

#### TERRITORY URANIUM COMPANY LTD. ABN# 94 115 770 226

### ASX:(TUC)

# Tennant Creek Bluebush Southeast Targets (EL 24966)

Joint Venture with Panoramic Resources

## **PHASE TWO – DRILLING REPORT**

Tennant Creek SE5314	1:250,000
Kelly 5658	1:100,000
Geodetic Datum of Australia	94, Zone 53



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### **EXECUTIVE SUMMARY**

Territory Uranium Company (TUC) in joint venture with Panoramic Resources conducted a second phase of drilling looking for possible Tennant Creek style high grade Iron Oxide Copper-Gold (IOCG) style mineralisation at its Bluebush project in 2010. The drilling consisted of two diamond drill holes for 1,220.5m targeting selected geophysical anomalies, one RC drill hole for 298m was also completed following up on magnetite and chlorite alteration identified in hole TDD02 the previous year.

The drilling effectively tested the main geophysical targeting criteria across the 4km strike length of the Bluebush Southeast Prospect. Geophysical anomalies were either explained by dense ultramafic rock types or magnetite mineralisation not associated with significant gold or copper grades. The lack of gold and copper mineralisation over the 4 km strike length would suggest a distinct lack of mineralising events in the region.

Given the lack of success it is recommended that the joint venture on this tenement should be put on hold. In addition, further work at Bluebush Southeast would likely require extensive further negotiations with traditional owners with respect to access and it is felt that these additional burdens are prohibitive given the likely exploration success.

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#### 1. INTRODUCTION

Territory Uranium Company (TUC) in joint venture with Panoramic Resources conducted a second phase of drilling looking for possible Tennant Creek style high grade Iron Oxide Copper-Gold (IOCG) style mineralisation at its Bluebush project. The drilling commenced on the 22<sup>nd</sup> of August and finished on the 7<sup>th</sup> September 2010. The drilling consisted of two diamond drill holes for 1,220.5m targeting selected geophysical anomalies, one RC drill hole for 298m was also completed following up on magnetite alteration identified in hole TDD02 during the first drill program (Page, 2010).

#### 2. REGIONAL CONTEXT AND TARGETTING CRITERA

#### 2.1 Known Mineralisation

The Bluebush project is situated between the Tennant Creek Gold Field to the northeast and the Rover Field to the southwest (Figure 1). Mining has occurred within the Tennant Creek field (25km northeast) with historical production recorded at approximately 5.5Moz Au and 470,000t Cu since discovery in the 1930's (Bills 2009). The last stage of production was in 2007.

Mineralisation in the Tennant Creek (25km northeast) and the Rover Field (40km southwest) primarily occurs in "Tennant Creek Style" high grade IOCG deposits hosted within Palaeoproterozoic sediments (Warramunga Formation). The mineralisation occurs in association with ironstones precipitated by connate brines at locations such as EW fold hinges, axial planar shears and porphyry intrusions.

Immediately to the southeast of EL24966 Giant's Reef completed a two diamond and seven RC drill holes in 2001. The highest intersection was found in BBRD2 which came back at 2m @ 0.51 g/t Au.

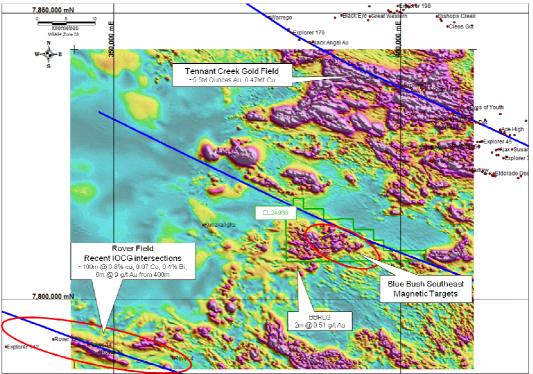


Figure 1 Regional mineralisation displayed on airborne magnetic imagery



#### 2.2 Stratigraphy

Interpreted to the south east of the EL 24966 project area is the Junalki Formation, a lithic / volcanoclastic arenite with interbedded laminated siltstone, and some argillaceous banded iron formation and rhyodacitic lava. Johnstone (2001) noted that the Junalki Formation had age dating similar to the Warramunga Formation which hosts the majority of mineralisation at the Tennant Creek Goldfield. This unit could be a sub basinal analogy to the Warramunga Formation and therefore is thought by TUC to improve the propsectivity of the tenement.

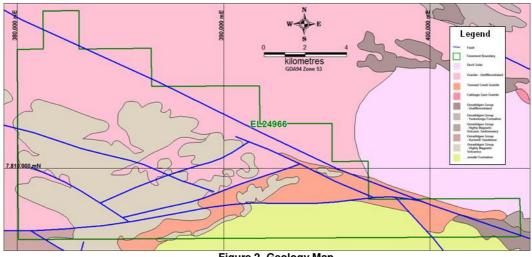


Figure 2 Geology Map

#### 2.3 Structure

TUC's Bluebush Southeast prospect sits at the intersection of two major NNW/WNW trending lineaments likely to be associated with the trend of regional thrusts discussed by (Large, 1991). Numerous structures (Figure 2) cut the project between these two lineaments identifiable from magnetic disruptions in aeromagnetic data. These major lineaments match the orientation of those characteristic of the Tennant Creek Gold Field to the northeast of Bluebush and the Rover field to the southwest (Figure 1).

A strong S shaped shear (see Figure 3) on the south eastern side of the tenement appears to contain slices of a magnetic/sedimentary unit possibly the Junalki Formation (sub-basinal analogy to the Warramunga Formation).

#### 2.4 **Geophysical Targeting Criteria**

The second phase of drilling at Bluebush targeted selected geophysical models between the Tennant Creek and Rover Fields which were not able to be drilled during the first phase. These higher priority targets were subject to an Aboriginal Area Protection Authority Restricted Work Area (RWA). TUC applied for a dispensation to drill two holes within the RWA, this approval was granted by the Traditional Owners in June 2010.

The drilling was designed to explore for Tennant Creek Style high grade IOCG deposits occurring in association with ironstones. Geophysical ground gravity survey data (collected by TUC in 2008) was combined with regional airborne magnetic survey data to reveal numerous coincident gravity/magnetic anomalies. These anomalies were modelled by two independent geophysists (Lindeman Geophysics and Newexco) and are presented in Figure 3. It was hypothesised the magnetic/gravity anomalies could be ironstones with associated mineralisation. The phase two drill program was designed to test two of these targets within the RWA. A third hole was designed based on the magnetite stringers intersected in TDD02 and tested a hypothesised Juno Style Deposit located above TDD02.



#### 2.5 Drill Holes

In August/September 2010 TUC drilled three holes in the Bluebush project area. The details of the holes can be found in Table 1. Figure 3 shows the location of drill holes. Collar coordinates were picked up with a conventional handheld GPS.

Hole ID	Easting	Northing	Elevation	Dip/	RC Depth	Diamond	Total
	GDA94 Zone 53			Azimuth	(m)	Depth (m)	Depth (m)
TDD06	391,233	7,808,476	330m	-58/000	201	270.8	471.8
TDD07	392,429	7,809,195	330m	-59/000	160	290.7	450.7
TURC0080	394,900	7,809,825	330m	-60/000	298	0	298
Total					659	561.5	1,220.5

Table 1 Drill Hole Details

#### 2.6 Sampling, Analysis and Measurement

Table 2 details the drilling, sampling, analysis and measurement protocols for the drill program.

Drilling Method	Drilling was undertaken with conventional NQ wireline coring tools and RC drilling used to
	pre collar holes. Except for TURC0080 which as drilled solely with RC drilling.
Core Orientation	Core was orientated on every run with an in core barrel ezi mark tool.
Down Hole	Down hole survey information was taken at the collar to ensure correct hole set up and at
Orientation Survey	regular intervals down the hole. An electronic multi shot tool was used.
Core Mark Up	All core was marked at 1m intervals and orientation and sample lines added where possible.
Core Photography	All core was photographed prior to sampling using a high quality Canon digital camera.
eere r netegraphy	All photos are located in Appendix A
Sample Quality	Diamond core, normal quality measures applied.
Logging	Core and RC chips were logged digitally (Tables include Lithology, Weathering and
	Regolith, Water Intersections, Structure, Veining, Alteration, Mineralisation, Geotechnical including RQD data, Specific Gravity and Magnetic Susceptibility) in a Microsoft Access Database which is located in Appendix B.
Sampling Procedure	RC samples were taken generally at 4m composites from 1m piles plus 1m splits using a riffle splitter. Some samples have been preserved for resample where necessary. Sampling of core commenced once all core photography, logging and geophysical analysis was completed. Samples of ½ core were taken to geological intervals generally at 1m intervals (maximum 1.4m, minimum 0.3m). Core was sampled in areas of geological interest, to geological boundaries or to provide a multi element geochemical signature of specific units.
Sampling QAQC	For the RC samples every 25 <sup>th</sup> sample was a duplicate of the previous metre to ensure quality control of the assays.
Geophysical Analysis	The core was weighed in and out of water to calculate specific gravity roughly every 10m.
of Core	Magnetic Susceptibility was also recorded every metre along the core. All results are located in a Microsoft Access Database which is located in Appendix B.
Sample Dispatch	Samples were dispatched from the TUC Darwin office to Bureau Veritas - Amdel in
Sumple Disputori	Adelaide via their sample preparation laboratory in Darwin.
Analysis	Samples were sent to Amdel Laboratory in Adelaide for the following analysis:
,	Fire Assay - Au (1ppb), Pt (5ppb), Pd (1ppm)
	Multi-Acid Digest ICPMS Analysis- Ag (0.1ppm), As (0.5ppm), Ba (5ppm), Bi (0.1ppm), Co
	(0.2ppm), Cr (2ppm), Cu (2ppm), Fe (100ppm), Mg (10ppm), Mo (0.1ppm), Ni (2ppm), Pb
	(5ppm), Sb (0.5ppm), Th (0.1ppm), U (0.1ppm), W (0.5ppm) and Zn (0.5ppm).
Analysis QAQC	Laboratory QAQC procedures including blanks, duplicate analysis and standard analysis
	were employed. Amdel Laboratory complies with to AS9001 Quality Systems standards
	and partakes in round robin check analysis with other laboratories.
Down Hole	Down Hole Magnetic Survey was completed by Direct Systems Limited, results are
Geophysical Survey	located in the Microsoft Access Database (Appendix B). The parameters used for the
Geophysical Survey	survey are located in Appendix C.
	Table 2 Drilling Sampling and Massurement Protocol

 Table 2
 Drilling Sampling and Measurement Protocol



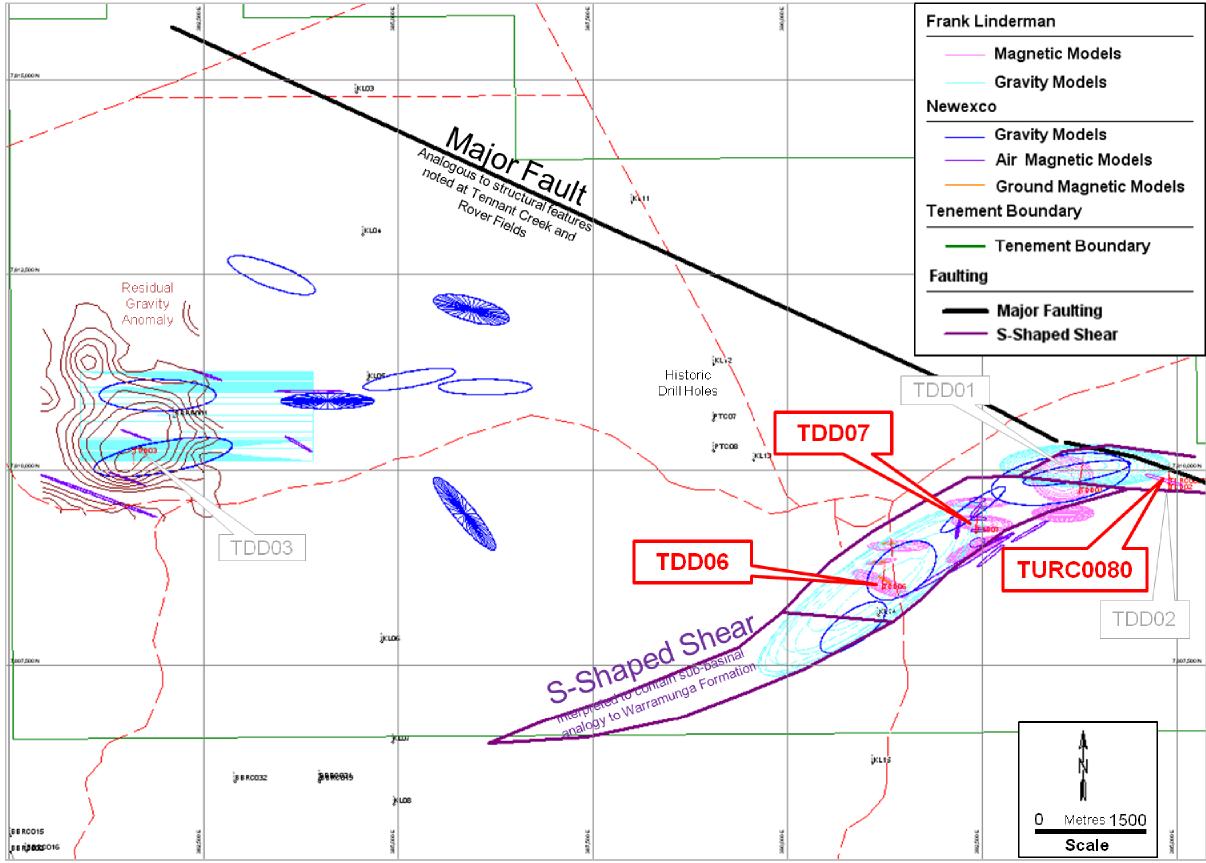


Figure 3 Plan map showing the new Drill Holes (red) and last year's drill holes (grey) in relation to the Gravity and Magnetic models, historic drilling is also shown.



#### 3. RESULTS

#### 3.1 Bluebush Southeast Residual Gravity Anomaly - TDD06

TDD06 was designed to target a residual gravity anomaly which coincided with magnetic anomaly and test for ironstone associated mineralisation in palaeoproterozoic sediments caught within an S-Shaped Shear formation (see Figure 3). The hole was designed to test two overlapping geophysical models interpreted by our consultants (see Figure 4).

The hole was drilled to 202m using an RC drill rig with fresh rock being intersected at 70m (see Figure 4). Diamond drilling then extended the hole to a total depth of 471.8m. The drill hole started off drilling an overlying limestone cover formation from 0-35m, before intersecting a sequence of interbedded intermediate porphyrys and dolerites which continued to a depth of 98m.

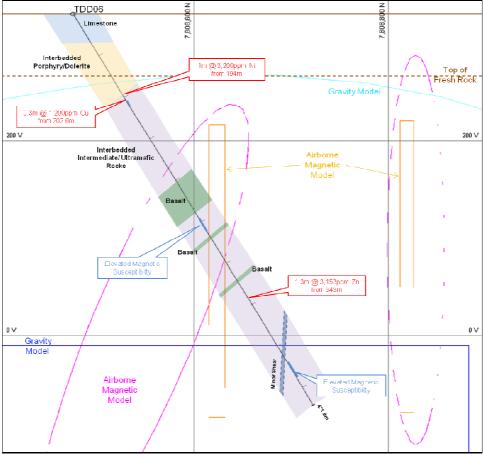


Figure 4 The drill log of TDD06

The remainder of the drill hole consisted of interbedded intermediate and ultramafic rocks with an occasional basalt. Elevated magnetic susceptibility readings occurred at 100-104m, 252-261m and 428-441m, these zones coincide with some, but not all, of the ultramafic rocks. A minor shear zone was intersected at 412.5-416.6m, veining, mineralisation and alteration in the hole was limited.

The ultramafic rocks are thought to be the source of the gravity anomaly. However, the magnetic anomaly is thought to be caused by magnetite within the ultramafc rocks, with largest zone of elevated magnetic susceptibility (252-261m) occurring within an ultramafic at the centre of the magnetic anomaly models.



Maximum values of 19ppb Au, 0.3m @ 1,200 ppm Cu, 1m @ 3,200 ppm Ni and 1.3m @ 3,153 ppm Zn have been returned. The elevated copper result occurred at 202m, in a 30cm wide sample which was sampled due to distinct quartz veining and noticeable sulphide mineralisation. The size of the anomalous zone was not large enough to warrant further interest. The 1.3m wide anomalous zinc was contained within an intermediate porphyry which also showed distinct quartz veining, however no sulphides were noticed.

The association of zinc in an intermediate porphyry has similarities with the mineralisation at Explorer 108 which is located in the Rover field. At Explorer 108, zinc is the dominant metal and occurs in a hydrothermal alteration zone within sheared acid volcanic and dolomite rocks (Martin, 2007). This association could potentially indicate a mineralised footprint in the vicinity around TDD06, however the lack of hydrothermal alteration is discouraging.

For full details about TDD06 please look at the drill logs (Appendix B) and cross section (Appendix D).

#### 3.2 Bluebush Southeast Residual Gravity Anomaly - TDD07

Like TDD06, TDD07 was designed to test a residual gravity anomaly which coincided with a magnetic anomaly.

TDD07 was drilled down to a total depth of 450.7m, with a 160m RC pre-collar. The majority of the whole consisted of volcanoclastic sediments with a small basalt layer noticed from 317.3-322.6m (Figure 5). The hole had slightly elevated magnetic susceptibility reading for a large portion of the hole.

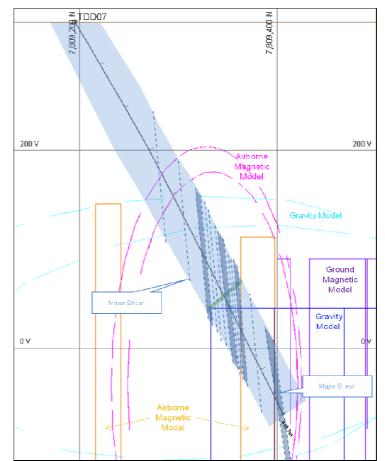


Figure 5 The log of drill hole TDD07 showing the multiple shear zones which were intersected.



Like in the previous drill hole, minor alteration, veining and mineralisation was intersected. However, no significant assay results have been returned to date. Some assays remain pending but no significant results are expected.

The ground was extremely broken from the commencement of the hole with occasional reprieve. It is believed that a late stage structure at a low angle to the hole ( $\sim$ 15°) has been intersected. The hole was terminated 249.3m early, once it has passed through the deeper Newexco magnetic model. This decision was made in light of excessive slow penetration charges and the risk of hole collapse. A total of 90m of unrecoverable casing was left in the hole, whilst 70m of casing was recovered.

The slightly elevated magnetic susceptibility values measured over the volcanoclastic sediments are thought to be the cause of the magnetic model. Due to the early finishing of this hole, drilling only tested the Lindeman Gravity Model. The Newexco Gravity Model was not fully tested, however, given the fact that the drill holes had explained the gravity anomalies to be due to dense rock types it was not thought likely that anything different would be proven by continuing this hole.

For full details about TDD07 please look at the drill logs (Appendix B) and cross section (Appendix E).

#### 3.3 Southeast Magnetic Anomaly – TURC0080

In an initial drill program in 2009 TDD02 intersected a strong magnetite alteration (including magnetite stringers) and chlorite alteration between 286.6-305m. TUC hypothesised the magnetite and chlorite alteration could be analogous to the alteration seen below the Juno Deposit in the Tennant Creek Field. Another supporting feature of the results from TDD02 was the presence of anomalous gold and copper in the weathering horizon which was interpreted to indicate the presence of mineralisation at depth. The Juno deposit was used as the model for exploration and TURC0080 was designed to test the target as shown in Figure 6.

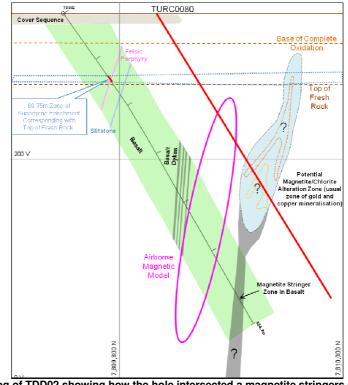


Figure 6 The log of TDD02 showing how the hole intersected a magnetite stringers and the proposed TURC0080 (red) targeting the hypothesised Juno Deposit Model. The model was adapted from Emerson Resources interpretation of the Juno Deposit (Russell, 2009).



TURC0080 was drilled to a depth of 298m using RC drilling (see Figure 7), the hole intersected basalt for the entire hole, with only a small felsic dyke between 264-265m. Although there were minor signs of alteration and veining no significant mineralisation was noticed. Magnetic susceptibility readings of the drill hole showed no elevated readings, and magnetic stringers were not seen in this drill hole.

Assay results returned for the drill hole were disappointing with maximum values being 7ppb Au, 385ppm Cu and 310ppm Zn. It should be noted however the supergene enrichment zone noticed in TDD02 was also present in drill hole TURC0080.

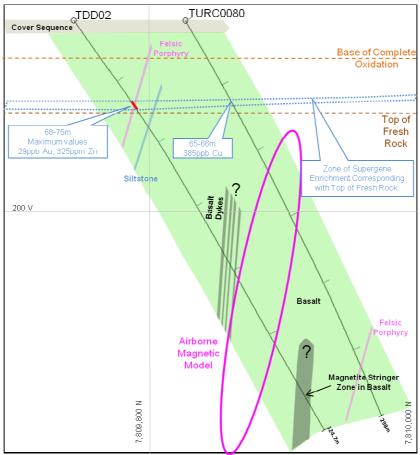


Figure 7 The log of TURC0080 and TDD02

A hole beneath TDD02 could be considered but given the lack of encouraging results to date this target is not considered to be a high priority.

For full details about TURC0080 please look at the drill logs (Appendix B) and cross section (Appendix F).

#### 4. COST OF PROGRAM

The costs involved in this work program detailed below in Table 3 (inclusive of GST), with invoices outstanding marked in red.

Cost centre	Total Item Cost (A\$)
RC Drilling	\$52,881.40
Diamond Drilling	\$213,065.08
Mobilisation/Demobilisation	\$16,000
Assay and Core Cutting Costs	\$3,214.86
	~\$8,000
Down Hole Survey	\$4,779.61
Track and Pad Clearance & Rehabilitation	\$21,612.33
Food & Accommodation	\$4,779.61
Supplies	\$7,956.00
Freight	\$878.27
Flights	\$1,430.00
Management, Administration, Wages &	\$31,435.40
Overheads	~\$6,000
Total Cost	\$358,100.78
	~\$372,100.78

 Table 3
 Diamond Drill Program Costs (Invoices outstanding marked in red)

### 5. COMPETITOR RESULTS

In a joint venture between Western Desert Resources (WDR) and Tennant Creek Gold seven drill holes were completed on EL 255881 to the Southeast of the Project Area. The drill holes were designed to test similar style geophysical targets. The RC drilling commenced in February 2010 with 4 holes completed, the other 3 drill holes were extended with diamond tails in June.

The completed RC holes were unsuccessful with WDR stating that "Geophysical measurements on the samples indicate that the holes have successfully tested the magnetic targets which were caused by the barren magnetic volcanic/igneous sequences" (Gardner, 2010). To date the results from the diamond drilling are yet to be announced but due to the time delay in getting results out (June – December) it is likely the diamond holes were also unsuccessful.

TUC believes the rock types described by WDR are the same as those drilled in this project area and are the cause of the anomalies on both EL 255881 and EL24966.

#### 6. CONCLUSIONS/RECOMMENDATIONS

We conclude that drilling has effectively tested the main geophysical targeting criteria across the 4km strike length of the Bluebush Southeast Prospect. Geophysical anomalies were either explained by dense ultramafic rock types or magnetite mineralisation not associated with significant gold or copper grades. The lack of gold and copper mineralisation over the 4km strike length would suggest a distinct lack of mineralising events in the region.

Given the length of the drill holes and their scope across major structures one would have expected some anomalous mineralisation within the normal footprint of a mineralised system.

Two targets for further exploration potential exist in the Bluebush Southeast area. The first is to target Explorer 108 style mineralisation around TDD06, the second is option is to drill under TDD02. However, the likelihood of success is limited, and as such neither of these targets are considered a high priority.

Due to the lack of success in this latest round of drilling and considering the recent unsuccessful programs by competitors in the surrounding terrain, and the high cost of exploration it is recommended that the joint venture on this tenement should be put on hold.



In addition, further work at Bluebush Southeast would likely require extensive further negotiations with traditional owners with respect to access and it is felt that these additional burdens are prohibitive given the likely exploration success. It is not recommended that any further work be undertaken on this prospect at this stage.

TUC looks forward to working with Panoramic and continuing this joint venture on the other Tennant Creek tenement EL 24967, with a RAB program due to start in the new year.

#### 7. REFERENCES

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**Page, T. 4<sup>th</sup> May 2010**. The Final Report: Tennant Creek Bluebush 'Iron Oxide Copper Gold Exploration in Covered Terrain'. *TUC Company Report to Panoramic Resources.* 

**Russell, S. 21<sup>st</sup> December 2009.** Bonaza Gold Intersection and High Grade Copper Result at Tennant Creek as Testing of Tier 1 Tagets Progresses. *Company ASX Release (ASX:ERM).* 



#### 8. APPENDIX A – CORE PHOTOGRAPHY

#### 9. APPENDIX B – MICROSOFT ACCESS DATABASE

#### 10. APPENDIX C – DOWN HOLE MAGNETIC SURVEY PARAMETERS

Depth	Wireline Depth
Inc	Inclination
AzM	Magnetic Azimuth
AZa	Azimuth is the angle between the horizontal component of the borehole direction at a particular point and the direction of North. The angle should always be expressed in a 0-360 degree system measured clockwise from North. The angle may refer to either Magnetic, True (geographic) or Grid North. Whichever referred to must always be clearly indicated. It is calculated from the measured outputs of each magnetometer plus the accelerometer.
AZraw	As per Azimuth raw (AZraw) except that the Z-component of the earth's magnetic field is calculated (rather than measured as in AZraw) from the entered Dip and field strength. This azimuth calculation can overcome the effects of Bz magnetic interference. However, the method becomes less accurate at high inclinations and azimuths approaching East/West. It should therefore not be used as True Azimuth without an understanding of the error involved for a particular situation.
HSg	Toolface High Side. The angle between high-side and toolface. (Also known as gravity toolface).
MS	MS stands for Magnetic Steering. When the tool gets to +/- 15° Inc the tool HS will switch to MS as the gravity sensors become useless and magnetic sensors are still getting a good magnetic field
G(t)	Sum Gravity components on the sensor
B(t)	Magnetic field strength (Btot). Total magnetic field strength calculated from the three individual fluxgates.Btot = $(Bx^2 + By^2 + Bz^2)\frac{1}{2}$
MagDip	Magnetic field dip angle (Dip). The angle between a tangent to the earth's magnetic field vector at a particular location and the horizontal.
Gx/Gy/Gz	Gravity Vectors on the orthogonal planes
Bx/By/Bz	Magnetic Vectors on the orthogonal planes
Voltage	Voltage being supplied to sensor unit
TA	Temperature of the Instrument.
-S/+N	North or South Distance from the point of origin
-W/+E	West or East distance from point of Origin
Elev	Elevation from the point of origin
DL	The rate of total angular change of the borehole direction between two consecutive borehole survey stations, expressed in degrees per 30 m
VS	Vertical section (VS). The projection of the wellbore into a vertical plane parallel to some specified azimuth (Vertical Section Azimuth) and scaled with vertical depth. It is computed with respect to a specified origin.
CD	Closure Distance (CD). The horizontal displacement from North. CD = EW/sin (CA)
Cbrg	Closure bearing from point of Origin
Raw GX /Raw GY /Raw GZ	Raw gravity values
Raw Bx /Raw By /Raw Bz	Raw magnetic values

#### 11. APPENDIX D – CROSS SECTION – TDD06

#### 12. APPENDIX E – CROSS SECTION – TDD07

#### 13. APPENDIX F – CROSS SECTION – TURC0080