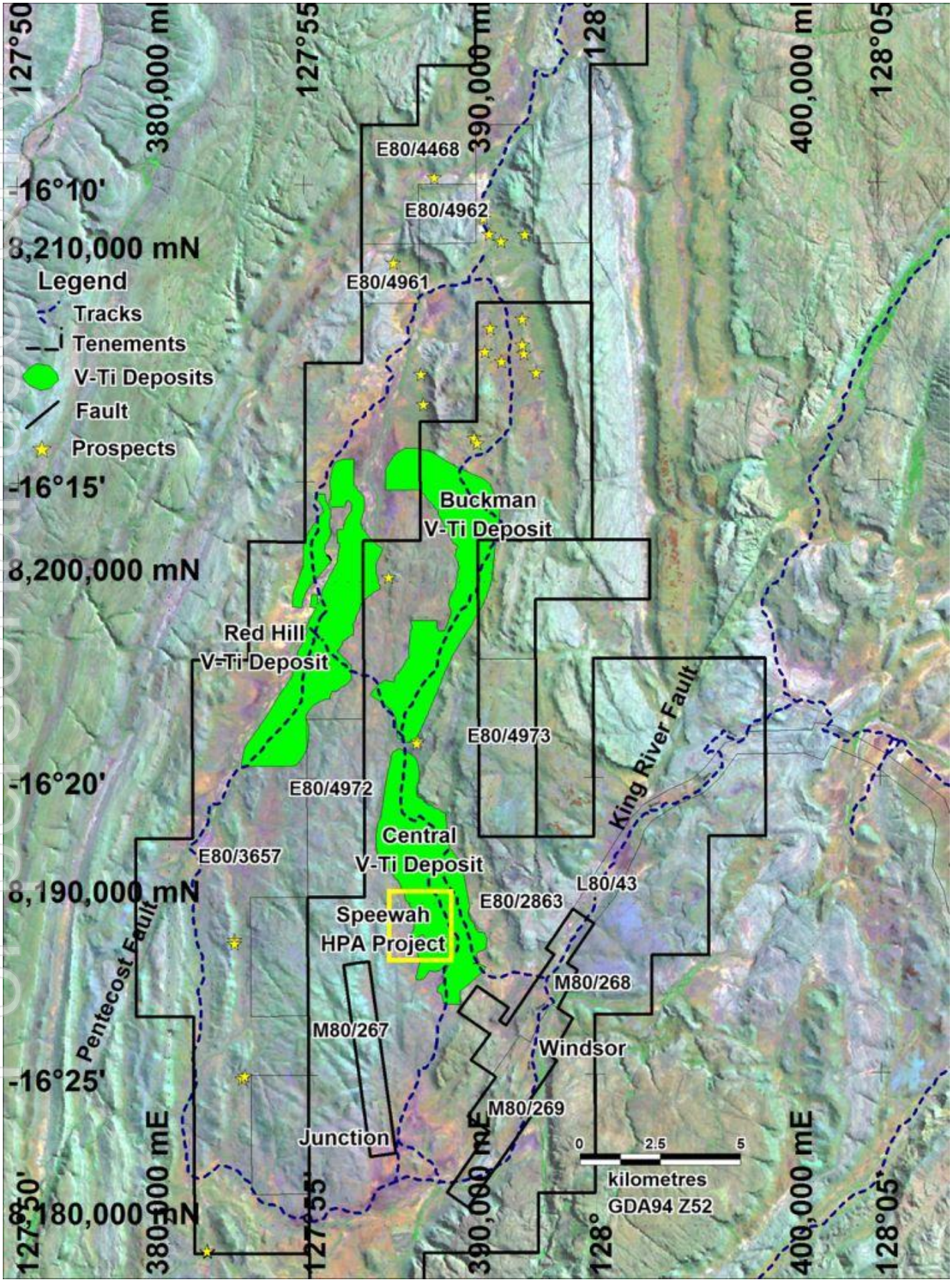


Figure 7: Location of the Central, Buckman and Red Hill vanadium deposits, the HPA Project area (yellow box), and gold-copper-silver prospects at Speewah.

KING RIVER
RESOURCES LIMITED

TABLE 1: SCHEDULE OF TENEMENTS HELD AT 30 SEPTEMBER 2020
SPEEWAH MINING PTY LTD and WHITEWATER MINERALS PTY LTD
(wholly-owned subsidiaries of King River Resources Limited)

Tenement	Project	Ownership	Change During Quarter
E80/2863	Speewah (held by Speewah Mining Pty Ltd)	100%	
E80/3657		100%	
E80/4468		100%	
E80/4831		100%	
E80/4961		100%	
E80/4962		100%	
E80/4972		100%	
E80/4973		100%	
L80/43		100%	
L80/47		100%	
M80/267		100%	
M80/268		100%	
M80/269		100%	
E80/5007	Mt Remarkable (held by Whitewater Minerals Pty Ltd)	100%	
E80/5133		100%	
E80/5176		100%	
E80/5177		100%	
E80/5178		100%	
ELA80/5192		100%	
ELA80/5193		100%	
E80/5194		100%	
E80/5195		100%	
E80/5196		100%	

Note:
E = Exploration Licence (granted) ELA = Exploration Licence (application)
M = Mining Lease (granted) L = Miscellaneous Licence (granted)

TREASURE CREEK PTY LTD
(wholly-owned subsidiary of King River Resources Limited)

Tenement	Project	Ownership	Change During Quarter
EL31617	Tennant Creek	100%	
EL31618		100%	
EL31619		100%	
EL31623		100%	
EL31624		100%	
EL31625		100%	
EL31626		100%	
EL31627		100%	
EL31628		100%	
EL31629		100%	
EL31633		100%	
EL31634		100%	
EL32199		100%	
EL32200		100%	
ELA32344		100%	
ELA32345		100%	

Note:
EL = Exploration Licence (granted)
ELA = Exploration Licence (application)

254 Adelaide Tce
Perth WA 6000

PO Box Z5518, Perth WA 6831

PHONE: +61 (0)8 9221 8055
FAX: +61 (0)8 9325 8088
WEB: www.kingriverresources.com.au