GR345/14

GROUP ANNUAL REPORT

(Central Tanami Project)

EL8797, EL26925, EL26926, EL28282, EL28474

Period: 28 February 2017 to 27 February 2018

Holders: Tanami (NT) Pty Ltd 75% & Northern Star (Tanami) Pty Ltd 25%

Operator: Northern Star (Tanami) Pty Ltd

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TANAMI SF52-15

1:100,000 Sheet Reference: Pargee (4758) Tanami (4858) Frankenia (4857)
Buck (4958) Wilson Creek (4959)

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TITLE PAGE AND BIBLIOGRAPHIC DATA SHEET

Project Name:	Central Tanami
Combined Report number:	GR345/14
Tenement:	EL8797, EL26925, EL26926, EL28282, EL28474
Tenement operator:	Northern Star (Tanami) Pty Ltd
Tenement holder:	Northern Star (Tanami) Pty Ltd (25%); Tanami (NT) Pty Ltd (75%)
Report type:	Annual
Report title:	Central Tanami Project GR345-14 Combined Annual Report
Report period:	28/02/2017 to 27/02/2018
Author:	Northern Star Resources Ltd
Date of report:	March 2017
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1:100 000 map sheet:	Pargee (4758) Tanami (4858) Frankenia (4857) Buck (4958) Wilson Creek (4959)
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Tectonic Units:	Granites Tanami Block (Inlier)

Keywords: Proterozoic Granites-Tanami Inlier, Tanami Group, Mt Charles Formation, Gold, Tanami Mine, Greenschist Facies, Aeolian Sand Blanket, Wetlands, Regional Soil Geochemical Analysis, Target Identification

Prospects drilled: N/A

List of assays: Ag, Al, As, Au, Au, Au, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Cu, Fe, Ga, Hf, In, K_, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Ni, P_, Pb, Rb, S_, Sb, Sc, Se, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, U_, V_, W_, Y_, Yb, Zn, Zr,

1 SUMMARY

This report describes exploration activities, primarily for gold, undertaken by Northern Star (Tanami) Pty Ltd (NST) over EL8797, EL26925, EL26926, EL28282 and EL28474 as part of the Central Tanami Combined Reporting Group 345/14 for the period 28 February 2017 to 27 February 2018. The centre of the project area is located approximately 650km northwest of Alice Springs.

The Central Tanami (CTP) group of tenements form part of a larger Joint Venture agreement between Tanami Gold (NT) Pty Ltd and newly incumbent joint venture partner and manager Northern Star (Tanami) Pty Ltd, a wholly owned subsidiary of Northern Star Resources Limited.

Following validation of drilling and geochemical datasets, on ground exploration commenced throughout the Tanami Project. A regional tectono-stratigraphic project was designed which incorporated several on-ground activities, a regional aeromagnetic survey, and several desktop programs. Key areas of the tectono-stratigraphic project included developing an understanding of the following areas:

- Defining the regional stratigraphic package.
- Regional Structural framework
- Understanding regolith and the distribution of the various units, how these units are associated with, or express, underlying mineralisation

Since initiation of this regional project, the NSR Exploration team have been able to develop a significant understanding of the Granites-Tanami Orogen and the context of the mineralising systems within the region. This knowledge is now being applied in identifying and testing targets, prioritised through a specific set of criteria designed to maximise discovery potential.

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2 INTRODUCTION

The Central Tanami Project (CTP) tenements are located approximately 650km northwest of Alice Springs (Figure 1). Access to the tenements is by air or via the Tanami Road to the Tanami Mine. This report covers the exploration activities for the year ending 27 February 2018.

The CTP is situated on Aboriginal land within the Central Desert Aboriginal Land Trust and the Mt Frederick Aboriginal Land Trust, both administered by the Central Land Council (CLC). Main road access to the tenure area is via the Tanami Road and to the north by the Lajamanu Road. A basic network of pre-existing and newly formed tracks link individual prospect areas. The nearest settlement is the Rabbit Flat roadhouse (closed) 40km to the southeast.

The climate is semi-arid with rainfall averaging approximately 400 mm per annum. Most rainfall occurs as summer storms associated with the monsoon season between November and March. Daily temperatures range from winter minima of near zero to summer maxima of about 48C. The mean maximum temperature ranges from 26C in June/July to 39C in November/January. The area is devoid of surface water except in small soaks after heavy rain. The Tanami Desert in which the leases are situated is typically dominated by smooth plain-lands widely covered in aeolian sand with a vegetation cover described as tall open acacia scrubland with a hummocky grass under-story (spinifex).

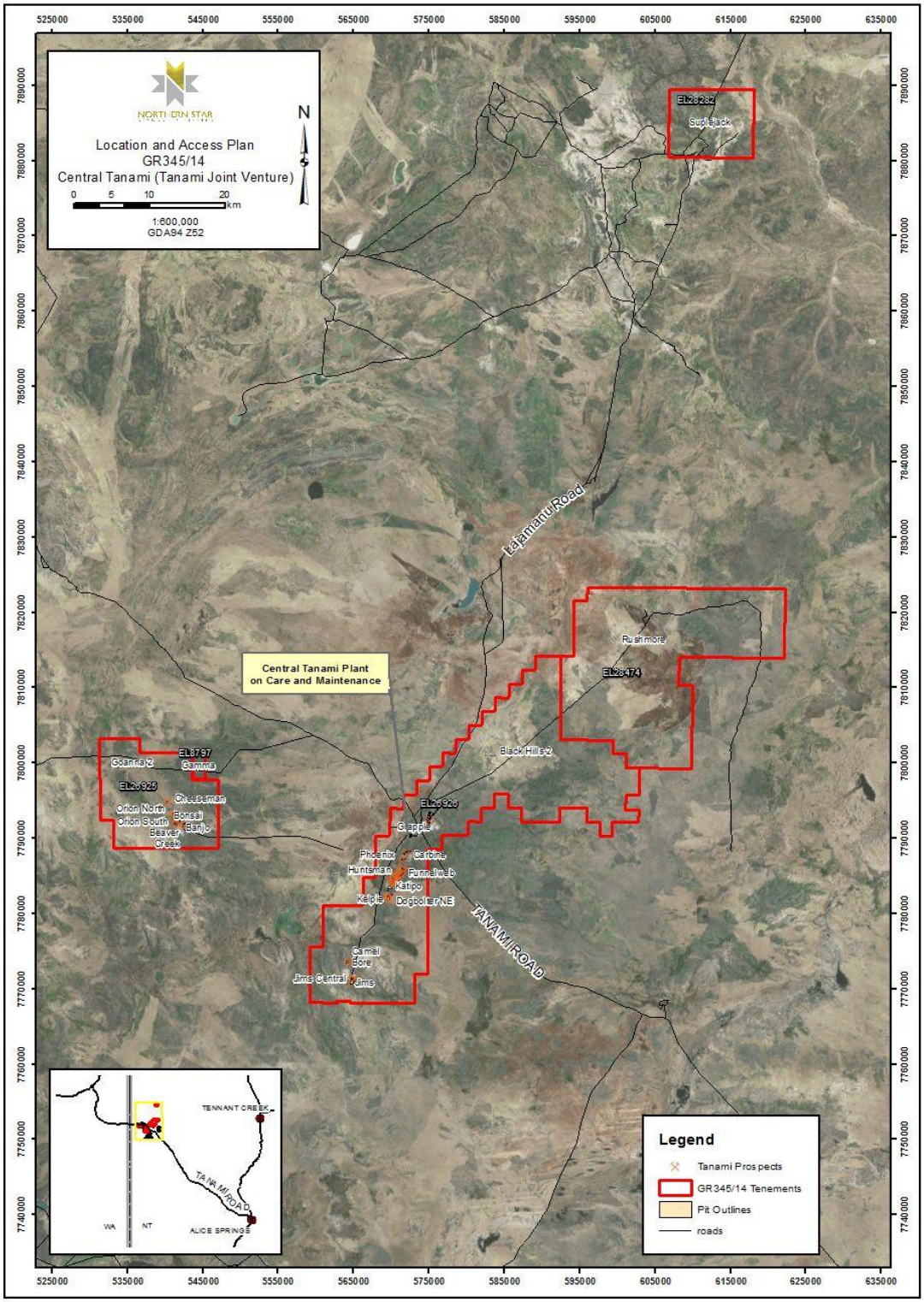

Figure 1 Tenement Location Plan

3 TENURE

On 30 March 2010, Tanami (NT) Pty Ltd (TNT), a wholly owned subsidiary of Tanami Gold NL, acquired EL 8797 from Australian Tenement Holdings Pty Ltd (ATH), a wholly owned subsidiary of Newmont Asia Pacific.

Exploration Licences 26925 and 26926 were granted to ATH on trust for the beneficial owner, (TNT) on 25 January 2011. The tenements were transferred to TNT, a wholly owned subsidiary of Tanami Gold NL, on 10 February 2011.

Exploration Licence 28282 was granted to Tanami NT Pty Ltd (TNT), a wholly owned subsidiary of Tanami Gold NL, on the 20 April 2011. EL 28282 replaced a portion of SEL 10319 which was acquired from Newmont Australia Ltd.

Exploration Licence 28474 was granted to Tanami (NT) Pty Ltd (TNT) on 12 March 2013. TNT is a wholly owned subsidiary of Tanami Gold NL.

In February 2015, a Heads of Agreement was executed between TNT and NST whereby NST agreed to progressively acquire a 60% joint venture interest in the tenements, of which the Central Tanami Group is a part, by sole funding all expenditure required to bring the Tanami Project back into commercial production which shall be achieved once the Central Tanami Project ("CTP") processing plant has been refurbished and is operated for a 30 day period or has produced 5,000oz of gold.

As part of the consideration of the Heads of Agreement, NST acquired a registerable interest in the tenements of 25%.

Tenement No.	Area (Blks)	Grant Date	Expiry Date	Holder
EL26925	60	12-Jan-2011	24-Jan-2019	Tanami (NT) Pty Ltd 75% Northern Star (Tanami) Pty Ltd 25%
EL26926	204	25-Jan-2011	24-Jan-2019	Tanami (NT) Pty Ltd 75% Northern Star (Tanami) Pty Ltd 25%
EL28282	35	20-Apr-2011	19-Apr-2019	Tanami (NT) Pty Ltd 75% Northern Star (Tanami) Pty Ltd 25%
EL28474	148	12-Mar-2013	11-Mar-2019	Tanami (NT) Pty Ltd 75% Northern Star (Tanami) Pty Ltd 25%
EL8797	2	09-Sep-1999	25-Aug-2018	Tanami (NT) Pty Ltd 75% Northern Star (Tanami) Pty Ltd 25%

Table 1 Tenement Details – Central Tanami Project

4 GEOLOGY

4.1 REGIONAL GEOLOGY

The Granites – Tanami Block is bounded to the west by the Canning Basin, and to the east by the Wiso Basin and is considered to be one of the western most Palaeoproterozoic inliers of the Northern Australian Orogenic Province. The block is thought to have developed around the Barramundi Orogeny – major event 1845 – 1840 Ma (Blake et al., 1979).

The stratigraphy of the Tanami Region has been revised as a result of an intensive study completed by the NTGS (Hendrick x et al., 2000). The stratigraphy outlined by Blake et al (1979) has had some significant modifications.

The Archaean Billabong Complex and Browns Range Metamorphics are the oldest rocks in the area. Browns Range Metamorphics comprise granitic gneiss and muscovite schist intruded by fine-grained granite, thin granitic sills, aplite and pegmatite. The Billabong Complex comprises banded granitic gneiss, which are generally elongated and fault bound.

Lying unconformably above the Archaean basement is the Palaeoproterozoic McFarlane Peak Group. These rocks are characterised by a thick sequence of mafic volcanic, volcaniclastic and clastic sedimentary rocks, which possess a distinctive magnetic and gravity signature. This package of rocks is structurally complex and is considered to have a tectonic contact with the overlying Tanami Group.

The Tanami group is subdivided into three formations:

- Dead Bullock Formation: siltstone, mudstone, chert and banded iron formation.
- Killi Killi Formation: turbiditic sandstone.
- Twigg Formation: purple siltstone with minor sandstone and chert.
-

The Dead Bullock Formation occurs at the base of the Tanami Group and is dominated by fine-grained sedimentary rocks. The rocks outcrop at Dead Bullock Soak, Lightning Ridge and Officer Hill. At the Granites the rocks have been metamorphosed to amphibolite facies to form andalusite, garnet and hornblende bearing schists. The Dead Bullock formation is host to significant gold mineralisation at the Granites and Dead Bullock Soak.

The Killi-Killi Formation conformably overlies the Dead Bullock Formation and is the most extensive formation in the group. The sequence of turbidites includes micaceous greywacke, quartzwacke, and lithic greywacke, quartz arenite and lithic arenite, interbedded with siltstone, mudstone and occasional thin chert beds. Detrital mica is a characteristic feature. The Killi-Killi is metamorphosed to lower greenschist facies and is interpreted to be up to 4km thick.

The Twigg formation is confined to a narrow package of rocks immediately west of the Tanami Mine corridor. It comprises a sequence of interbedded purple siltstone with thin-bedded chert and minor medium bedded greywacke.

The Pargee Sandstone unconformably overlies the Tanami Group and is exposed on the western side of the Coomarie Dome extending into Western Australia. The Pargee Sandstone comprises thick-bedded quartz arenite, lithic arenite and conglomerate with pebbly sandstone and conglomerate at the base.

The Mount Charles Formation comprises an intercalated package of basalts and turbiditic sediments, which occur on the western side of the Frankenia Dome. The Mount Charles Formation is host to structurally controlled vein hosted gold mineralisation in the Tanami Mine Corridor. Sediments include sandstone, mudstone, carbonaceous mudstones and intraclast conglomerate. Basalts are predominantly massive units with pillow basalts and basaltic breccias also evident.

The Mt Winnecke Group is also interpreted to lie unconformably over the Tanami Group and is divided into two units - siliciclastic sediments and felsic volcanics. The Nanny Goat Volcanics are characterised by extrusive volcanic rocks including quartz-feldspar ignimbrite, feldspar ignimbrite, rhyolite lava, basalt and minor siliciclastic sediments.

The Birrindudu group comprises 3 units with Gardiner Sandstone at the base, overlain by Talbot Well Formation and Coomarie Sandstone. The Supplejack Down sandstone is interpreted to belong to this group but its relationship is unclear. The Birrindudu group lie unconformably over the Browns Range Metamorphics, MacFarlane Peak Group, Tanami Group, Pargee Sandstone, Nanny Goat Creek Volcanics and Mount Winnecke Group.

Cenozoic laterite, silcrete, calcrete, and Quaternary debris cover 60 – 70% of the Tanami Desert. The Quaternary sediments are generally unconsolidated, representing the most recent phase of erosion and deposition of sands, gravels and lithic fragments.

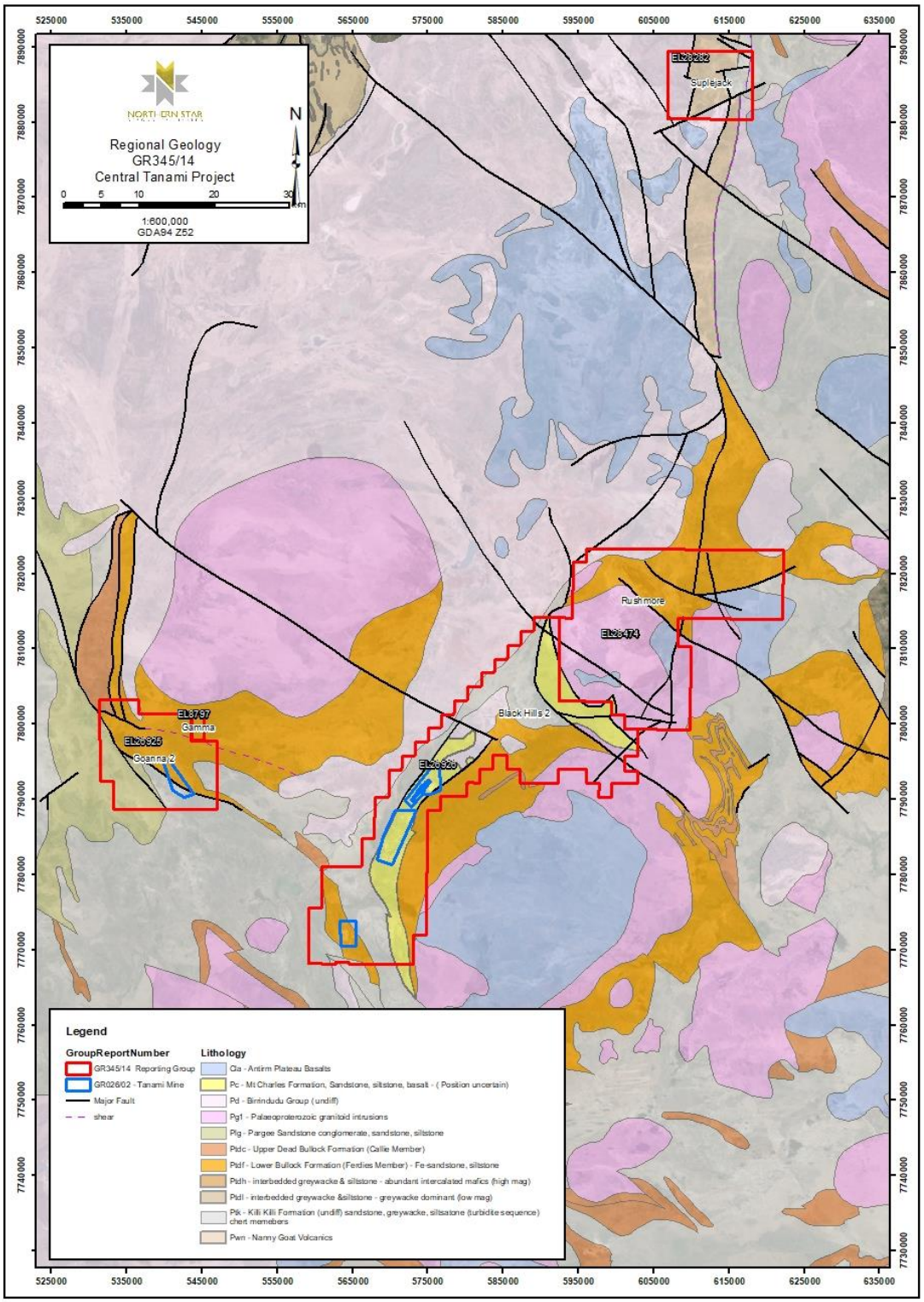

Figure 2: Regional Geology GR-345/14 Central Tanami

4.2 TENEMENT GEOLOGY

At the Gamma prospect (EL8797) approximately 60% of the tenement is covered by Aeolian sand, which overlies areas of deep transported cover such as a coarse-grained quartz rich sand over the Coomarie Granite to depths of over 20m.

Pisolitic gravels at surface are a good indicator of shallow transported cover, as are lithic gravels and quartz float. Pisolitic gravels comprise 25-30% of the tenement area. Quartz and lithic dominated gravels make up approximately 5% of the area.

The remainder consists of transported clays, sand, calcrete/silcrete and minor outcrop.
Further to the southwest, at Goanna 2 and Molech (EL26925), the major units of the area are fine grained sediments and basalts correlated with the Mount Charles Formation. These occur in a northwest striking zone between Coomarie Granite to the northeast and structurally juxtaposed sandstone turbidite units of the younger Killi Killi Formation to the southwest. Killi Killi Formation units also occur in synclinal cores of folded Mount Charles Formation. The Flores Complex in the north of the tenement has historically been interpreted as older stratigraphy with higher metamorphic grade, but magnetic signature is similar to Mount Charles Formation.

At Rushmore (EL28474), the geology comprises steeply dipping dolerite sills which intrude turbiditic metasediments of the Killi Killi Formation. The magnetic image indicates a 900m long anomaly with a slight offset that has been depleted in magnetite. The anomaly strikes at 340, similar to that of Groundrush and Ripcord deposits. Previous drilling indicates cover sands in the area range in thickness from 2-4m.

The major units of EL26926 are fine grained sediments and basalts of the Mount Charles Formation. These occur in the east limb of a regional north to northeast striking syncline with younger Killi Killi Formation to the west and lower Dead Bullock Formation to the east. In the southwest of the tenement the west limb of the syncline occurs. In the northeast of the tenement folding is more complex against granite batholiths with Killi Killi Formation exposed in syncline cores. Outliers of post mineralisation Gardiner Sandstone occur throughout the tenement.

Suplejack (EL28282, to the north) is predominantly part of the Coomarie Dome, which extends down to the Tanami Mine region. The Coomarie Dome has intruded Tanami Complex rocks (including Mt Charles Beds, Nanny Goat Creek Beds and Nongra Creek Beds). It is thought that inliers/ roof pendants may exist within some portions of the lease.

Covering these is a series of Upper Proterozoic Birrindudu Group Sediments (including Gardiner Sandstone, Talbot Well Formation and Coomarie Sandstone). To the east of the lease the majority of the younger Cambrian Antrim Plateau Volcanics lie (these consist of Tholeiitic basalt, minor tuffaceous sandstone, and lithic arenite). Previous experience and brief helicopter reconnaissance has suggested that not all the mapped Antrim Plateau Volcanics are as such and may be Tanami Complex in origin. Obvious outcropping geology is restricted to the Birrindudu Group Sediments.

The Nanny Goat Creek Volcanics are Archaean to Lower Proterozoic rocks, stratigraphically equivalent to the Mount Charles Beds outcropping near the Tanami Mine to the south. Both of these rock units form part of the Tanami Complex.

The Nanny Goat Creek Beds are described as predominantly volcanic rocks consisting of ignimbrite acid porphyry, amygdaloidal non-porphyritic basaltic lavas with intrusive patchy porphyritic basalt and tuff. The subordinate rocks are metasedimentary greywacke, shale and siltstone.

The Nanny Goat Creek Volcanics host the Crusade gold mineralisation. The mineralisation occurs along a regional shear zone that juxtaposes two units from the Nanny Goat Creek Beds; namely dacite to the west and basalt to the east. The majority of the mineralisation is hosted within the footwall basaltic rocks. Structures evident in the Gardiner Sandstone (Carpentarian) can be easily recognised on a regional basis and transferred to the Nanny Goat Creek Beds. With this in mind, two structural trends (N – S and NW – SE) are evident.

Crusade consists of outcropping Nanny Goat Creek Beds. The rocks are generally steeply dipping with cleavage often parallel to bedding, adding to the structural complexity. Complex folding and faulting is evident and detailed mapping is required to more fully understand this area.

5 PREVIOUS EXPLORATION OVER AREA

Exploration work on tenements of the CTP has been carried out over 20 years by several companies and various joint ventures:

Prior to 1990	Zapopan
1990 – Jan 2002	Otter Gold Mines Ltd, Tanami Mine JV
Jan 2002–Early 2002	Normandy Mining
Early 2002 – March 2010	Newmont Mining Corporation
March 2010 - Feb 2015	Tanami NT
Feb 2015 – onwards	Northern Star (Tanami) Pty Ltd

At Suplejack (EL28282), significant surface sampling was completed in 2012 and 2013. No mineralisation trend was highlighted at local prospects of Saladin and Richard, with the best result at 3ppb for a rock chip. Other prospects targeted as geologically interesting outcrops were discovered in close proximity to Suplejack.

At EL28474, some surface sampling was undertaken targeting a depleted magnetic structure, similar to the signature of Groundrush (deposit with +1Moz of gold). Programs extended to the northeast following historical anomalism in lag results and hoped to provide potential strike extension and generate a drill target. A total of 53 samples were collected on a 100x400m grid pattern within the Dropzone prospect with 16 plant samples taken on EL28474. Limited Au anomalism was identified (6.7ppb).

On EL26926, only limited field validation was completed in the years prior to Northern Star taking over exploration activities.

At Jim's South prospect significantly anomalous RAB drilling has only had minor follow up work. Outcropping quartz veining was sampled with 6 rock chip and 5 drilling spoil samples taken. In 2014, follow up Aircore drilling was conducted.

Initially surface exploration (pXRF and soils) were conducted over an area identifying several elevated Au and multi-element results. Arsenic was elevated for the majority of the grid area while Barium, Zinc and Caesium are concentrated in haloes around the Molybdenum. Copper displayed a W-E trend while elevated Mercury spots appear to line up in a NW_SE trend but due to the limited number of responses in Mercury this was considered suspect.

Following the above surface exploration programs a drill program was carried out to test this prospective corridor and tie in previous drilling programs. A total of 57 angled Aircore holes were drilled between EL26926 and ML168, totalling 4,580m, including 46 holes in EL26926 for 3,694m (Figure 3**Error! Reference source not found.**). The drill holes intersected basalts and s ediments, with narrow quartz veins. Sporadic Au mineralisation was associated with narrow quartz veins.

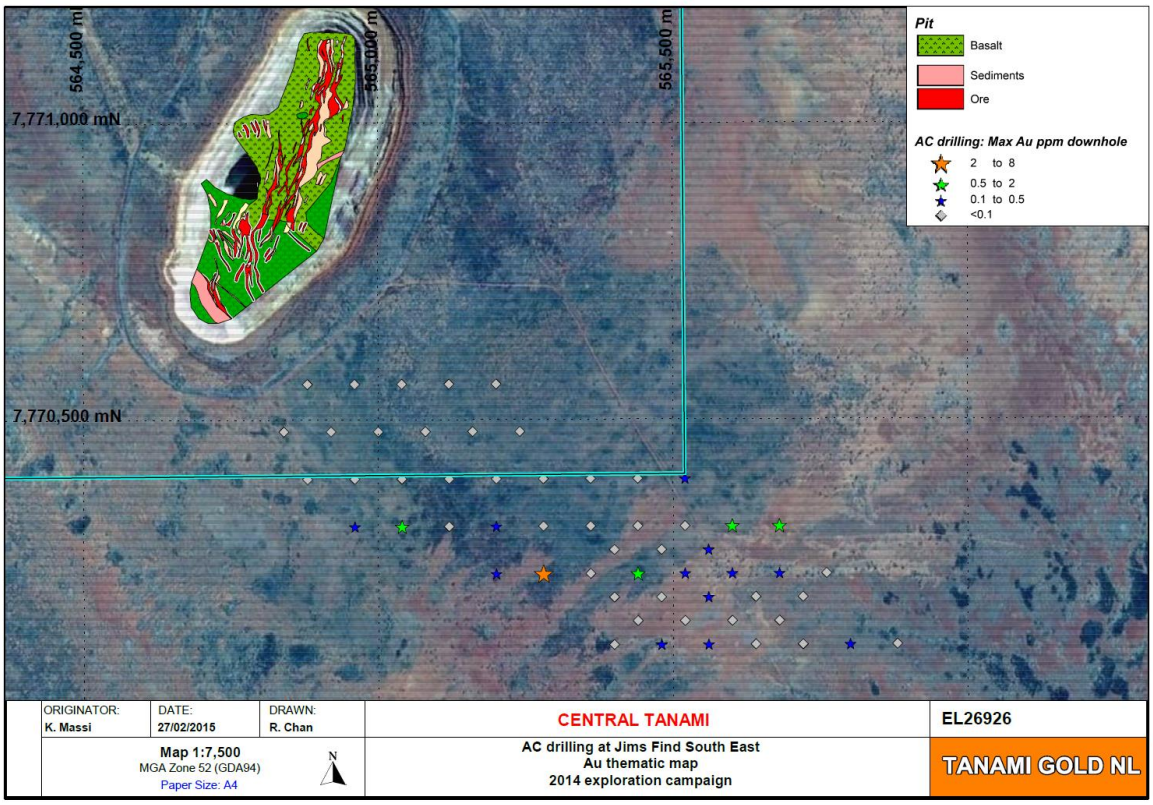

Figure 3 Au thematic map (max Au downhole) of the AC drilling at Jims South.

Exploration on the Galifrey Deposit (EL26926) was part of a large scale project review in 2014 with several reconnaissance fieldtrips. Consultants were enlisted to conduct a detailed mineralogical and structural assessment of the prospect, this involve significant review of historical data, re-logging of existing diamond drilling, field mapping and rock chip analysis, with a total of 5 rock chips collected and analysed.

XRF analysis of the historical diamond holes (WTDH series) was conducted, as well as a relogging exercise to assess the vein mineralogy and paragenesis in the context of both Tanami Lode Gold mineralisation and the proposed intrusion related mineralisation model. Mineralisation at Galifrey is significantly different to the Tanami Corridor, with mineralisation

typically manifested as narrow extensional micro-veinlets of quartz/carbonate/sericite/sulphide and gold in a stockwork array associated with shearing relating to the Galifrey fault. The Galifrey fault lies on the north eastern side of a major intrusive complex (granite and dacite intrusives).

At Gamma (EL8797), no on ground exploration was conducted by TNT as the majority of exploration efforts was completed on other tenements in the region, in particular the Central Tanami Mine and Groundrush tenements.

At Molech (EL26925) Prospecting identified several historical working at the Red Herring Prospect with little or no gold mineralisation identified.

5.1 NORTHERN STAR PREVIOUS WORK COMPLETED

A comprehensive reconnaissance excursion was carried out during 2015 with TGNL and NST geologists. This involved multiple traverses across the majority of tenements within the Central Tanami Project, including EL26926, EL26925, EL8797 and EL28282.

As part of the TGNL-NST handover of operation, TGNL provided several sizeable datasets of which NST have ongoing efforts in extracting, validating and reviewing the contents. NST extracted regional drilling and surface geochemical data from the TGNL database to commence the regional exploration targeting exercise. Compilation of other data including geophysics, regional and prospect scale geological mapping and GIS files was also carried out, incorporating both data provided by TGNL and open-file datasets. Review during compilation of these datasets was carried out to assist the commencement of the targeting exercise.

Regional reconnaissance to several tenement groups outside the scope of this annual report contributed to a preliminary understanding of the regional stratigraphy and how CTP fits into that framework. To better understand the stratigraphy, structural architecture and how both interacted with past mineralising events, a significant focus was placed on geological mapping and lithogeochemical sampling. The following technical works were carried out at CTP and are explained in detail below: pit mapping (geological and regolith), surface mapping and lithogeochemical sampling, Depth of Cover Project and geochemical program design. In addition to the technical work carried out at CTP, support work was also carried out and is detailed below.

5.1.1 Pit Mapping

A review of all existing pit mapping was performed, this included geological and regolith mapping. The key observation from regolith mapping was the identification of two main duricrust horizons, one residual and the other transported. The former unit was noted as ferruginised bedrock, typically consisting of interlocking (jigsaw-fit) pisoliths and nodules with well-developed limonitic cutans. The transported duricrust was noted as a friable layer of ironstone nodules or fragments derived from erosion of older duricrust horizons, probably the product of colluviation and sheetwash. Ironstone fragments were found to be small than in the lateritic duricrust units.

5.1.2 Surface Mapping

To build on and complement existing mapping datasets NST commenced a robust geological mapping exercise aimed at better understanding the regional stratigraphy and how it fits into the regional stage.

Given the lack of extensive outcrop in the Tanami Region historical drill chip samples have been collected and catalogued for logging. Where outcrop persists standard geological mapping practices have applied. Within the Tanami Mine Corridor there are more than 25,000 historical percussion drill sites, most have some form of remnant drill chips remaining. The initial area of interest began over EL 26926, this has grown to include the Groundrush domain and Molech area, progressing outwards towards the bounding Coomarie and Frankenia Domes.

Once drill chips have been collected a first pass log is created, these chips are split to provide a reference sample for cataloguing and an analytical sample for litho-geochemical analysis.

6 WORK COMPLETED IN THE REPORTING PERIOD

Implementation of a regional tectono-stratigraphic project has meant a considerable amount of on-ground and office-based exploration activities across the Tanami Project, in particular the CTP.

The following technical works were carried out at CTP and are explained in detail below:

6.1 REGIONAL AEROMAGNETIC/RADIOMETRIC SURVEY

Following the previous years' review and reprocessing of geophysical datasets, NST decided to undertake a regional scale airborne magnetic-radiometric survey at a high-resolution, to better assist geological interpretation and targeting.

The regional airborne magnetic and radiometric survey was carried out between May 28 and August 4 2017, a total of 77,940 line kilometres were flown over an area approximately 4,500km2. Raw AMAG data merged with regional datasets is shown in Figure 4 covering the GR345-14 Reporting Group. Data processing and preliminary interpretation for this region is ongoing but completed mapping is outlined in purple in the exploration index and in Figure 4.

Inversion processing of the newly acquired magnetic data was undertaken with the aim of developing a sub-surface geological model of the Jim's-Tanami Mine area. A snapshot of the resulting inversion model is included as Figure 5.

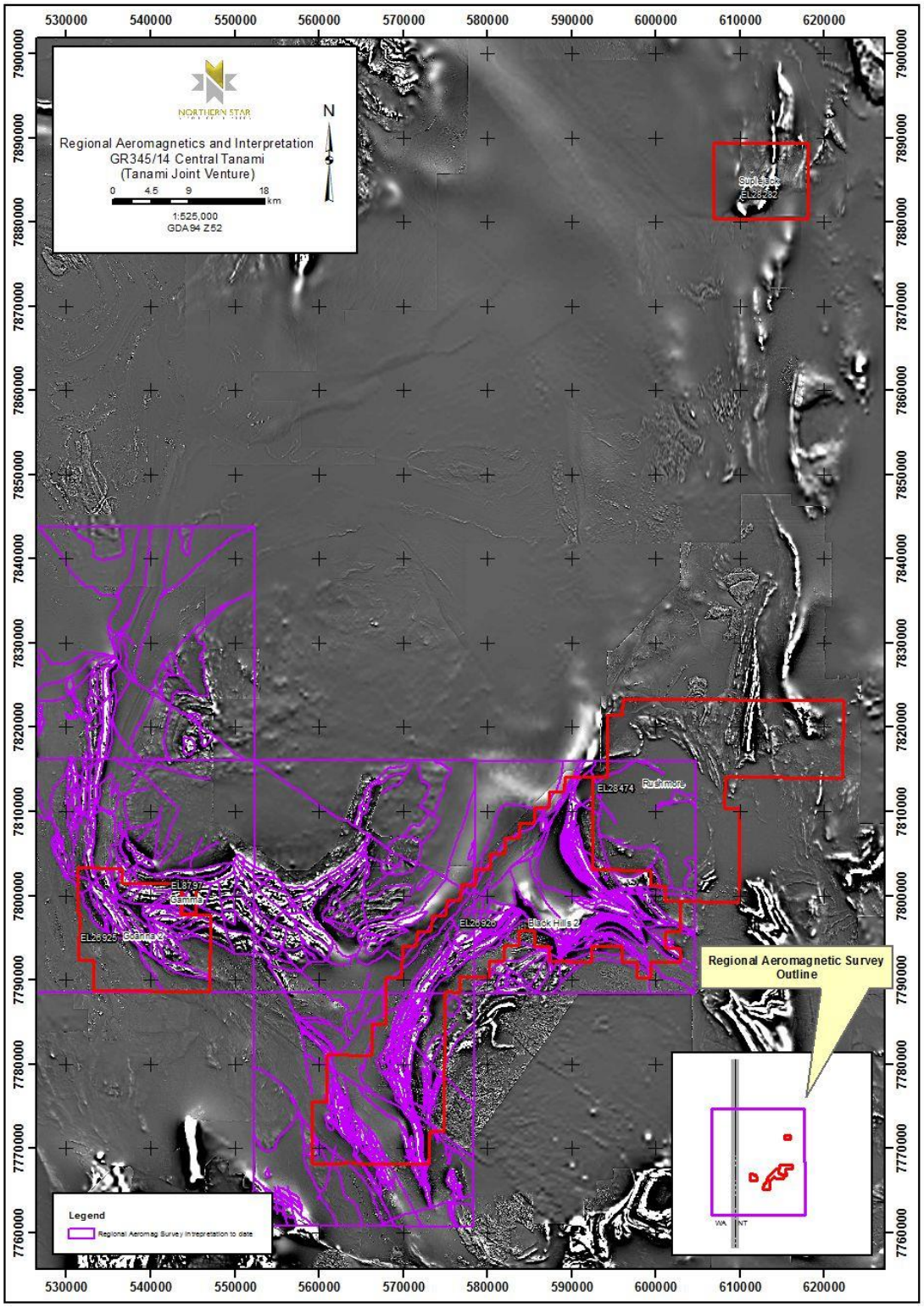

Figure 4: Merged Aeromagnetic Surveys with Regional data completed over GR 345/14. (Interpretations outlined in purple)

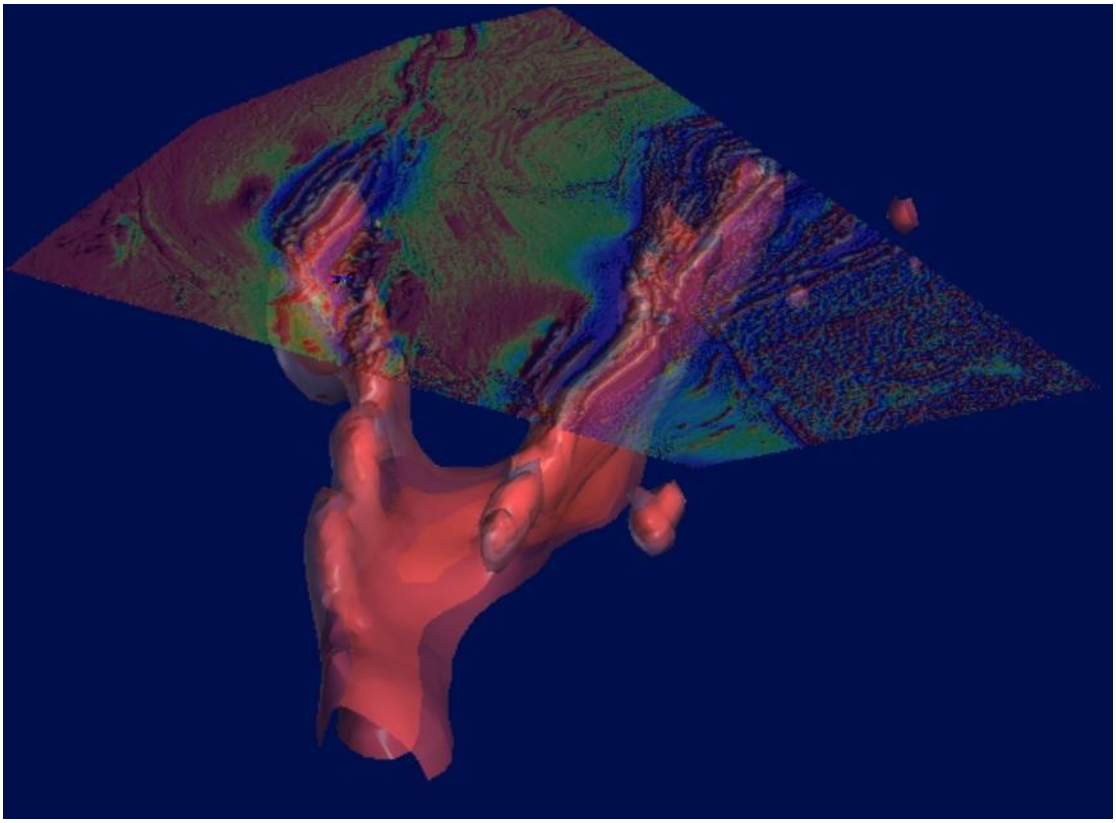

Figure 5 Magnetic inversion - Oblique view looking north west

6.2 GRAVITY SURVEY

Atlas Geophysics was contracted to acquire surface gravity data in the two areas of the CTP, surrounding the historical Jim's Central, Jim's Main and Camelbore deposits at the Jim's gold camp and surrounding the Hurricane-Repulse deposit at the Central Tanami Mine. A total of 8,540 gravity stations were collected on either 200m x 200m or 100m x 50m grid spacings. Figure 6 is a SLOPE image of the processed gravity readings, designed to assist in identifying lithological and structural contacts.

Results from this gravity survey have been incorporated into surface reconnaissance and geological mapping. Detailed analysis of these results has provided considerable knowledge benefits in understanding the stratigraphy and structure of the Tanami Mine Corridor.

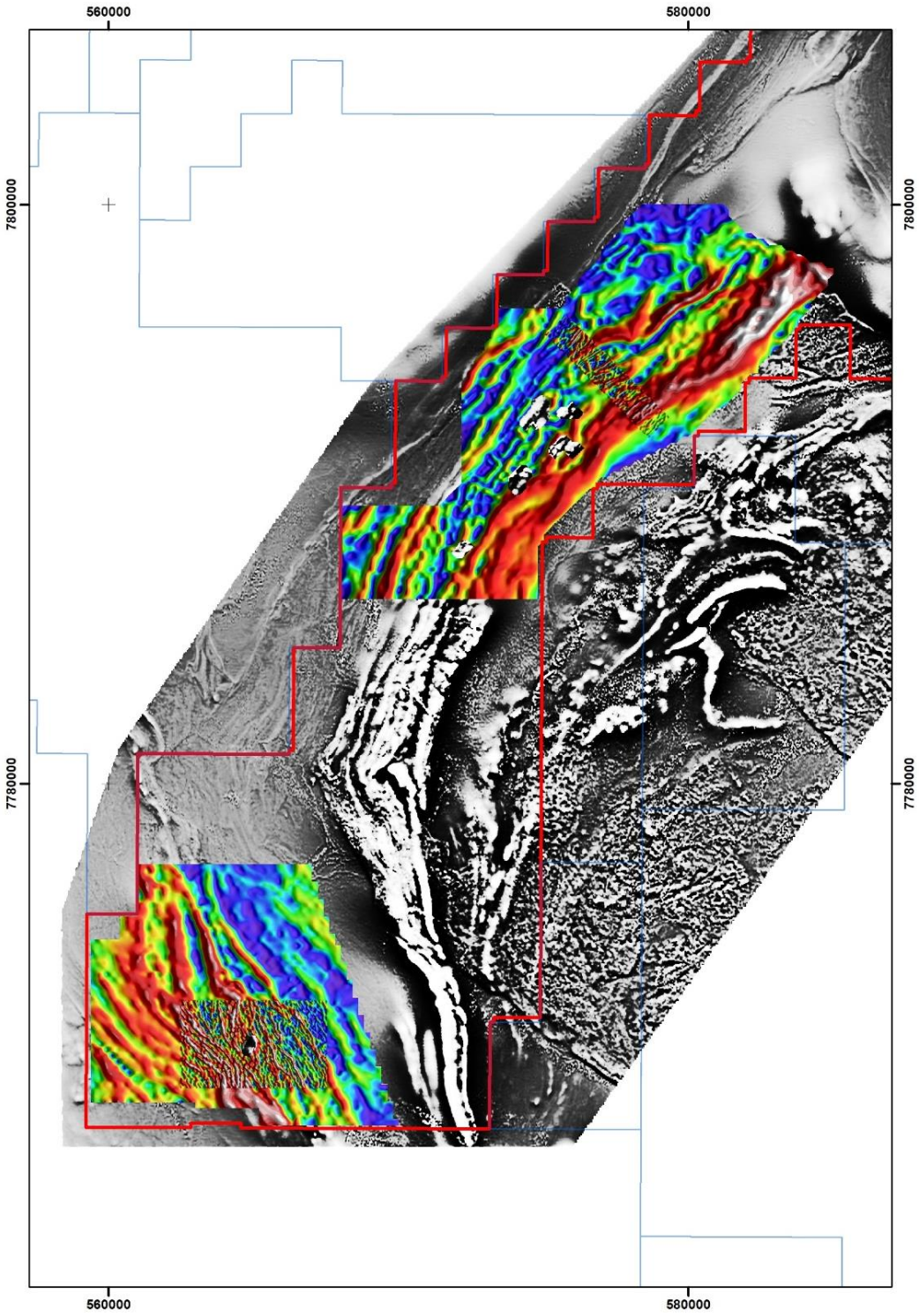

Figure 6: Gravity Survey

6.3 DEPTH OF COVER STUDY - MIRA GEOSCIENCE

In December 2016, NST commissioned geological consultants, Mira Geoscience to undertake a Depth of Cover (DoC) map and to categorise the regolith within the whole of NST's Tanami tenure. The DoC project was completed in two stages with the initial stage to model the base cover and the second stage to interpret and classify the cover and regolith materials.

Mira Geoscience completed the depth of cover project in May 2017. The final interpreted depth of cover product incorporates horizons from legacy drilling datasets, inverted EM geophysics and broad scale paleochannel interpretations. This surface and the input datasets will be utilised in future prospect targeting and to assist with the design of exploration programs over these areas.

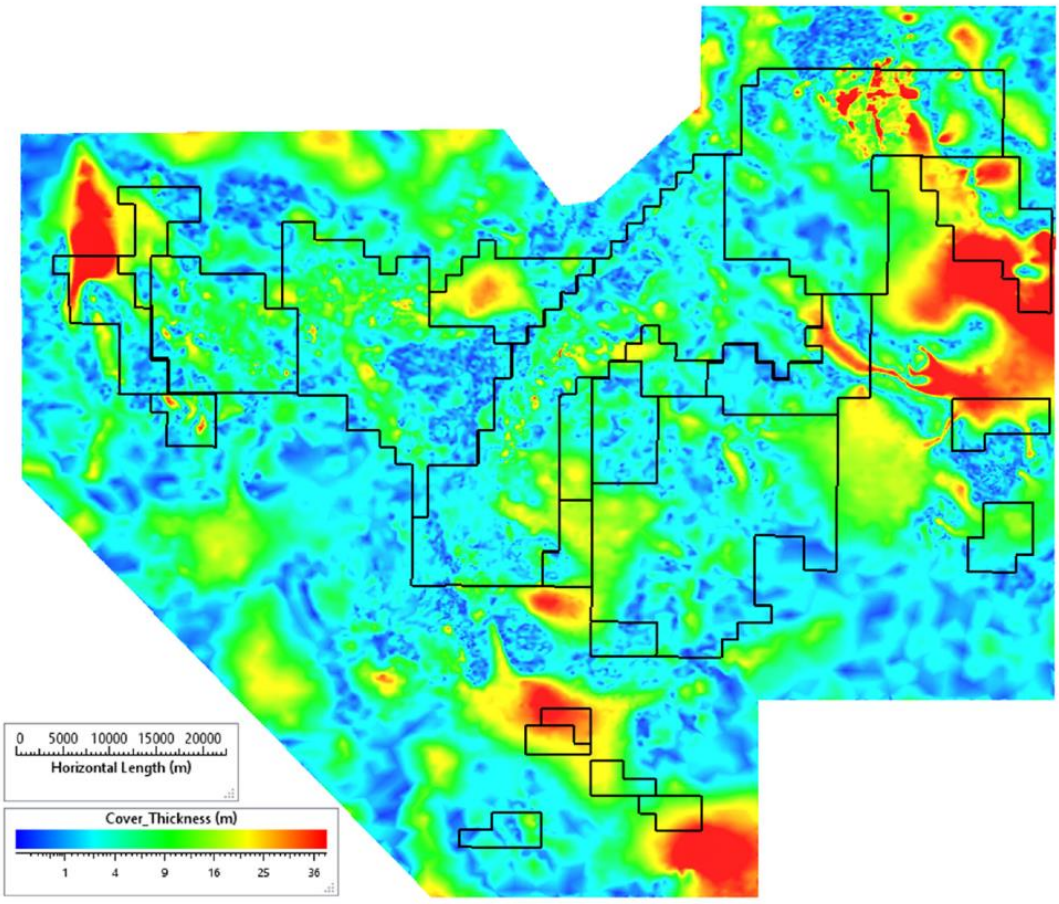

Figure 7: Depth of Cover Surface Interpretation

6.4 MMP Variation Submission

Operational and Exploration MMP's were initially lodged at DPIR in December 2016. In September 2017 NST submitted a variation to the Tanami Regional Exploration MMP to include further target areas in the region. This submission was approved in December 2017, Drilling in the proposed target areas will commence in 2018 and will greatly assist in providing a stronger understand of the regional geological framework that the Tanami Mine lies in.

6.4.1 Geochemical Program Design

To enhance the understanding of the relationship between mineralisation and the overlying regolith, a drill program for either AC, RAB or RC drilling has been designed. An MMP amendment for this drilling was submitted following approval of the CTP MMP currently under review.

6.5 Exploration Targeting

Throughout the Mine Corridor and adjacent areas, mineralisation has been observed to be associated with moderately inclined stratigraphy, most likely representing domains of least strain. Some late stage, mineralisation associated reactivation of fault networks in these areas is noted. These, and other inferences have been compiled into a set of broad criteria to be used for future regional exploration targeting.

6.6 Surface Sampling

As mentioned earlier, bottom of hole sampling of historic holes was completed to aid in interpretation of the lithological data present within the regional database.

A total of 779 historical drill sites were inspected over all tenements and a total of 428 bottom-of-hole (BOH) chip samples were collected from them for analysis.

Prospect	Tenement	Rock	Soil	Chip (BOH)	Assayed Chip (BOH)	Comments
Suplejack	EL28282	21	103	40	40	
Groundrush (East)	EL28474	9		6	6	
and Base Jump		1		8	8	
Tanami Mine Corridor	EL26926	35	1	721	372	
Blackhills	EL26926	23		2		
Jims	EL26926	132		2	2	
Molech	EL26925	3	66			Orientation soil sampling
Totals		**224**	**170**	**779**	**428**	

All samples have been submitted for multi-element analysis to assist in lithogeochemical characterisation and identification of pathfinder anomalism.

Samples were dispatched for analysis to SGS and ALS laboratories in Perth where a multi-element suite was analysed by 4 Acid Digest followed by ICP-MS/AES determination. Gold was analysed by fire assay.

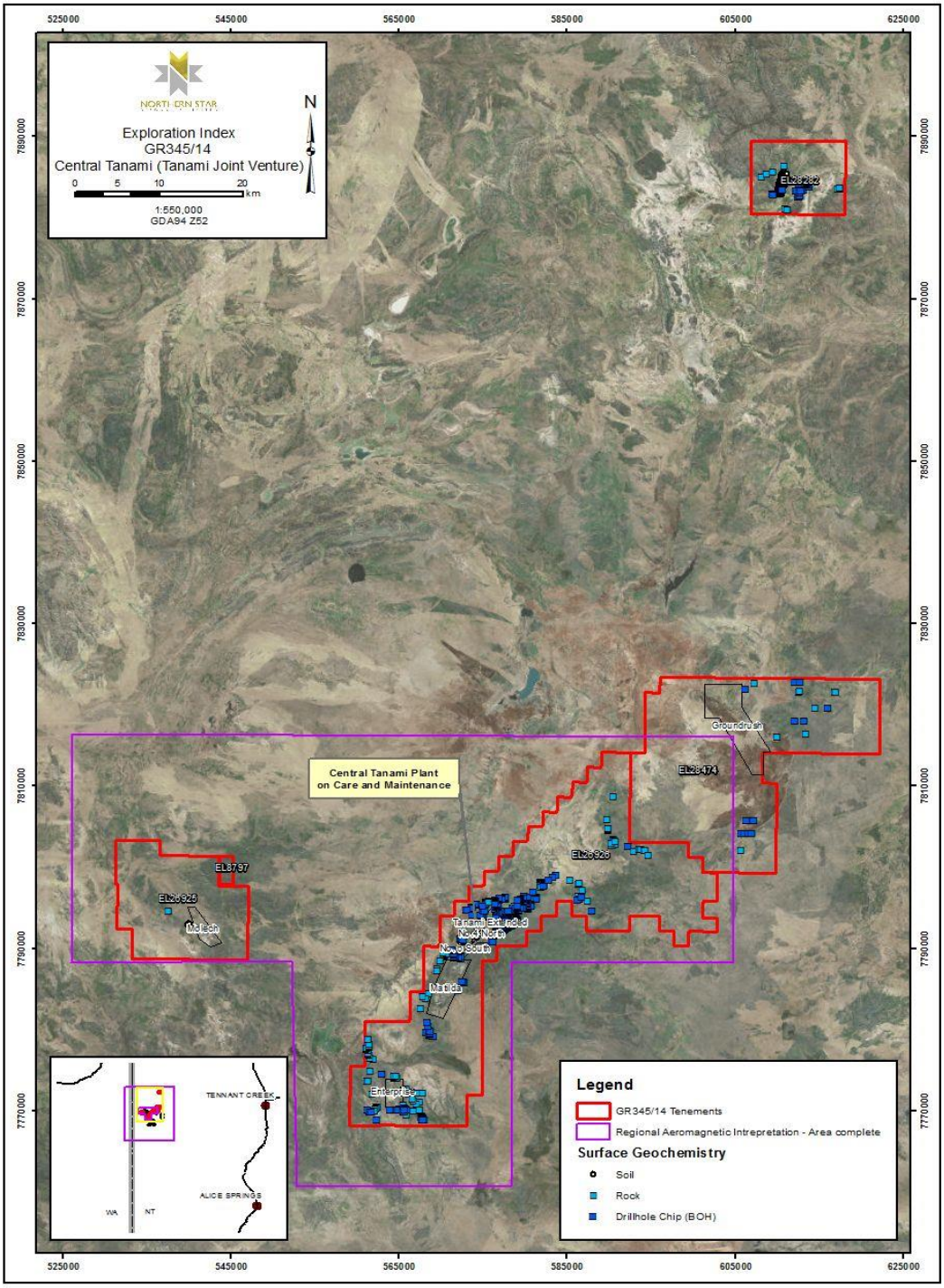

Figure 8: Surface Sampling including BOH Chip sampling

6.6.1 Suplejack Soil Program

A small area of soil sampling was completed at the Suplejack project on EL28282. This sampling took place at the first of four areas to be tested within EL28282 with sampling of other areas being postponed due to heavy rain and personnel prioritization. 103 Soil samples were collected on a 20m x 200m east-west orientated grid over the interpreted western limb of the Suplejack Basalt. Samples were sieved to a >177µ <2mm fraction to remove fine aeolian sand and the effect of large lithic fragments with approximately 250g taken for analysis. 5 individual samples were then composited into one calico bag with this sample centered on the central point of the 5 samples. Samples were sent for analysis by 25g Aqua Regia digest with ICPAES/MS finish for Au, Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sc, Sr, Ti, V, Zn, Bi, Hg, Sb, Se, Sn, Te, Th, Tl, U, W.

Results were generally disappointing with a maximum result received of 9ppb that corresponds with a 1/gt intersects in historical drilling at the Lucifer prospect (Figure 9). This anomalous zone appears to be limited in strike but has only been tested by two lines of AC drilling therefore further drilling is warranted. No pathfinder anomalism was returned from these results. Trace elements display a possible change in lithology across the northern half of the target area. This may be mapping the presence of the Birrindudu sandstone cover sequence overlying the mafic stratigraphy as it does not match the interpreted lithological contact.

It is expected that the remaining soil samples planned will be collected during the 2018 field season.

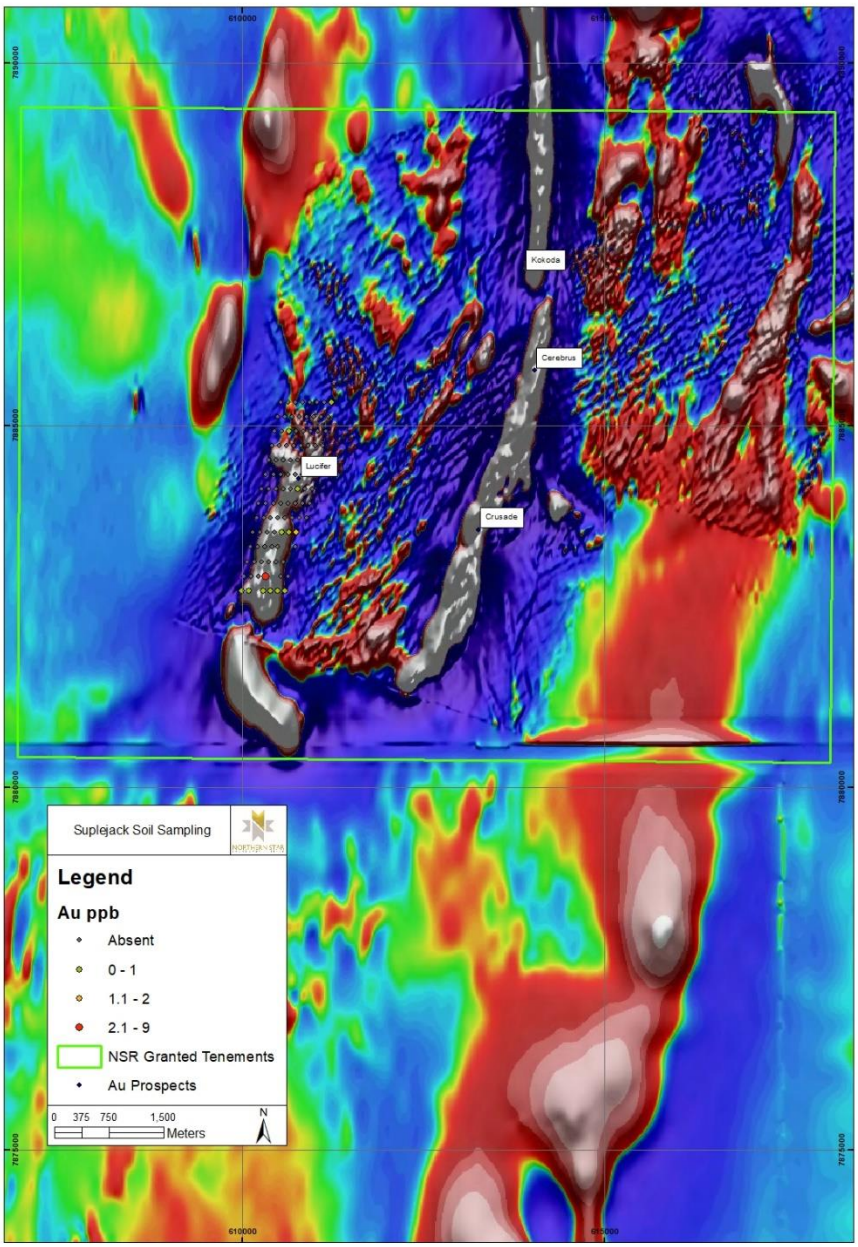

Figure 9 Suplejack soil sampling results overlain on 1VD RTP TMI E-Shade aeromagnetic image. Highest result is 9pbb shown in red.

6.7 Surface Mapping and Rock sampling

Continuing from mapping commencing in late 2016, a total of 1,173 geological points have been logged, 600 of these points have litho-geochemical samples available. 183 regolith points and 318 structural measurements has also been taken. Approximately 370km2 has been assessed by first pass mapping, nearly a third of that area has been sampled in significant density. Figure 8 shows all geological mapping points collected to date.

To further assist the geological mapping process all legacy mapping datasets were compiled into a single GIS feature class and standardized for coding. This process highlighted multiple discrepancies in datasets and geological theories which will dictate future mapping focus.

Structural review as a part of the mapping process has focused predominantly on existing open pits and incorporating that with remote sensing data. Several key structural observations have been developed and will continue to be examined as mapping progresses.

A review of the litho-geochemical samples analysed during the reporting period has shown several interesting features that will be reviewed further once additional analytical data is acquired.

Surface mapping at the Jim's region was ongoing, with investigation of a 158ppb (Au) rock chip identifying a >300m long zone of hydrothermal brecciation within mainly sediment (siltstones and sandstone) and minor basalt in places. Brecciation by quartz-carbonate bearing fluids has resulted in angular jig-saw fit breccias with strong silicification of host rock. Pyrite and arsenian pyrite are present as blebs and disseminated within veining and on the margins of clasts. This zone of brecciation sits on a clear magnetic lineament that may represent either mafic lithologies or ferruginous sediments.

A second minor anomaly (14ppb) was returned from a milky, buck quartz vein located to the east of the Gallifrey prospect. Further investigation of this observed veining and vein subcrop extending over ~250m. Zones of hydrothermal breccia veining have resulted in strong silica-serecite overprinting of siltstones or fine grained felsic volcanics.

Approximately 40 additional samples were collected from both zones, including veining and host rock to determine the scale of anomalism. Mapping of the breccia zones to both the north and south is ongoing along with interpretation of historical exploration of this prospect areas.

6.7.1 Rock chip sampling

Three anomalous assays were returned from rock chip samples taken from the Crusade prospect area (Suplejack). These results include 1.64ppm, 1.79ppm and 1.135ppm Au. Samples were taken from quartz veining over and to the south of the main Crusade resource area. Two of these samples indicate the significant potential for growth of the existing Crusade mineralised system. Further surface mapping and field reconnaissance is ongoing in this area whilst negotiations for an access agreement take place.

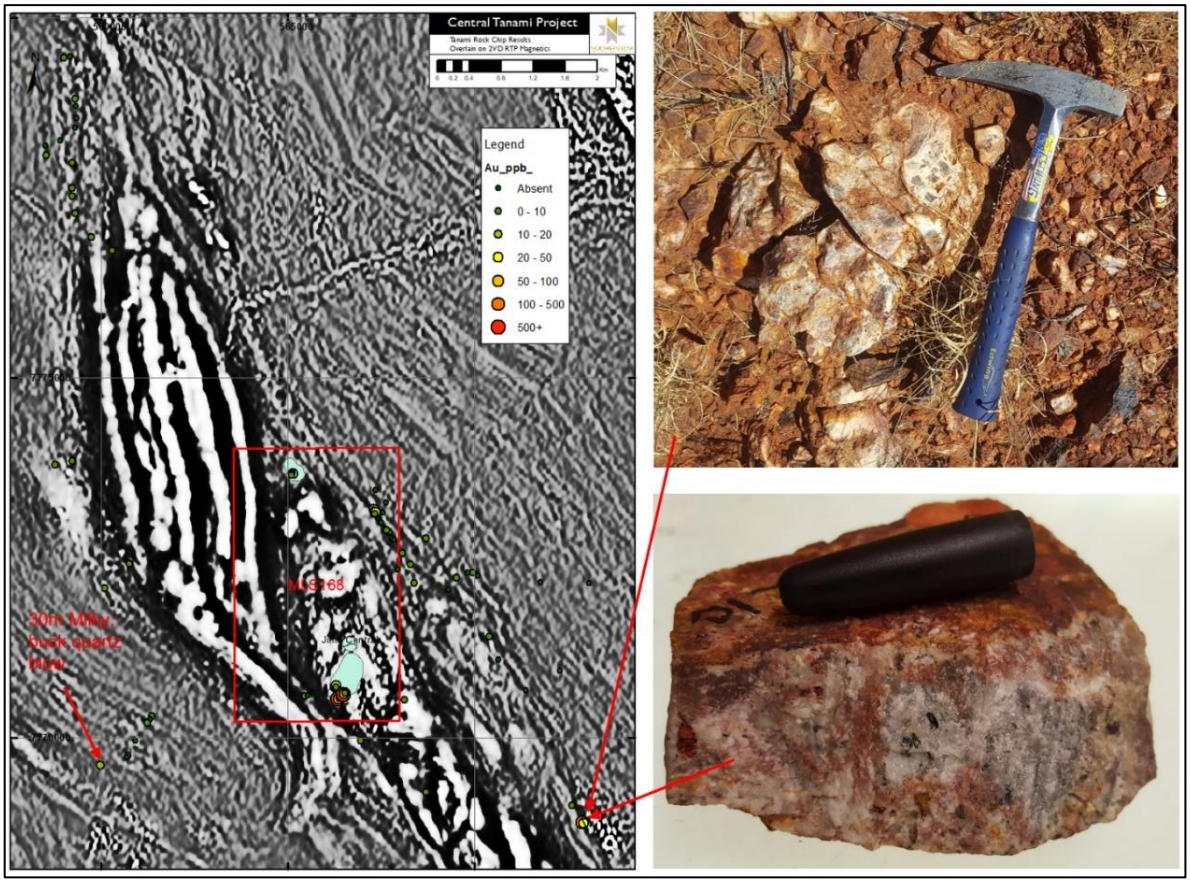

Figure 10: Jim's prospect area: rock chip assay results overlain on 2VD Aeromagnetics. Anomalous results were returned from hydrothermal breccia veining with pyrite and arsenian pyrite mineralisation.

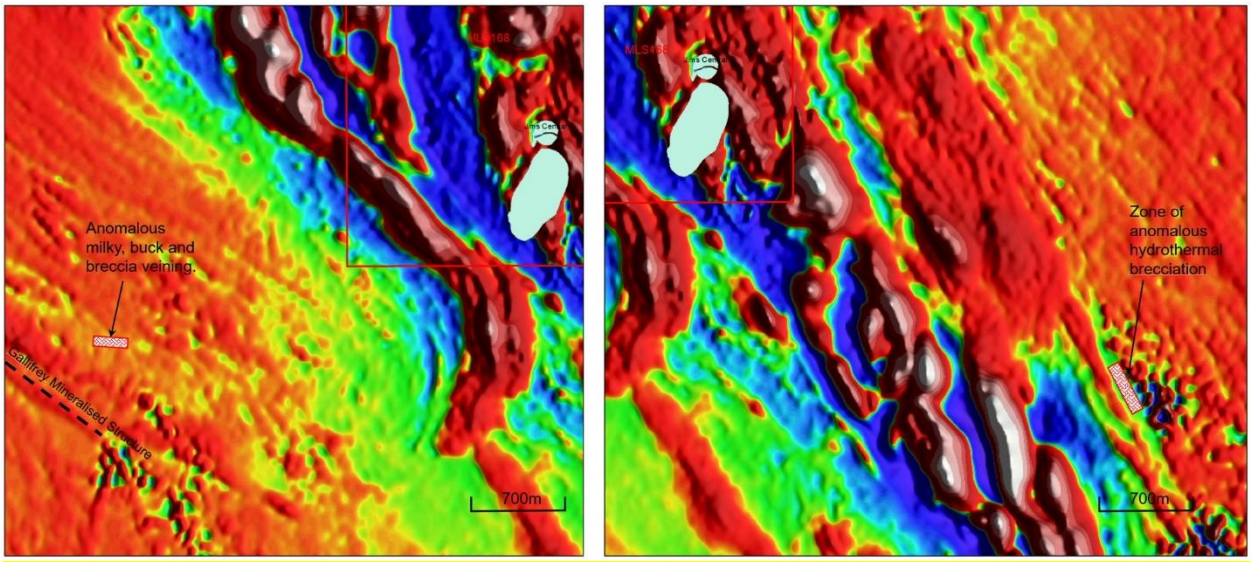

Figure 11: Anomalous outcrop near the Gallifrey prospect over 1VD RTP TMI E-Shade aeromagnetic image (EL26926)

6.8 REGIONAL ENVIRONMENTAL SURVEY AND GEOLOGICAL RECONNAISSANCE PROGRAM

A regional helicopter assisted environmental survey was carried out between June 24 to 29, geological reconnaissance was performed in conjunction with this work. The environmental survey was carried out to assist NST in its upcoming MMP amendment for additional works over regional tenure. Twenty-three sites were investigated to better understand the flora and fauna species in those regions, and to determine whether there are any species of conservation significance present. This includes the Jim's area on EL26926 and Suplejack project on EL28282. Evidence for some endangered species, namely the Greater Bilby, was noted in several regions. A final report will be provided to NST in late July and was incorporated into the Tanami Regional Exploration MMP amendment. It is also Attached as Appendix B.

Utilising helicopter assistance, a geologist led team covered eleven traverses across all NT tenure, for a total of approximately 25km of field reconnaissance. This included a traverse over the Suplejack project on EL28282. The aim of this field program was to assess the regional stratigraphic interpretations and to identify any areas of outcrop that warrant follow-up investigation.

7 CONCLUSIONS AND RECOMMENDATIONS

Over the coming twelve months NST will continue to provide geological mapping coverage over the CTP area, gradually shifting its focus from quantifying local stratigraphy and mineralisation to developing a set of basic geological characteristics that the company can apply to its regional tenure.

By incorporating the results of the Depth of Cover project and regolith drill testing, NST will be able to accurately determine the best means of exploration for areas not only within the CTP tenure but also further afield. By geochemical testing of lower order targets and, with regulatory approvals in place, drill testing of advanced targets, NST will be able to develop continuous pipeline of targets for assessment.

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9 APPENDICES

Appendix A – Mira Geoscience 4594 Northern Star Tanami

Appendix B – Biota Environmental Science Jim's Area Ecological Survey