MetalsGrove

Territory Lithium

EL 32419 Annual Technical Report

For the Period: 26/03/2023 to 25/03/2024

Box Hole Project

Project Name: Box Hole Project

Tenement Numbers: EL 32419

Tenement Operator: MetalsGrove Mining Ltd.

Tenement Holder: Territory Lithium Pty Ltd.

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Abstract

This report covers the work completed on tenement EL32419 (the Box Hole Project or the Project) during the period of the 26th of March 2023 to the 25th of March 2024 by MetalsGrove Mining Ltd. (MetalsGrove or the Company). The Box Hole Project lies within the north-central zone of the Huckitta (SF53-11) 1:250,000 map sheet, north of the Plenty highway and approximately 340 km northeast of Alice Springs.

The Box Hole Project has potential for large tonnage carbonate-hosted lead-zinc deposits of the Mississippi Valley Type (MVT). Mineralisation is hosted by a mixed carbonate and shale sedimentary sequence within the Georgina Basin.

Exploration on the tenement dates back to the late 1950s. The Project is centred around the King's Workings galena deposit, which was mined by hand for a total of 15 tonnes of galena, that was hand-picked and sold to the Broken Hill Smelter, returning an average grade of 66% lead (Pb) and 58.5 g/t silver (Ag). Historical exploration on the tenement has been completed by several companies, including CRA Exploration Pty Ltd, BHP, and Uramet Minerals. Exploration activities consisted of mapping, sample collection, drilling, ground gravity, induced polarization (IP), and aeromagnetic surveys.

During the reporting period, MetalsGrove commissioned Interpid to process and interpret all data currently available within the Project generating new targets for drilling.

Magnetic survey data collected in 2022 did not generate the expected results and was processed alongside gravity surveys and historical drilling generating multiple new targets and extending mineralisation along strike. Drillholes planned in the previous reporting period were not drilled due to unseasonal rainfall restricting access. Future programmes at Box Hole will include drilling and further testing of the targets.

1 Introduction

This report covers the work done on tenement EL32419 (the Box Hole Project) during the period of the 26th of March 2023 to the 25th of March 2024 by MetalsGrove Mining Ltd. (MetalsGrove or the Company). The exploration license for EL32419 was granted on the 26th of March 2021, for a period of six years. It consists of 40 blocks or 127.08 sq. km. The tenement lies within the north-central zone of the Huckitta (SF53-11) 1:250,000 map sheet, north of the Plenty Highway.

In June 2020, Shree Minerals Ltd. entered a farm-in and joint venture agreement with Territory Lithium Pty Ltd. (Territory Lithium) to explore for base-metals on tenement EL32419. The Box Hole Project has potential for large tonnage carbonate-hosted lead zinc deposits of the Mississippi Valley Type (MVT). Mineralisation is hosted by a mixed carbonate and shale sedimentary sequence within the Georgina Basin.

MetalsGrove acquired 100% interest in the Box Hole Project from Territory Lithium following their incorporation in November 2021.

2 Location, Title History, Physiography and Access

Tenement EL32419 is located on the north-central zone of the Huckitta (SF53-11) 1:250,000 and Arapunga (6053) 1:100,000 map sheet and is approximately 340 km northeast of Alice Springs (Figure 1).

Exploration License EL32419 was granted on the 26th of March 2021 for a six-year period. It consists of 40 blocks or 127.08 km^2 (Figure 2). The tenement is held by Territory Lithium Pty Ltd. MetalsGrove is the operator of the tenement and acquired 100% interest in EL32419 from Territory Lithium following MetalsGrove's incorporation in November 2021.

Table 1: Tenement Details

Tenement ID	Grant Date	Expiry Date	Holder	Size (BL)
EL 32419	26/03/2021	25/03/2027	Territory Lithium	40

To access the tenement from Alice Springs, travel north along the Stuart Highway for approximately 70 km, and turn east along the Plenty Highway for 165 km to the Arapunya tracks. Travel north along the graded station tracks. Past Irrerlirre and Dneiper stations, the tracks veer towards the east and end at the Arapunya Station, approximately 150 km from the Plenty Highway. The tenement lies on the Arapunya Station, just east of the homestead.

In August 2022, MetalsGrove signed a long-term access agreement with the Arapunya Station, owned by Sandover Pastoral Company Pty Ltd., allowing MetalsGrove to advance on-ground exploration programs.

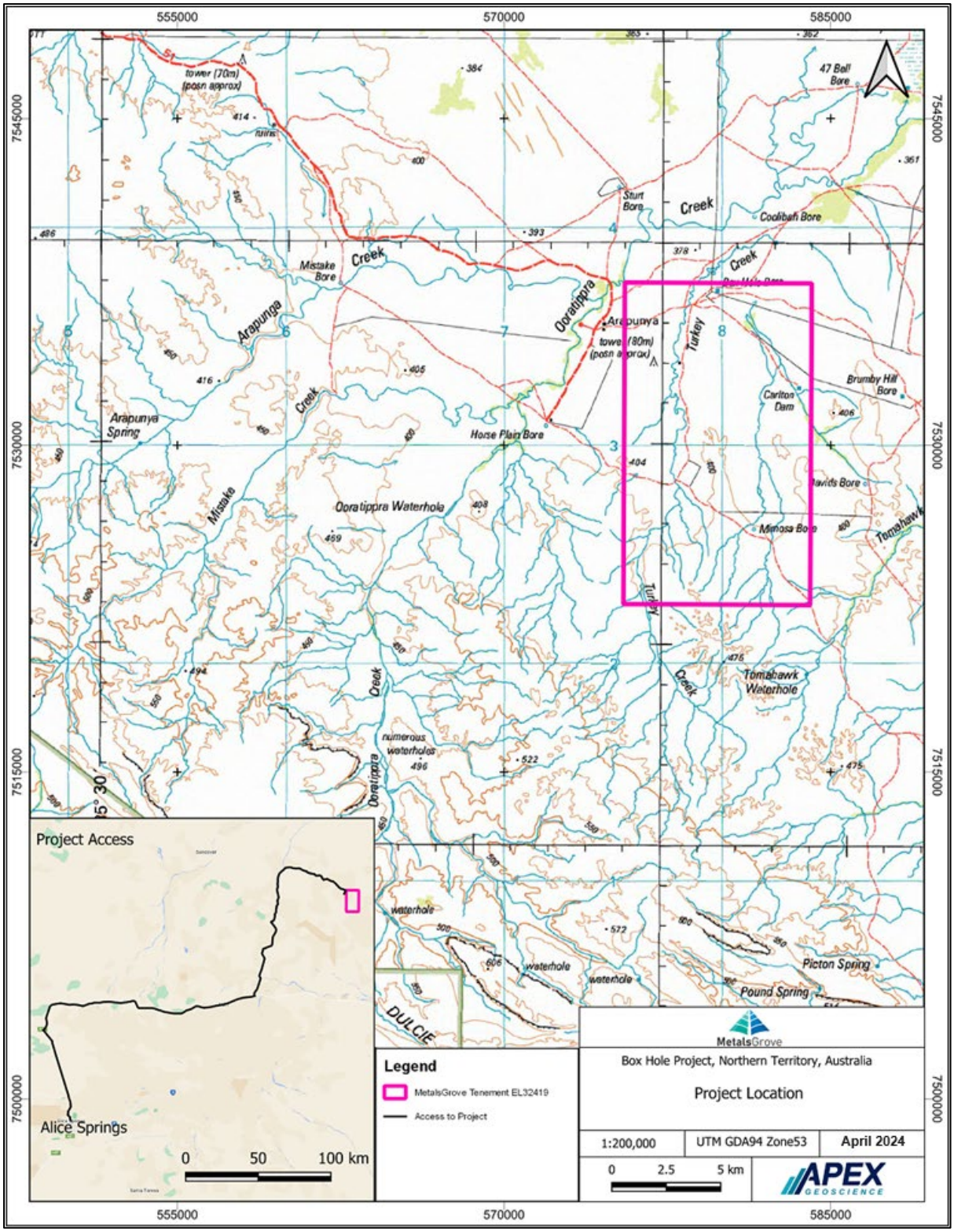

Figure 1. Location and access of the Box Hole Project.

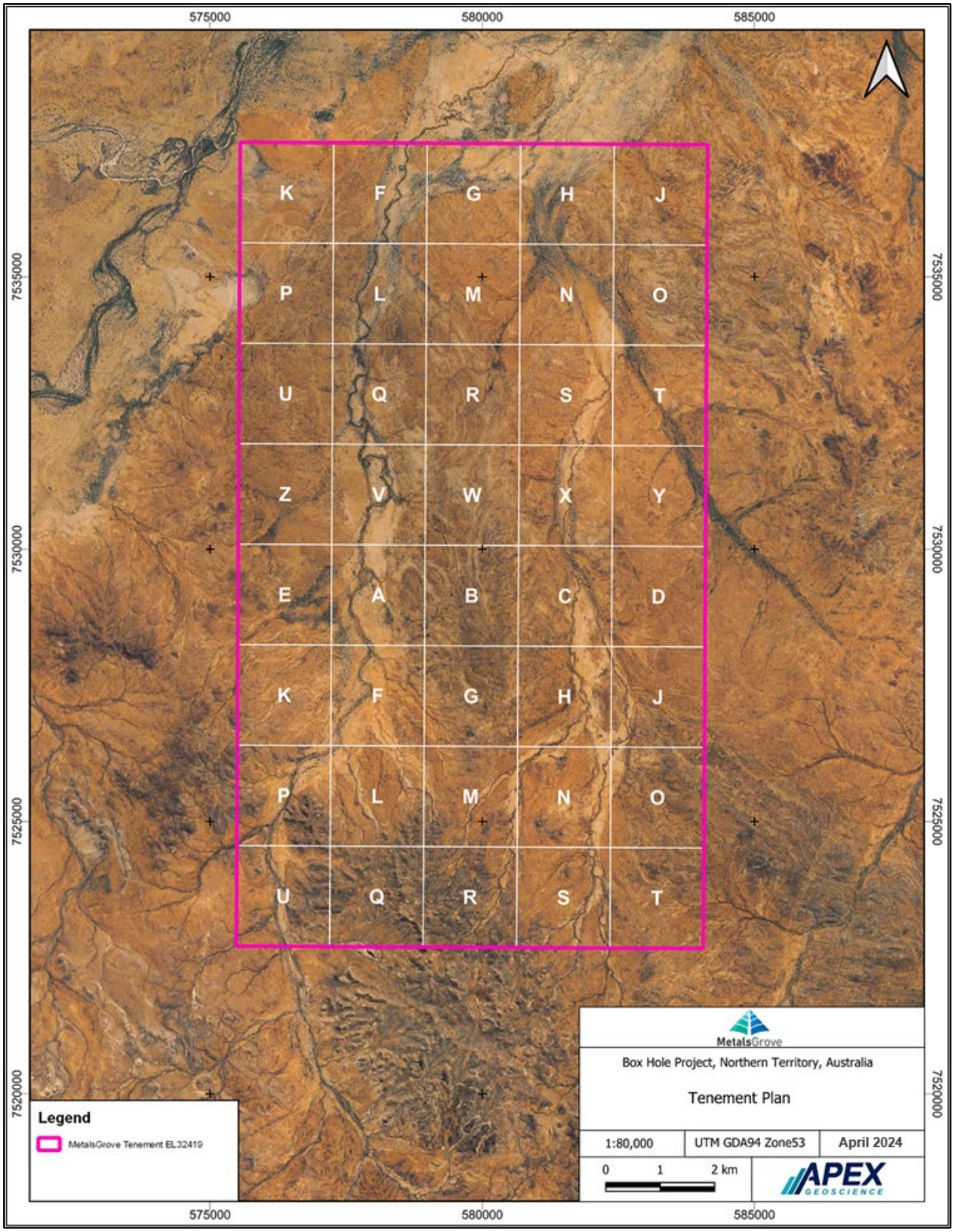

Figure 2. Box Hole tenement plan with blocks.

3 Geological Setting

The regional and local geology of the Box Hole Project has been summarized from Busbridge (2022).

3.1 Regional Geology

The Box Hole Project lies within the southern Georgina Basin, which was the northern part of the Centralian Superbasin. The Dulcie Trough, on the Georgina Basin margin, was interpreted to be a Neoproterozoic half-graben structure that was inverted during the Alice Springs Orogeny (Kruse et al., 2013; Dunster et al., 2007).

The southern margin of the tenement is bound by a major thrust fault, and northeast-southwest compression led to formation of the syncline and representing the current depocenter during the Pertnjara Movement (395-375 Ma; Dunster, 2007). Sedimentary basin fills include shallow marine successions of Neoproterozoic, Cambrian, and Ordovician age, with a general thinning towards the north up against a basement high (Kruse et al., 2013; Dunster et al. 2007).

Following the Peterman Orogeny, the area developed as a stable carbonate platform, with occasional clastic sedimentation. The subsequent Alice Springs Orogeny produced little metamorphism in the southern Georgina Basin but is thought to be responsible for some mild heating and hydrothermal activity (Dunster et al. 2007).

The regional geology of the Box Hole Project is presented in Figure 3.

3.2 Local Geology

The Project is situated entirely within the Upper Cambrian Arrinthrunga Formation of the Georgina Basin (Figure 3). The Arrinthrunga Formation is a shale/carbonate sequence with some quartzitic sands that were deposited in an occasionally emergent, restricted shallow basin. Stromatolitic reefs are common.

The stratabound mineralisation at the Box Hole Project occurs in a succession of interbedded sandstone, sandy (siliciclastic) dolostone, and dolostone in two different intervals. The more prominent mineralisation is confined to silicified stromatolitic dolostone associated with barite veins (Schmid, 2021). One of the Stromatolitic reefs hosts the King's Workings deposit, which appears to be a MVT style barite-galena deposit formed during the Alice Springs Orogeny. The mineralised area is extensively silicified and contains pyrite gossans and occasional sphalerite in addition to the galena and barite.

A second horizon underlying the main mineralisation is hosted in siltstones/shale (galena), siltstone, stromatolite, sandy dolostone. Those two intervals are based on outcrop observations (Schmid, 2021).

The structural framework of the Box Hole deposit is dominated by gently folding strata in north-trending synclines bound by northwest-trending southwest-dipping basement faults outside the area of interest. The main fault was interpreted as a basin forming extensional fault during the Neoproterozoic and was reactivated in a sinistral reverse sense during the Pertnjara Movement of the Alice Springs Orogeny (Dunster et al.

2007). A set of northwest-southeast trending faults was interpreted by Uramet Minerals, but no further structural analysis was undertaken (Magee, 2008).

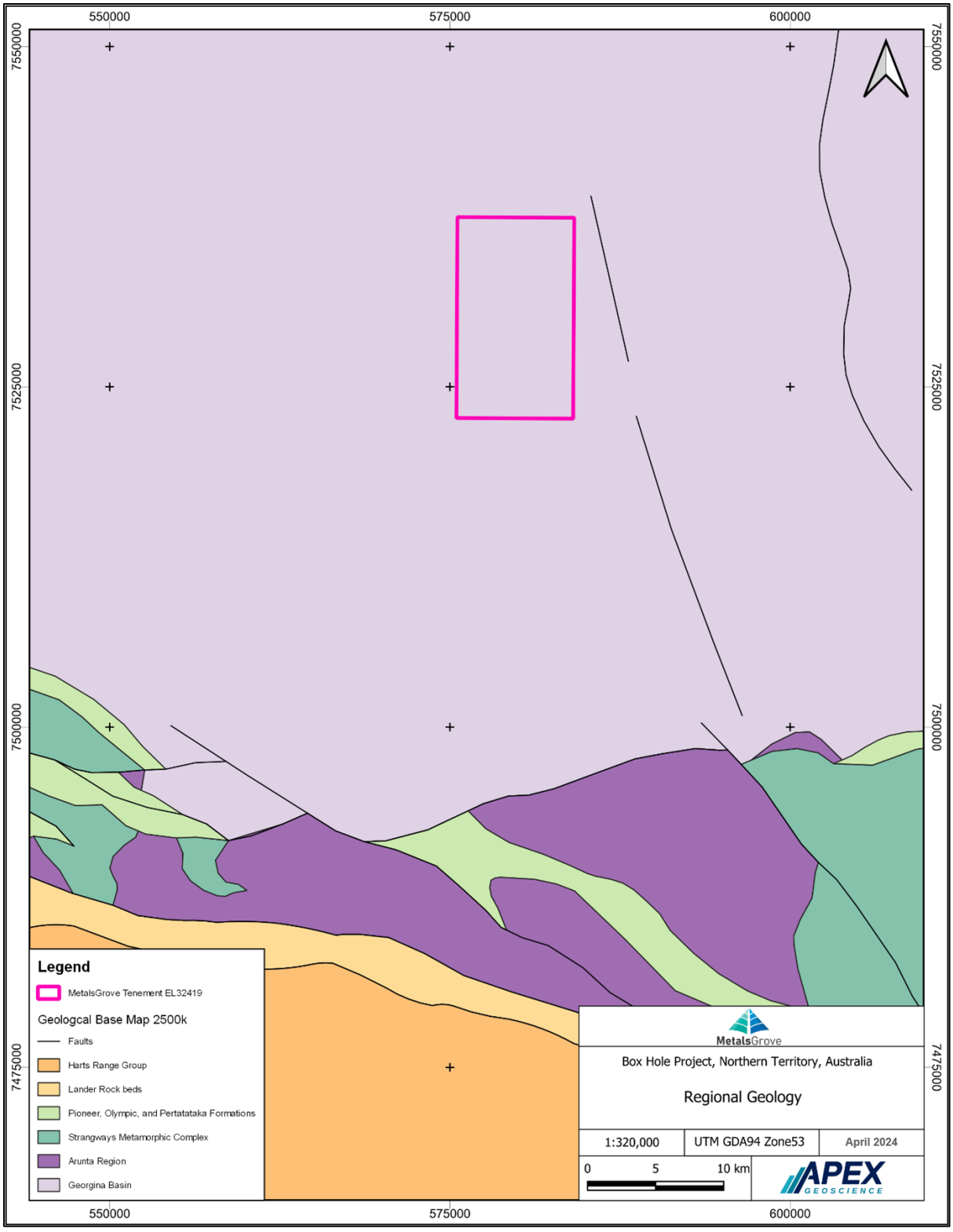

Figure 3. Regional Geology of the Project area.

4 Previous Exploration

Information on the historical exploration of the Box Hole Project area was sourced from Penna (2010), Fillis (2006), and Dunster et al. (2007).

During the late 1950s, stockmen and prospectors collected samples of galena in limestone east of Turkey Creek. Prospector WH King obtained an Authority of Prospect over this locality in January 1960 and traced the mineralised outcrop on surface. The Project area was mined by hand for a total of 15 tonnes of galena, that was hand-picked and sold to the Broken Hill Smelter, with an average grade of 66% lead (Pb), 58.5 g/t silver (Ag), and 0.43% bismuth (Bi).

In 1960, the property was farmed out to Consolidated Zinc Enterprise Exploration (CZEE – a precursor to CRA Exploration Pty Ltd). Exploration activities consisted of a mapping program and an 8-hole drilling program for a total of 439 m. The drilling did not intersect any significant mineralisation and the conclusion was that mineralisation is largely stratigraphically controlled, with minor structural concentration along faults in anticlinal axes.

During the late 1960s and the early 1970s, Vanadium Mining Ltd reviewed available gravity and aeromagnetic data and acquired three reconnaissance induced polarisation (IP) lines, 3 miles long and separated by 2 miles, over alluvial cover west of the workings. A northwest-southeast tie line extended to surface mineralisation at Box Hole. After assessing the geophysical data, the exploration lease was relinquished.

In the early 1970s, CRA Exploration Pty Ltd (CRA) explored for sedimentary uranium in the Devonian Dulcie Sandstone, as well as soil and stream sediment sampling as an orientation study for regional base metal exploration.

In 1971, Central Pacific Minerals (CPM) conducted an IP survey, surface geochemistry and a drilling program. Nine angled percussion holes were drilled to a maximum depth of 46 m and intersected only low values of base metals.

In 1974, Australian Anglo-American began work on the prospect and conducted a mapping program, a gravity survey and shallow percussion drilling. No further exploration activities were warranted.

In the late 1970s, Dampier Mining Ltd, a subsidiary of BHP, had remapped the King's Workings at a scale of 1:25,000 and highlighted several discrepancies in comparison to work completed by other companies. Existing drill holes were plotted in different locations to the Anglo-American survey. BHP re-assayed CPM drill cuttings, conducted soil sampling and drilled four widely spaced diamond drill holes (BHD01 to BHD04). The drilling targeted the stratigraphic equivalent of the surface mineralisation up to 200 m below the surface. Drilling results did not intersect any significant mineralisation. The exploration lease was relinquished in 1977.

In the mid-1980s, Plenty Mica Mining conducted a detailed mapping program and fluid inclusion studies.

In 1993, CRA drilled three drill holes to test for MVT mineralisation, with only one hole close to King's Workings (DD92TC01) to a depth of 386 m. The lowest sandstone unit was logged between the interval of 78 – 80 m. Below the sandstone, only dolomite, dolarenite and dololutite were logged. Siderite is common and is sometimes

associated with pyrite. Green chlorite and fluorite were also recorded, with bitumen logged deeper in the drill hole.

From 2007 to 2009, Uramet Minerals Ltd (Uramet) completed the most significant exploration program. Exploration activities consisted of stream sediment sampling, selected loam sampling, an aerial EM survey (VTEM), an aeromagnetic survey, two gravity surveys, ground magnetic and IP surveys, a photo-interpretation study, mineral chemistry analysis, and drilling.

In 2007, Uramet conducted a dipole-dipole IP survey over half of the tenement area, including the southern mineralised zone. The survey consisted of 18 lines with spacing at 50 m and 100 m, for a total of 27.9 km. The results from the IP survey were interpreted to indicate two chargeable layers, an outer layer and an inner layer. The inner layer is coincident with the King's Workings mineralisation, and the outer layer is interpreted to correlate with the northern mineralised zone. Drilling of shallow IP targets suggests that the anomalism can be attributed to pyritic shale. The deeper IP targets in the northeast of the tenement have not been drilled. CRA's drill hole DD91TC01 had most likely intersected the deep IP anomaly without intersecting significant mineralisation (Mackay and Reynolds, 2009).

In 2008, Uramet conducted a ground gravity and IP survey over the Box Hole Project to identify the presence of disseminated metal sulphide bodies at depth. A 94-hole, 4,155 m rotary air blast (RAB) drill program was conducted to test several possible targets based on geophysical, geochemical, and mapping data. Holes that were drilled away from the mapped mineralisation returned low Zn and Pb values (below hand-held XRF detection limits).

In June 2020, Shree Minerals Ltd. (Shree) entered into a farm-in and joint venture agreement with Territory Lithium to explore EL32419 for gold and base metals.

In 2021, Shree commissioned a research study on the Box Hole Project. The study was funded by the Commonwealth Scientific and Industrial Research Organisation's (CSIRO) kick start program and allowed Shree to access CSIRO's research expertise and capabilities. The aim of the study was to evaluate and re-process existing geophysical, lithological, and geochemical data as the basis for building a 3D model and to understand the setting of the Pb-Zn deposit. The key outcomes of the study are as follows:

- Pb-Zn mineralisation occurs in two stratabound horizons within a 40 m thick interval within interbedded shales, sandstone, and siltstone, or near the contact within the overlying dolostones.
- Mineralisation is widespread across the tenement, but grade is variable both laterally and vertically.
- Pervasive barite and manganese alteration extends up to 10 m from the stratabound mineralisation.
- Mineralisation in the southern area is more complex but is also higher grade, possibly indicating proximity to the feeder structures.
- The mineralisation is stratabound within favourable lithological units. However, on a prospect scale the mineralisation shows a striking linear trend, possibly indicating an underlying structural control such as a feeder fault zone.

An overview of historical exploration results is presented in Figure 4. Mineralisation at the Project extends along strike for 7 km, from Kings North to Aysh Reward.

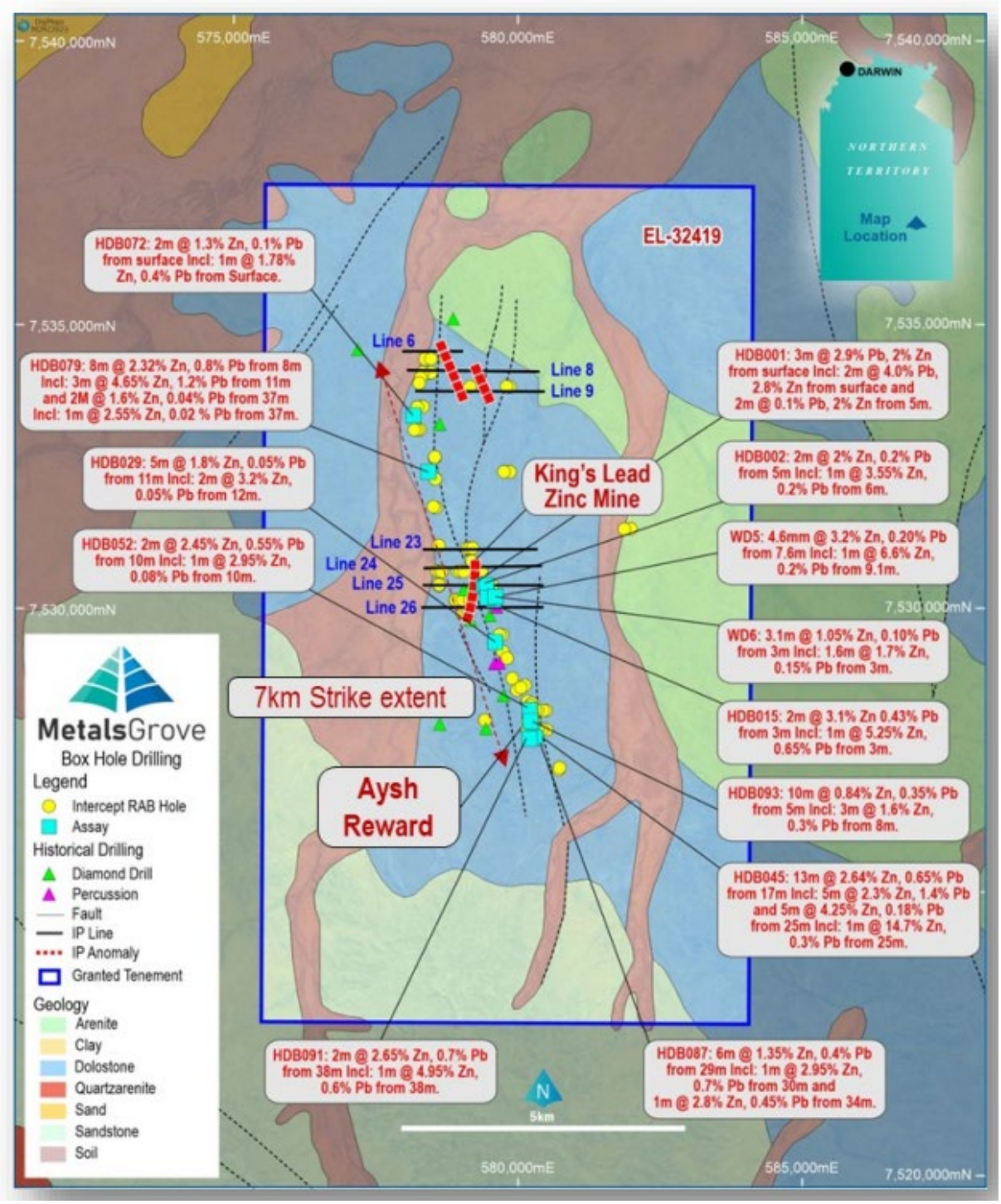

Figure 4. Significant results of historical exploration.

In 2022, MetalsGrove contracted Thomson Airborne Geophysical Survey to conduct an airborne magnetic, radiometric and elevation survey to identify new targets and refine existing targets for future drill programmes. The survey was part of the larger program including Edwards Creek and Bruce projects. The Box Hole geophysical

survey was completed at 50 m line spacing and 500 m tie lines totalling 1,149 km. Raw data processing was completed by Southern Geoscience Consultants generating GeoTIFF and ECW images delineating two zones of surface mineralisation and extending mineralisation up to 7 km along strike from Kings North to Aysh Reward. Drill hole planning was followed by a heritage survey in January 2023 by MetalsGrove representatives and the Aboriginal Areas Protection Authority ahead of drilling planned for the current reporting period.

5 Current Exploration

No on-ground exploration occurred at Box Hole due to adverse weather events. Work completed during the current reporting period included 3-D geophysical processing and interpretation, drill programme planning, government co-funding drilling application (GDC program) and project mobilisation/demobilisation involving track preparation.

5.1 Geophysical Survey

MetalsGrove completed an airborne magnetics and radiometric survey in 2022 and initial 1D inversion to generate targets for the 2023 drill programme. During the current reporting period, MetalsGrove engaged Intrepid Geophysics (Intrepid) to complete a 2.5D Inversion to improve the 1D inversion results to improve identification of structures in areas of known MVT style mineralisation and identify new targets for the 2023 RC drill programme. Final report and model are provided as supplementary material.

Intrepid Geophysics was given drilling data, elevation measurements, magnetic surveys, GIS files, radiometric data, aerial imagery and supporting documentation to complete a modelling study of the project area. Intrepid also collected publicly accessible data and assimilated all data forms into a compiled database.

The workflow followed by Intrepid started with geo-referencing and vectorizing existing geological maps using QGIS. The vectorized map was brought into GeoModeller as a topographic backdrop for further investigation of the layer boundaries. Within GeoModeller, historical drilling data was input to understand the geological relationships more in depth. Due to limited drilling in the area, the constraints of this data were not optimal and needed more supervision and correction with further interpretation. With comparison of the model against the magnetic data, anomalous magnetic high values were found to correlate with pyritic shales/sandstones.

Further data processing indicated mineralisation in dolomite cannot be detected with airborne electromagnetics (EM). Anomalies resulted from pyritic shales/sandstones beneath cover confirmed by gravity survey lows and historic drilling. Gravity highs are strongly correlated with mineralised dolomite and high priority targets (Figure 5).

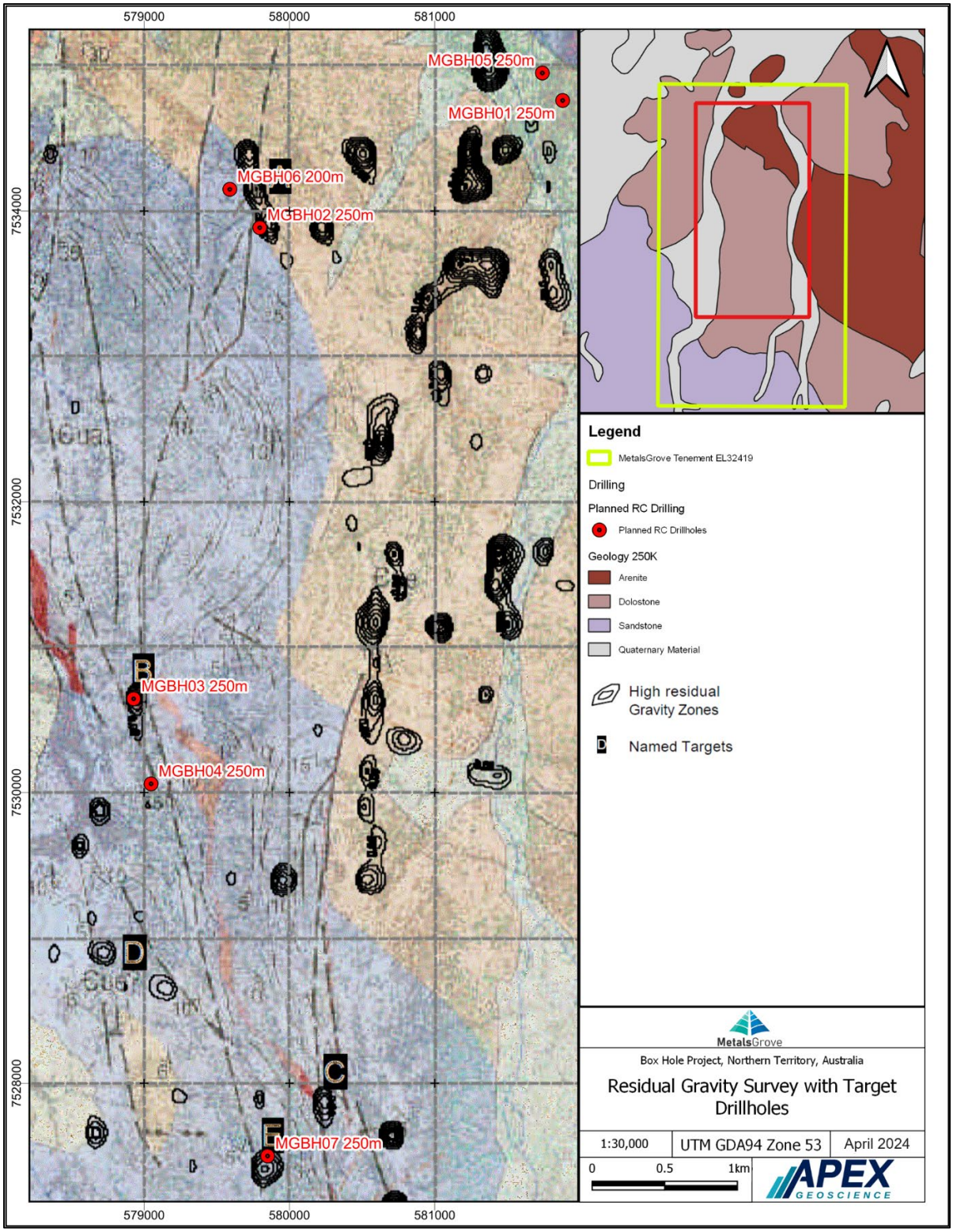

Figure 5. Residual gravity anomalies and planned drillholes.

Intrepid also generated an initial 3D volumetric geological model across areas of interest build an understanding of subsurface lithologies with data input from historical geochemistry, drilling, EM, and radiometric surveys (Figure 6).

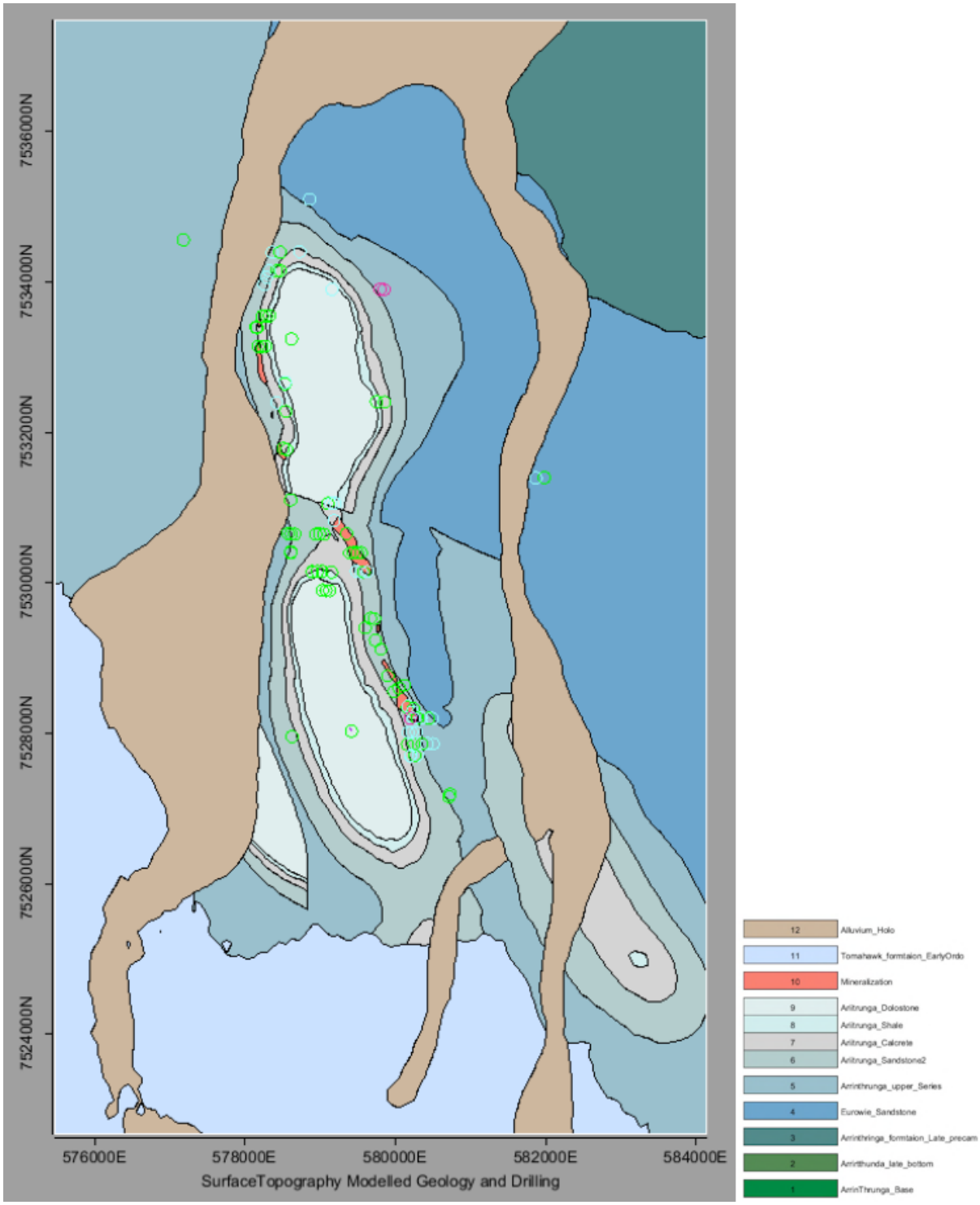

Figure 6. Box Hole 3-D geological model plan view.

5.2 Drilling

MetalsGrove planned a first pass 1700 m, 7 hole RC programme for Box Hole in June 2023 testing lead-zinc and REE targets identified in deep chargeability anomalies and gravity surveys along historical REE biogeochemistry. In preparation for drilling, access tracks and drill pads were cleared along with sumps dug. However, due to a heavy unseasonal rainfall event, project access was limited, and all crews

demobilised after drilling at another MetalsGrove project. The programme will be part of future drilling at MetalsGrove's Arunta projects.

6 Conclusions

The results from Intrepid's data processing and historical exploration identified mineralisation along strike for 7 km from Kings North to Aysh Reward and new targets in the northeast. Initial geological modelling has informed targeting and can be refined with additional data from future drill programs. Current drill plans test many exploration targets generated by the data processing completed by Intrepid and will be included in future exploration plans across the Arunta Projects.

7 References

Busbridge, M. (2022): Territory Lithium Pty Ltd. EL32419, Annual Report for the reporting period 26 March 2021 to 25 March 2022.

Dunster, J.N., Kruse, P.D., Duffett, M.L., Ambrose, G.J. (2007): Geology and Resource potential of the southern Georgina Basin. Northern Territory Geological Survey, Digital Information Package DIP007.

Intrepid geophysics/SenseOre (2023): Box Hole Prospect Area 3D Modelling and targeting Exercise EL 22537, Arunta project, Internal Report, 11p.

Kruse, P.D., Dunster, J.N., Munson, T.J. (2013): Chapter 28: Georgina Basin. In Ahmad, M., Munson, T.J. (compilers). Geology and Mineral resources of the Northern Territory. Northern Territory Geological Survey, Special Publication 5.

Magee, C. (2008): Box Hole Metal Project, Annual Report EL22537. Uramet Minerals, NTGS CR-2008-0387

Penna, P. (2010): Uramet EL 22537 Annual Technical Box Hole Base Metal Project September 2010, NTGS CR2010-0526

Schmid, S., Blaikie, T., McFarlane, H., Mule, S., and Schaubs, P. (2021): Box Hole MVT deposit exploration targeting by integrated geophysical and geological modelling, NT, Australia. CSIRO EP2021-2923.

Southern Geoscience Consultants (2022): MetalsGrove Mining Limited Tenez Project, internal report dated November 2022, 6p.

Thomson Airborne Geophysical Survey (2022): Metalsgrove Mining Ltd Airborne Geophysical Survey Operations Report, Tenez, internal report, 54 p.