



ASX Announcement

# **ACTIVITIES REPORT – DECEMBER QUARTER 2015**

# Summary

Work towards providing additional funding for ongoing research and exploration, as indicated in the Annual Report, was initiated in the form of a rights issue to shareholders. The interest in the gold mining sector continues to improve against a background of decline in almost all other sectors of the mining industry. Truscott continues to work on a number of potential joint venture initiatives with a view to progressing project development as the improvement in the gold mining sector becomes more robust.

During the quarter further research work was undertaken to advance the understanding of the paragenesis for; the structural setting, the sedimentary sequence and the mineralisation, across the Central Tennant Creek Mineral Field. The relationships defined, supported by field observations, are of use for assessing and further modelling the most likely locations for economic mineralisation to occur.

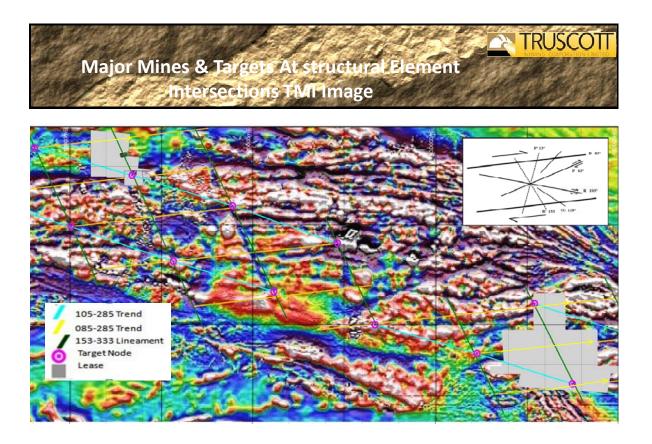


Figure One: Intersecting Structural Elements – Central Goldfield



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# Overview

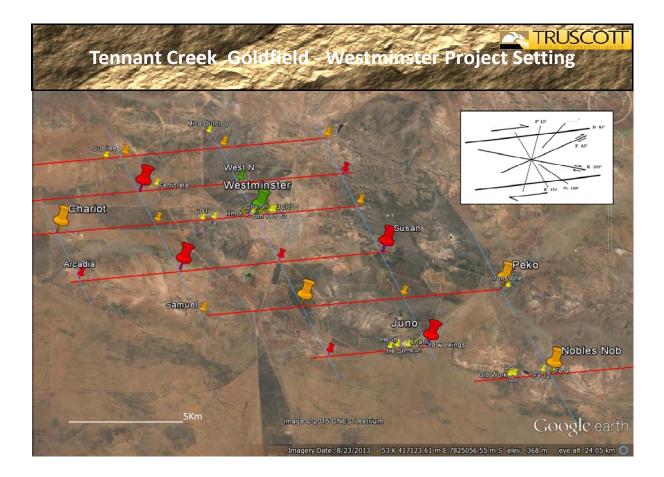
In the Central Tennant Creek Mineral Field Truscott has described the setting for the economic mineralisation in terms of a structural framework.

All historical major mines (Plus 500,000 ounces Au) are located on large  $083^{0}$  (D) shear zones (red traces), with cross cutting  $153^{0}$  (R<sup>`</sup>) structures (blue traces) helping to define deposit locations and targets.

The geophysical signature of trans-current shear on  $083^0$  (D) has been correlated with observations from hundreds of kilometres of traverses on foot (Figure 1), disruption and offset by late stage activity is evident.

It appears that historical mining operations proceeded with limited knowledge of structural controls and past and contemporary drilling of extensions to mineralised zones have not been undertaken with the benefit of a broader structural context.

The clearer  $153^{0}$  (R<sup>`</sup>) lineament is considered to have been active late stage and the locally observed  $083^{0}$  (D) shear can be measured to have been offset across the field to trend  $085^{0}$ . Similarly the locally observed resultant  $103^{0}$  (R) shear is offset across the field to trend approximately  $105^{0}$ .



**Figure Two: Westminster Project – Structural Setting** 



# Westminster Project – Structural Setting

The Westminster deposit (Figure 2) is positioned along the  $105^0$  trend that incorporates the Susan and Peko Mines.

Effective drilling of ore systems within the Central Mineral Field requires:

Identification of the location of the  $083^{0}$  (D) shear zone to constrain the ore system;

Determination of whether drilling is to be conducted in a compression or extension zone;

Location of late stage brittle faults (acting in reversal, dominantly @ 153<sup>0</sup> (R`) transecting and off-setting the mineralised arrays;

Recognition of the metamorphic zones

Faults transecting the ore zones have been documented for the majority of the larger mines. At Westminster these offsets and fractures, which are observable in the gravity image and at surface, are consistent with the direction of antithetic shearing at  $153^{\circ}$  (R<sup>`</sup>) and  $013^{\circ}$  (P<sup>`</sup>).

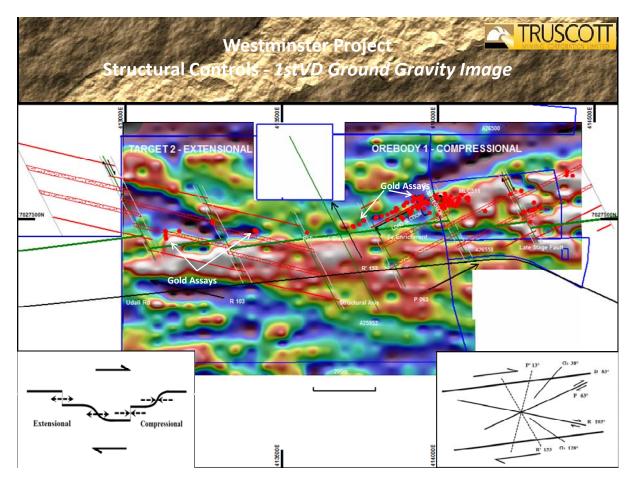


Figure Three: Westminster Project – Structurally Controlled Ore Zones



# **Westminster Project – Structural Controls**

The layout of Westminster (Figure 3) has been established from drilling and surface mapping with ore resource drilling initially focused on the eastern end of Westminster.

The node which centres the Westminster Project has been located in figures one and two. The compression zone (ore body one) to the east of the centre is considered to be what is characterised in structural texts as a positive flower structure. The extension zone (target 2) is considered to be what is commonly characterised as a negative flower structure.

Technical literature describes the negative flower structures associated with the 103<sup>0</sup> (R) resultant direction as typically being initial onset and the dominant dilation. The theory is supported by field observations with those parts of the large ore systems at the Warrego and Nobles Nob mines, exploited to date, exhibiting this character.

With the drilling at Westminster concentrating on the positive flower structure aligned with the  $063^{0}$  (P) resultant shear, the major part of the target zone awaits further drilling. At the Chariot deposit, located adjacent to Westminster on the  $083^{0}$  (D) shear to the West, the character of the main mineralisation footprint defined to date also appears to be compression.

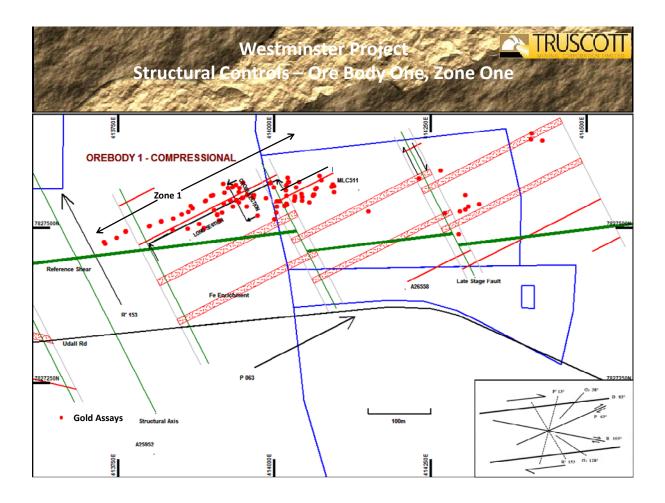


Figure Four: Westminster Project – Ore Body No1

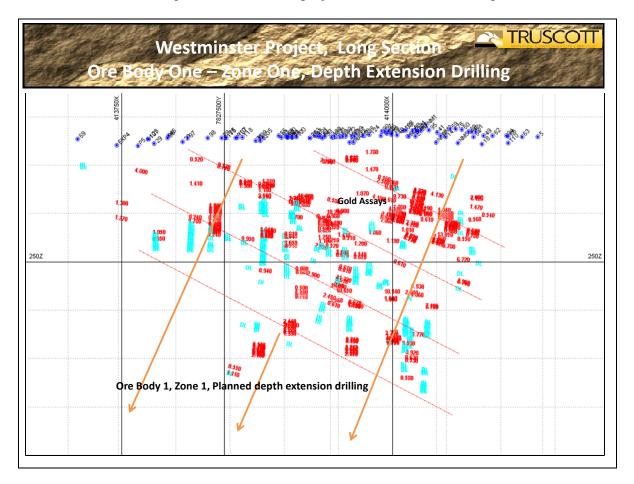


# Westminster Project – Ore-body One - Geometry

The drilling pattern in the plan view of figure four illustrates the offset in the sheared ironstone rocks that host the gold mineralisation. The sense of movement is accordance with the  $153^{0}$  (R<sup>`</sup>) direction of the structural model with positions to the east of the fault plain moving south. No vertical component of movement is evident.

It is evident from the plan view of ore-body one that less than ten percent of the immediate target area has been effectively drilled to date. The cross section of figure five also demonstrates the limited extent of drill testing to depth.

Drilling within the ore target zone (Figure 5) has substantively been limited to approximately 200 metres below surface where mineable grade gold intersections have been recorded. The majority of the drilling has been conducted utilising vertical drill holes and a significant number of holes now require extension into projected mineralisation at depth.



# Figure Five: Westminster Project – Ore Body No 1 – West

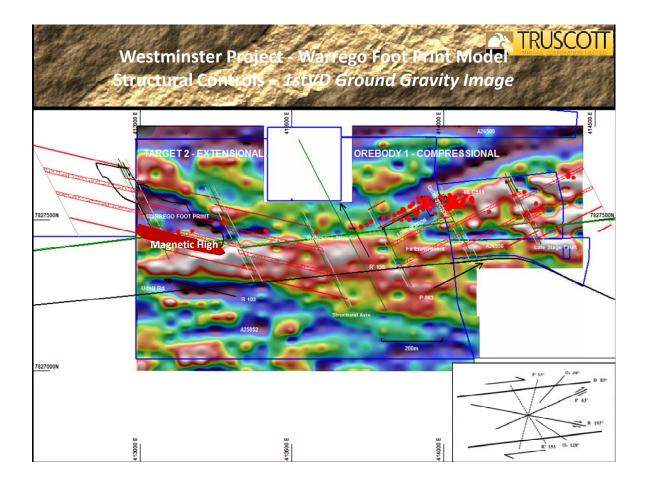
# Westminster Project – Target Two - Modelling

Early shallow drilling has intersected substantial intervals of low grade gold mineralisation at the extensional end of the Westminster Project area (Figure six).



The size of the potential target area, at the extension zone of Westminster, can be demonstrated by placing the footprint of the historical Warrego workings (6,750,000 tonnes mined) within the zone

The footprint which is to actual orientation and size is set over a gravity low with a magnetic high along the south western flank. A transition in metamorphic grade from greywacke to amphibolite facies is observed when traversing from the footwall metasediments to the hydraulic porphyry units located on the north eastern margins.



#### Figure Six: Westminster Project – Target 2 – Comparative Image

# **Tennant Creek Gold field – Current Paragenesis Model**

Having an understanding of the driving structural processes and the order in which events have occurred within the goldfield is important when developing an exploration strategy.

Earlier and some contemporary explorers have focused on geological folding and other features within the sedimentary sequence when considering potential sites for mineral deposition.

Truscott prefers a structural model which considers that the events which significantly influenced mineralisation, where largely discordant with the earlier geological features. That



is, subsequent large scale trans-current faulting and resultant shearing and dilation have been the dominant influences controlling sites for mineralisation.

Те	nnant Creek Goldfield Paragenesis-Model	S TRUSCOTT
Structural Events Tennant deformation event begins	Sedimentary Setting Warramunga Sediments deposited 1859ma	Mineralisation Sequence
Sediments Folded East-West Transcurrent dextral shear along 083	Sediments sheared along 083 Development of dilation along 103/063 Compression and Extension zones	Minor mineralisation along bedding planes
Metamorphic Event 1, Basic Fluids Quescent Period	Injection of Iron Rich Fluids	Iron deposition on 083 shear within 103/063 zones Crystallisation and consolidation of Iron
Intrusive Phase & Reactivation of 083 shear	Hydraulic Porphyry injected Sympathic to dilational directions Brecciation of injected	Permeable flow channels within
Metamorphic event 2 - Peak of Amphibolite facies	Porphyrys and Ironstone bodies Injection of mineralising fluids	brecciated host rocks Zoned concentrations of ore minerals within 103/063 dilational directions
Continued uplift and deformation Stress Reversal Offset Faulting on 153 antithetic fault trace Terminal stage explosive brecciation	Uplifted Warramunga Sediments eroded Ooradidgee Sedimention commences	Late offset faulting of 103/063 ore mineralisation by 153 antithetic fault trace Brecciated aggregates with mineralised clasts
TennantEventends	Ooradidgee sedimentation continues over Warramunga profile at 090	Hematite, and quartz fluids into shears in lower Ooradidgee sediments

Figure Six: Tennant Creek Goldfield – Paragenesis Model

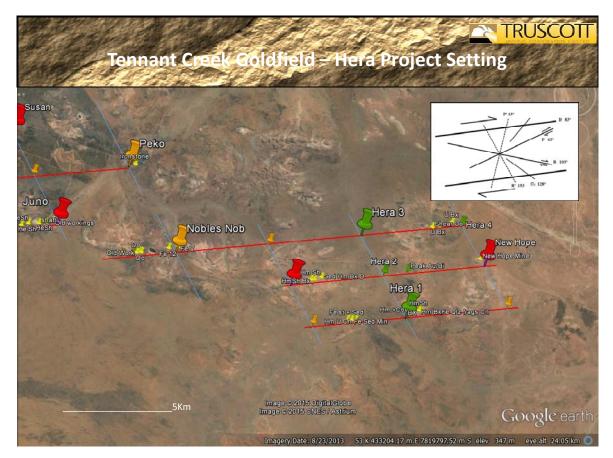
# Hera Project – Structural Setting

The Hera Project area (Figure 7) includes two major structural targets; the first Hera 1, is located on the Nobles Nob, Juno, and Chariot trend. This trend also includes several other important structural intersections that should be investigated by the current tenement holders.

The Hera 1 target has been located by ground tracing of the  $083^0$  (D) shear zone including identification of mineralised ironstone. The target zone has been further refined by reference to ground based gravity survey information generated by the company. The imagery also provides provisional locations for late offset faulting. Initial drilling will focus on confirming the location of the  $083^0$  (D) shear.

The second major structural target Hera 2 is located on the Peko, Susan, Westminster trend. This target has been located by ground tracing of the  $083^{0}$  (D) shear zone with ground based gravity survey work yet to be completed. This data will be acquired prior to drill testing to ensure best utilisation of drilling funds.





**Figure Seven: Hera Project – Structural Setting** 

#### **Project Scheduling**

**Core Business** 

Westminster Project Area (Truscott: MLC511, MA25952, MA26500, MA26588 all 100%)

**Project Status:** Proposed expenditure and earn-in schedule for the drill out and bankable feasibility study work set out.

Discussions with interested parties, on the commercial requirements to support project development, are in progress.

Planning completed to target the high grade gold zones within ore-body one, with new drilling and by extending existing drill holes.

Planning completed for further drilling of the gold mineralisation at target two with the objective of defining sufficient high grade gold to achieve ore body status.

Identification and confirmation of location of late stage brittle faulting determined. Work on Paragenesis and observations on Metamorphic Facies.



Drilling of the potential ore bodies within the larger Westminster extension/compression system scheduled to follow the finalisation of a commercial agreement.

#### New Business

Hera Project Area	(Truscott: EL27731, ELA 30883) all 100%)					
Project Status:	Clearance Certificates issued by AAPA for exploration and mining activities.					
	Planning for acquisition of geophysical information for Hera 2 target.					
	Comparative analysis of the structural setting for the Hera 2 target and field mapping is ongoing.					
	Centre of the Hera 1 target defined to establish a reference for the location the extension and compression zones.					
	Targeted scout drill planning for Hera 1 finalised, MMP submitted.					
	Discussions with a new party, interested in forming an earn-in and Joint Venture agreement, initiated and confidentiality agreements exchanged.					
	Build up of tenure holding, application of exploration area ELA 30883.					
Olympus Project Area	a (Truscott: EL29883, EL 30728 all 100%)					
Project Status:	Build up of tenure holding, addition of exploration area EL 30728.					
	Clearance Certificate issued by AAPA for exploration and mining activities.					
	Projected trace of the $083^{\circ}$ (D) trans-current shear across tenure.					
	Continued field recognisance & mapping program planned.					

Acquisition of ground based gravity data planned.

#### Peter N Smith Executive Chairman

**Competent Person's Statement:** The contents of this report, that relate to geology and exploration results, are based on information reviewed by Dr Judith Hanson, who is a consultant engaged by Truscott Mining Corporation Limited and a Member of the Australasian Institute of Mining & Metallurgy. She has sufficient experience relevant to the style of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a "Competent Person", as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Hanson consents to the inclusion in this presentation of the matters compiled by therein in the form and context in which they appear.



# Appendix

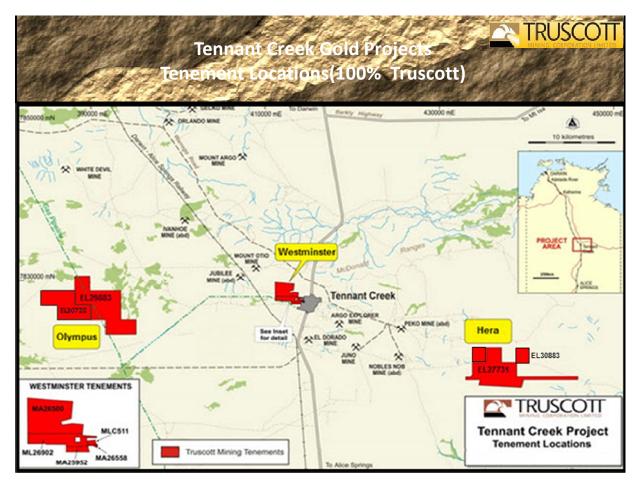


Figure Eight Truscott Exploration Tenure



Project		Interest at	Interest at	Acquired Dispose	ed
Tenement		Beginning	End		
Westminster	Northern Territory				
MLC 511		100%	100%		
MA25952		100%	100%		
MA26500		100%	100%		
MA26558		100%	100%		
Arcadia					
MLC29999	Northern Territory	100%	0%	Surrendered	
Hera	Northern Territory				
EL27731		100%	100%		
EL30883		0%	100%	Application	
Olympus	Northern Territory				
EL30728		100%	100%		
EL29883		100%	100%		

Mining Tenements Held at 31 December 2015 (Table 1)