**EXPLORATION LICENCE 29882**
**MT TODD PROJECT**
**NORTHERN TERRITORY**
**AUSTRALIA**

**COFUNDING REPORT**
**FOR THE PERIOD ENDED**
**March 1nd, 2019**

*Data presented in*
*GDA94 Datum*

Map sheet: Fergusson River 1:250 000 Sheet No. SD52-12

Target commodities: gold,

Prepared by:

Peter Harris Bsc.Geol, MAIG
Vista Gold Australia Pty.

Submitted by:

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Peter Harris
Exploration Manager
Vista Gold Australia Pty Ltd.

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## SUMMARY

2 Drillholes were undertaken on the Wandie IP / Magnetic anomaly to test for IOCG mineralization within the Pine Creek Geosyncline. The Postulated target was a coincident IP and magnetic anomaly within the alteration halo of the Wandie intrusive. The drilling successfully intersected both the IP anomaly and the lithological unit responsible for the Magnetic anomalisim. No ore-grade intercepts were achieved however long runs of point values were intersected in the drilling.

The mineralisation is associated with disseminated sulphides within altered silts and greywackes, rare veining was also apparent within the drill-core. The IP anomaly appears to be related to the disseminated sulphides and the magnetic anomaly to a Magnetite bearing unit higher in the holes. The drilling has successfully identified gold mineralization within the Wandie intrusive halo and lithologies amenable to gold mineralization. Despite being targeted on geophysics it appears that the area drilled lacks the structure required to focus the gold bearing fluids into an economic zone.

Further work is planned to identify where such a zone may occur within the Wandie alteration Halo, with initial studies being focused on the intersection of ther Cullen-Australis structural corridor, the Wandie Biotite Isograd and the contact of the Mt Bonnie / Burrell Creek formation.

## COPYRIGHT

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## 1. INTRODUCTION

The following report describes work completed un the Wandie prospect under the Co-funding agreement with the NTGS on the Exploration Licence EL 29882 during the period ending , March 1st, 2019.

This tenement is situated 40km due south of Pine Creek and 230km southeast of Darwin, Northern Territory. Access is gained via the Stuart Highway, with a western turnoff onto the access track to Two Rivers Station homestead. The tenements are on Aboriginal freehold land, access is via graded station tracks.

EL 29882 is the result of splitting EL25576 into two smaller EL's. Vista Gold Corp. signed an agreement on 1 March 2006 with the Northern Territory Government, the Administrators of Pegasus Gold and the Jawoyn Association for the purchase of the Mt Todd Gold Mine. The purchase of these mineral leases was finalized on 15th June 2006, with EL 28321 being applied for and granted in May 2011.

## 2. TENURE

Table 1 lists details of EL 28321 comprising a portion of the Mount Todd Project.

**Table 1: Licence Details**

| Tenement | Grant Date | Expiry Date | Area |
|---|---|---|---|
| EL 29882 | 16-Sept-13 | 15-Sept-19 | 180 sub-blocks |

### 2.1 TENURE HISTORY

EL29882 was applied for by Vista gold Australia on 20 Jan 2011 and Granted on the 03 May 2011. Vista Gold Australia is unaware of any other companies that may have held tenure over this parcel of land.

**Figure 1: General Location**

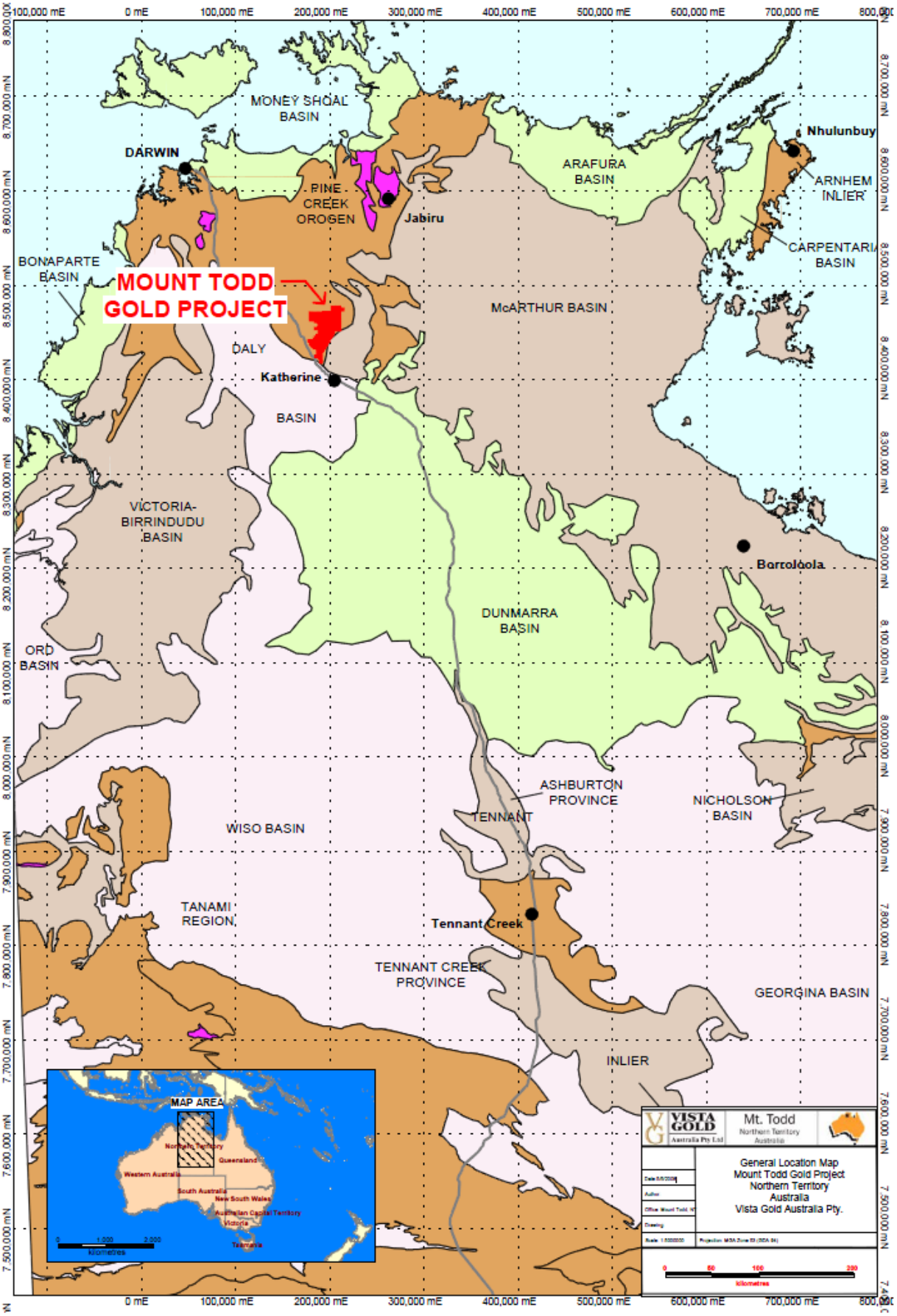


**Figure 2: EL Location Map**

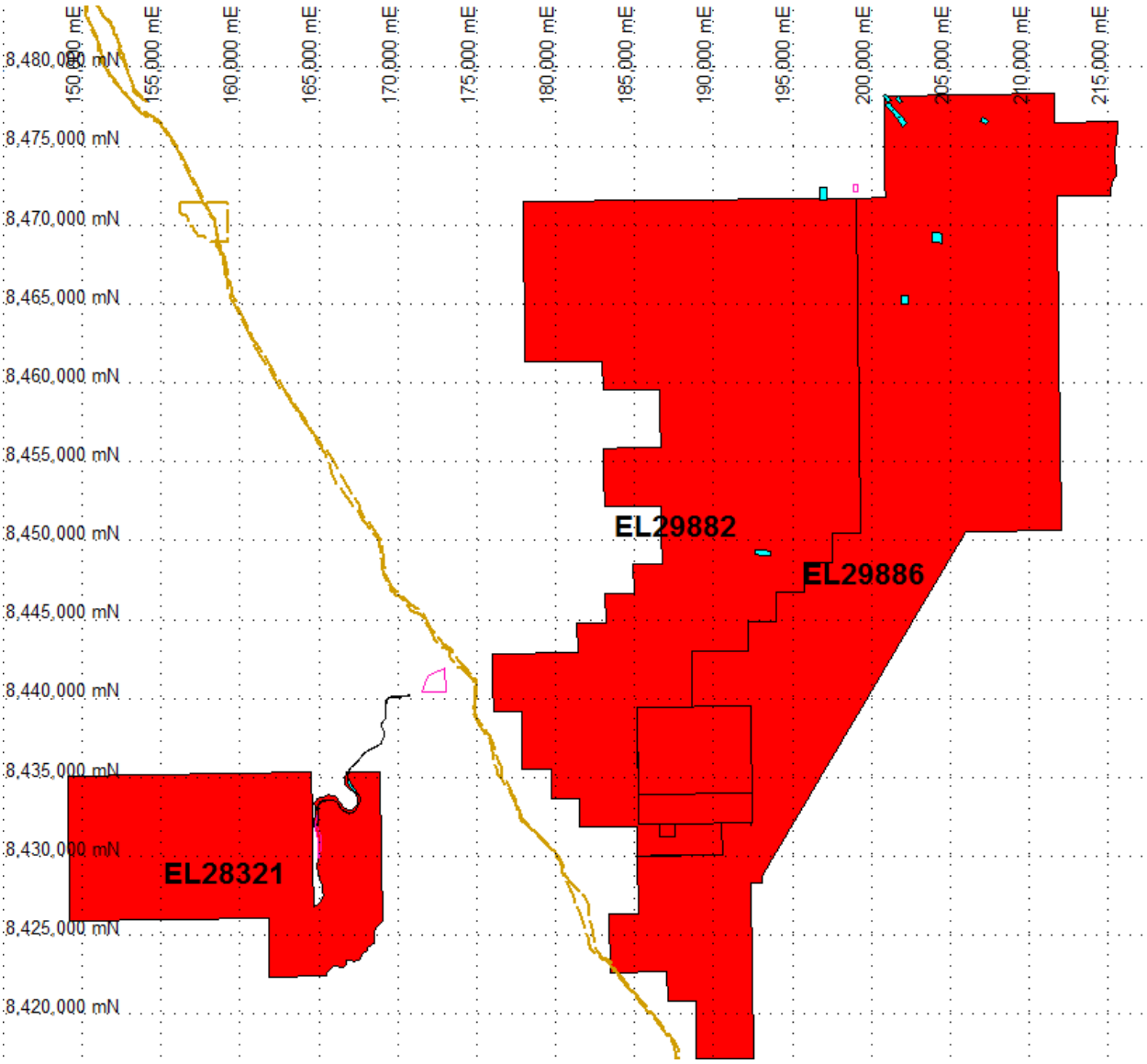
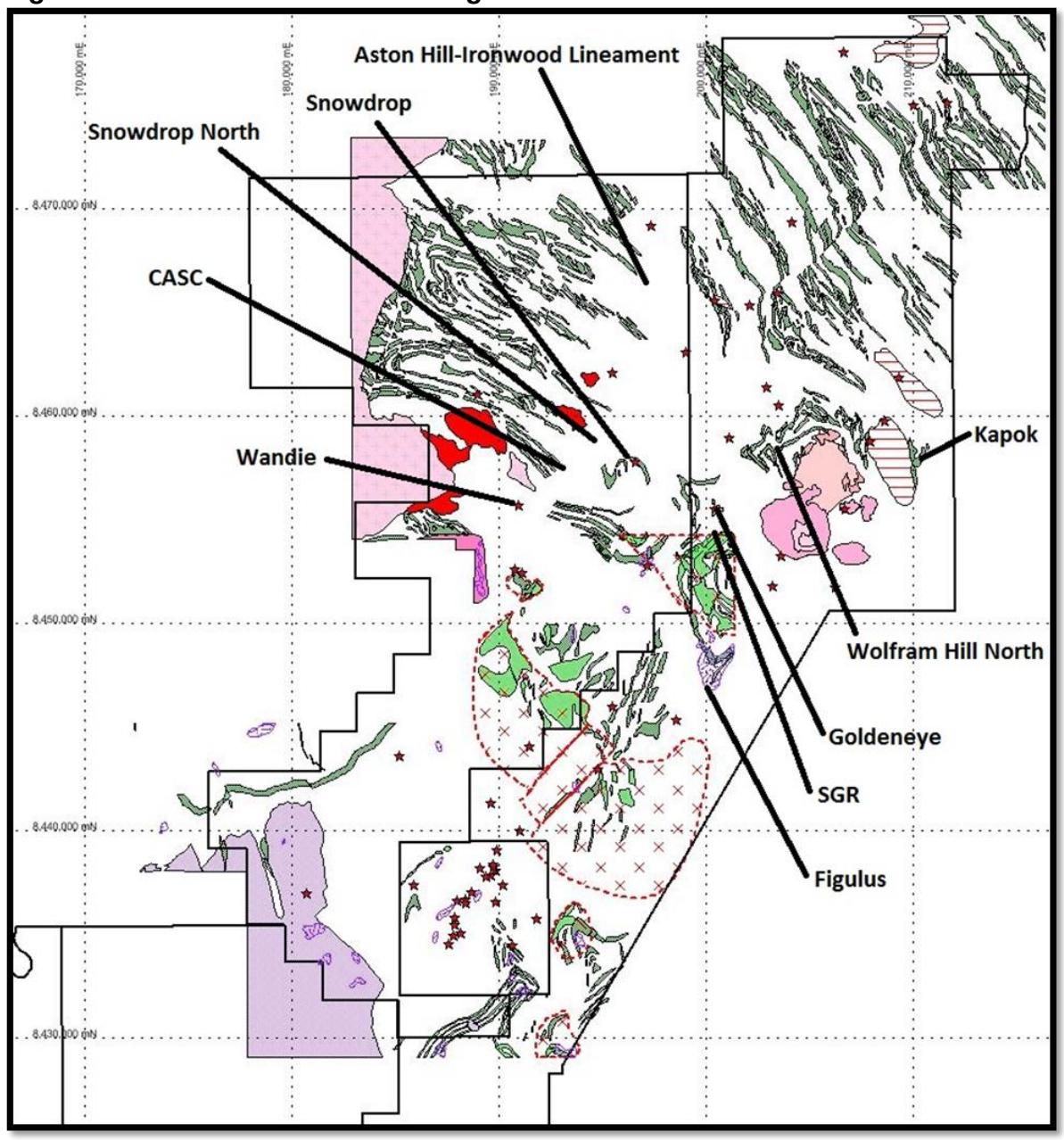


**Figure 3: Wandie and other Targets**



## 3. **REGIONAL CONCEPT** (from proposal)

The exploration concept has three elements: the circulation of mineralising fluids by post-orogenic radiothermal heating, the focusing of these fluids by basement structures, and a change in the redox conditions of these fluids caused by iron-rich lithologies. All three combine to explain a style of mineralisation proven in concept by the work done to date and new to the Pine Creek Geosyncline.

Central to this exploration concept is Klominsky's 1996 study of the granites of the Cullen Batholith. This study is the basis for a significant advance in understanding the mechanisms of gold mineralisation in the Pine Creek Geosyncline, providing for a model that explains far more than those deployed regionally by Dominion Mining and others. While previous exploration strategies had largely adhered to the model for Thermal Aureole Gold (TAG) mineralisation and had thus understood the mineralising events to be contemporaneous with granite emplacement, a new strategy is based on the idea that mineralisation is associated with amagmatic hydrothermal systems and therefore significantly post-dates granite emplacement. The new model incorporates both Coronation Hill and Tennant Creek styles of mineralisation where the TAG model could accommodate neither.

The amagmatic model for gold mineralisation is based on the idea that the hydrothermal system is a low-temperature phenomenon which post-dates granite emplacement and is driven by radioactive decay within the granite. The Cullen Batholith is noted for its high radiothermal content, having twice the average granite heat production overall. The individual granite plutons vary according to their radiothermal content and Klominsky classifies them on this basis, with each being assigned a heat production value measured in microwatts per cubic metre (μW/m3).

Klominsky begins by subdividing the granites into three igneous suites defined according to their intrusive age. The youngest of these, the Young Igneous Suite (YIS), tends to have a high radiothermal content and thus a high heat-producing capacity: the average heat production value of the YIS is significant, being up to 10 μW/m3 which is four times the average granite heat production and thus double the average value for the Batholith overall. It is these young, 'hot' granites that are most closely associated with the gold mineralisation.

Klominsky refines his classification of the granites, mapping them in terms of their heat-producing capacity. On this classification, two YIS granites stand out as potential drivers of post-orogenic mineralisation in the area: the Yenberrie Leucogranite and the Wandie Granite. With relatively limited outcrop area and a large metamorphic aureole (Figure 3), both are understood to be largely concealed, being on the eastern, downthrown side of the (sinistral, but also partially dip-slip) Pine Creek Shear Zone. The Yenberrie Leucogranite is interpreted to be associated with the Batman deposit, while the area surrounding the Wandie Granite is regarded as underexplored and highly prospective.

The stratigraphic setting of the area surrounding the Wandie Granite provides for the second component of the exploration concept, with iron-rich sediments known to occur in the lower parts of the Burrell Creek Formation.

The latter has been informally subdivided into two stratigraphic units, with a lower member consisting of beds containing magnetite and pyrrhotite.[1] These are locally enriched to form magnetite ironstones; this is interpreted to have occurred at the magmatic stage, from heated connate brines.[2]

Ironstones outcrop prominently in the area surrounding each of two prospects on Vista's tenements that are the focus of the exploration program outlined herein. The larger of these two is the proposed drill target, named the Wandie-Azaria prospect. Gold mineralisation is closely associated with the ironstones on both prospects, and Wandie-Azaria also contains copper, sitting on a regionally continuous ironstone trend that contains multiple occurrences of copper mineralisation known as the Fergusson's Copper trend.[3]

The iron-rich sediments are interpreted to cause the precipitation of the mineralisation in a way comparable to the ironstones at Tennant Creek, which latter are understood to be relatively reduced, acting as a reductant for the oxidised brines transporting the ore-forming metals.[4] This process is proven beyond doubt, though at a small scale, by previous observations at Wandie-Azaria, where copper mineralisation is seen to occur where magnetite ironstones are locally altered to hematite (Figure 4).

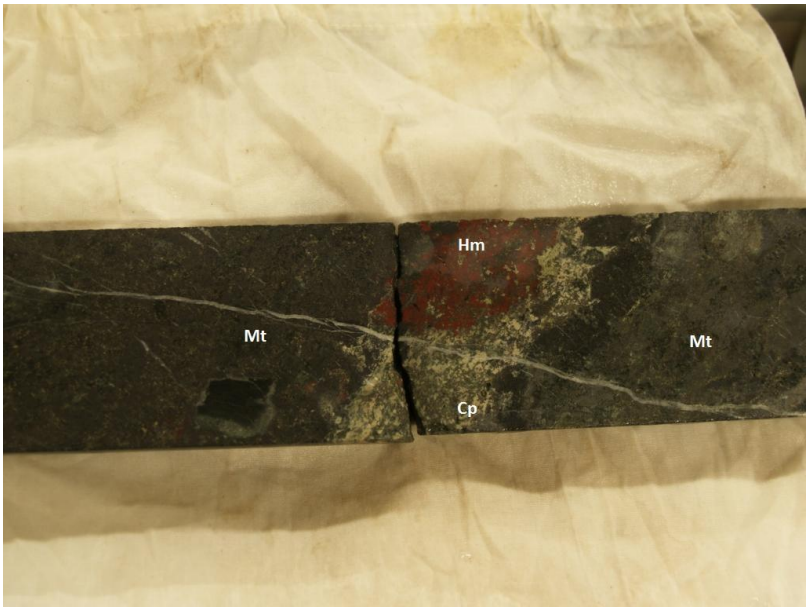



**Figure 4**: Late-stage copper mineralisation overprinting ironstone at Wandie-Azaria (Mt = magnetite; Hm = hematite; Cp = chalcopyrite).

[1] This is conformably overlain by an upper member consisting of prominent, regionally continuous beds commonly mapped as feldspathic grits.

[2] Davidson, G. J. and L., Ross R. (1998). "Proterozoioc copper-gold deposits." AGSO Journal of Australian Geology and Geophysics 17(4): 105-113.

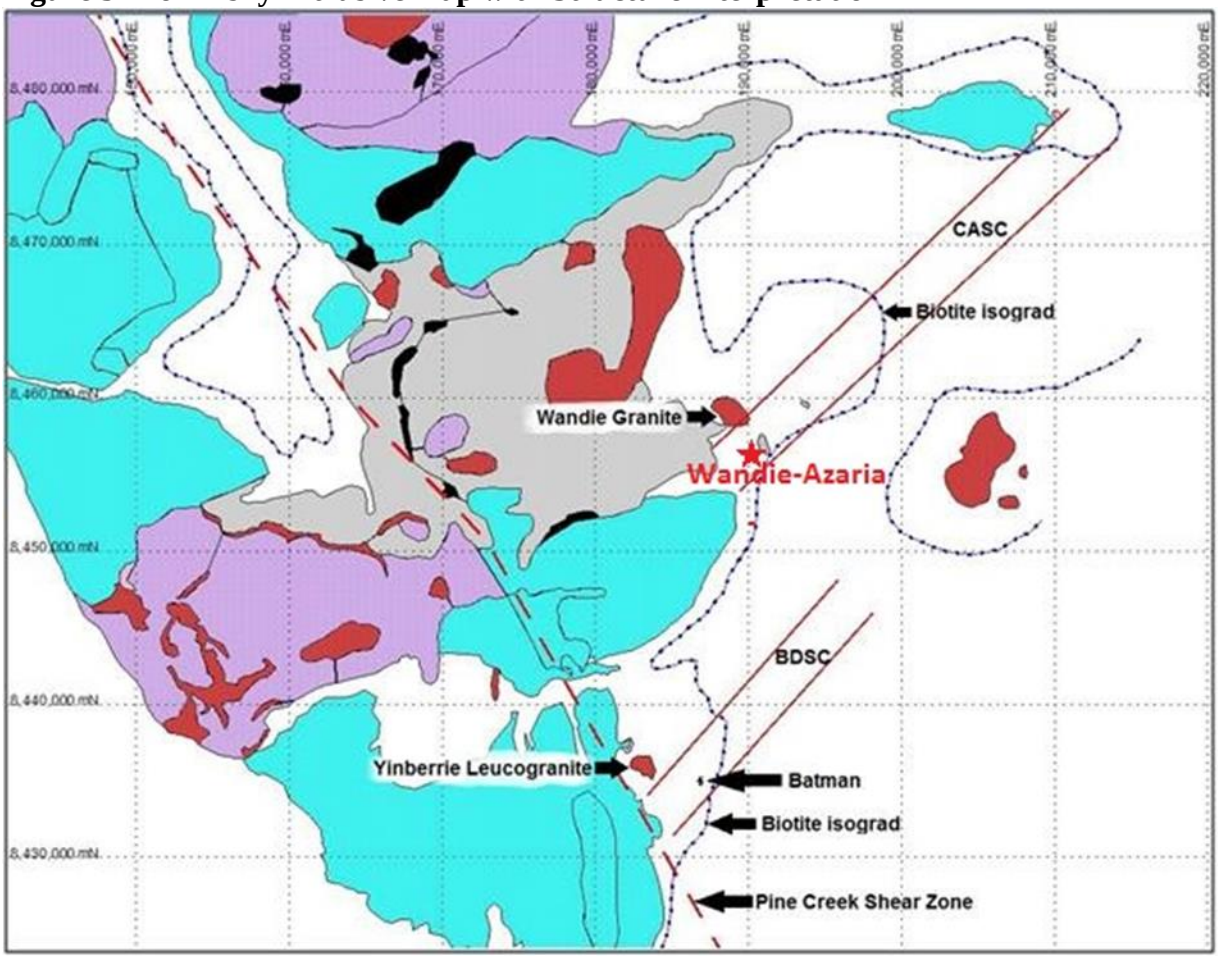
[3] Historical mining exploited the oxide zone; no drilling has ever been carried out on this trend prior to Vista's drill program of 2015-16.

[4] Wall, V. J., and Valenta, R.K. (1990). Ironstone-related gold-copper mineralisation: Tennant Creek and elsewhere. Pacific Rim Congress 90, Gold Coast, Australasian Institute of Mining and Metallurgy.

This process of an acidic, metal-bearing fluid in a highly oxidised state being destabilised by coming into contact with reducing lithologies is further enhanced by the channelling of those fluids by basement structures. This is the third of the three components in our exploration concept, provided for by the CASC and the localised structures which have been observed at Wandie-Azaria and which may be subsidiary structures of this regional basement structure. The veracity of this component is well established by the regularly spaced occurrence of mineralisation within the BDSC. The CASC is known to be a parallel corridor, also mineralised but comparatively under-explored.

We postulate that these three components are each necessary, and collectively sufficient, to provide for accumulations of mineralisation in a setting found throughout the Pine Creek Geosyncline.

**Figure 5 Klominsky Intrusive map with Structure interpretation**




Klominsky's map of the Cullen Batholith showing the heat-producing potential of the granites, with the regional structural corridors overlain and the location of Wandie-Azaria indicated**.**

## 4. RESULTS

A site inspection was carried out on the initially planned drill locations to test the large IP anomaly, however no geochemical anomalism was identified at that site, hence the holes were relocated to the 2nd IP target that had a coincident IP anomaly and once rock-chip samples returned, coincident geochemical anomalisim.

### Table 2 Significant Assays

| Prospect | Lease | Drillhole ID | Northing m (MGA94 z53) | Easting m (MGA94 z53) | Elevation msl | Bearing | Dip | Total Depth | Intercept 1 | Intercept 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| WANDIE | EL29882 | WD018-001 | 8456760 | 190220 | 147 | 227 | 50 | 279.5 | 78.9m @ .03 g/t from 187 mdh | 11m @ 0.06 g/t from 109 mdh |
| WANDIE | EL29882 | WD018-002 | 8456640 | 190275 | 148 | 224 | 50 | 291.4 | 1m @ 0.75 g/t from 117.2 mdh | 3.6m @ 0.13 g/t from 281.4 mdh |
| TOTAL MTRS | | | | | | | | 570.9 | | |

### Figure 6 Collar locations on EL29882

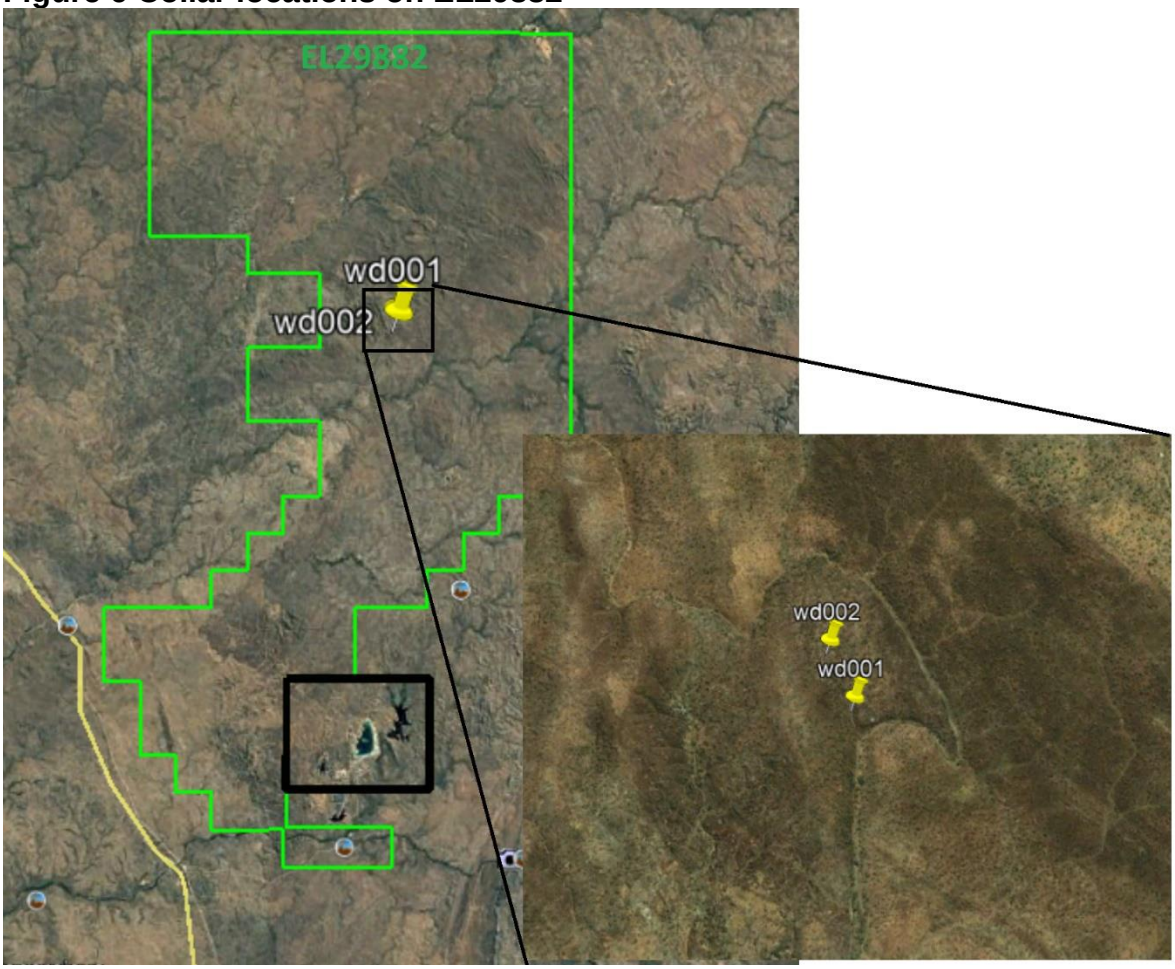


**Figure 7 High-priority IP targets**

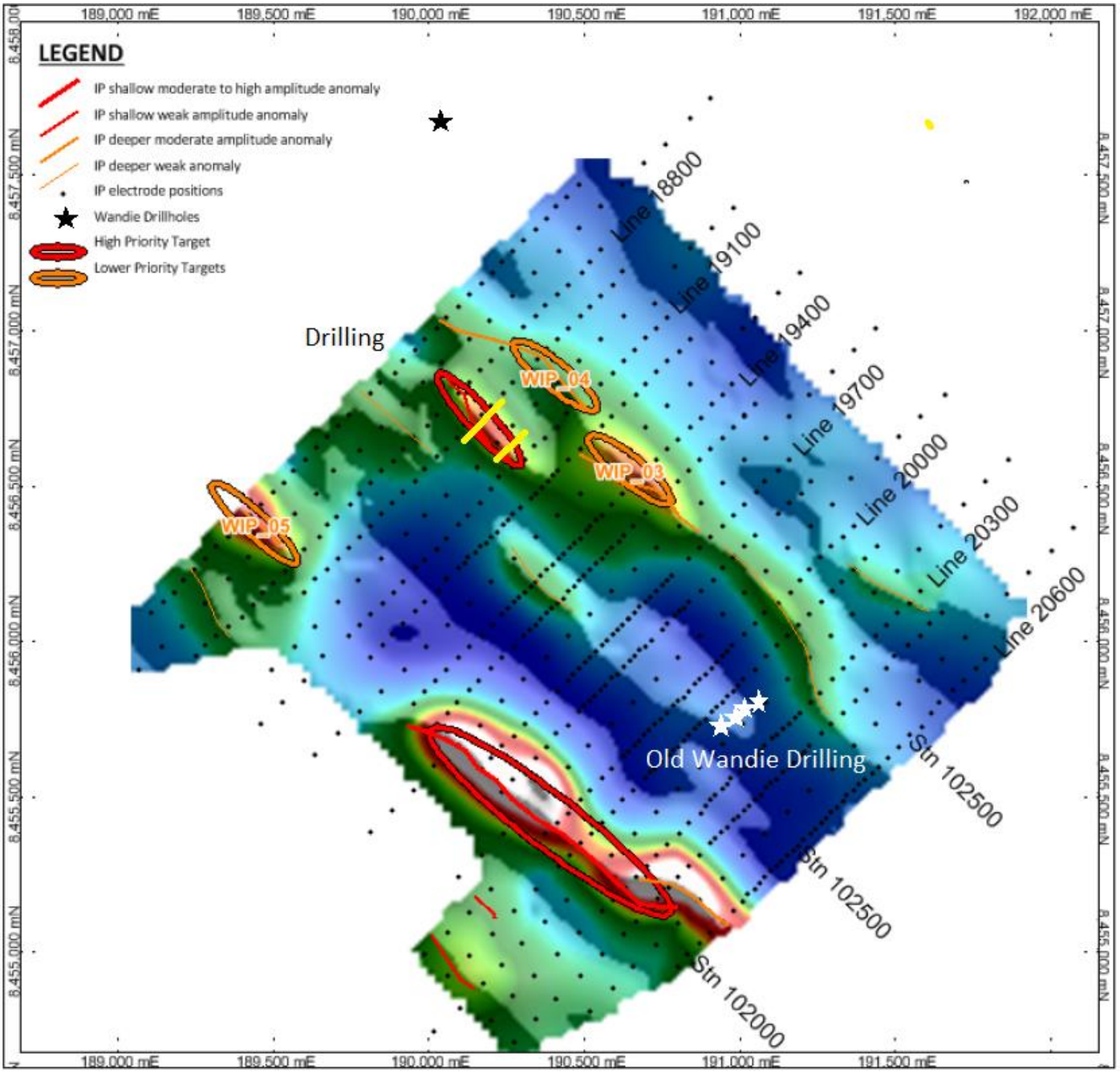
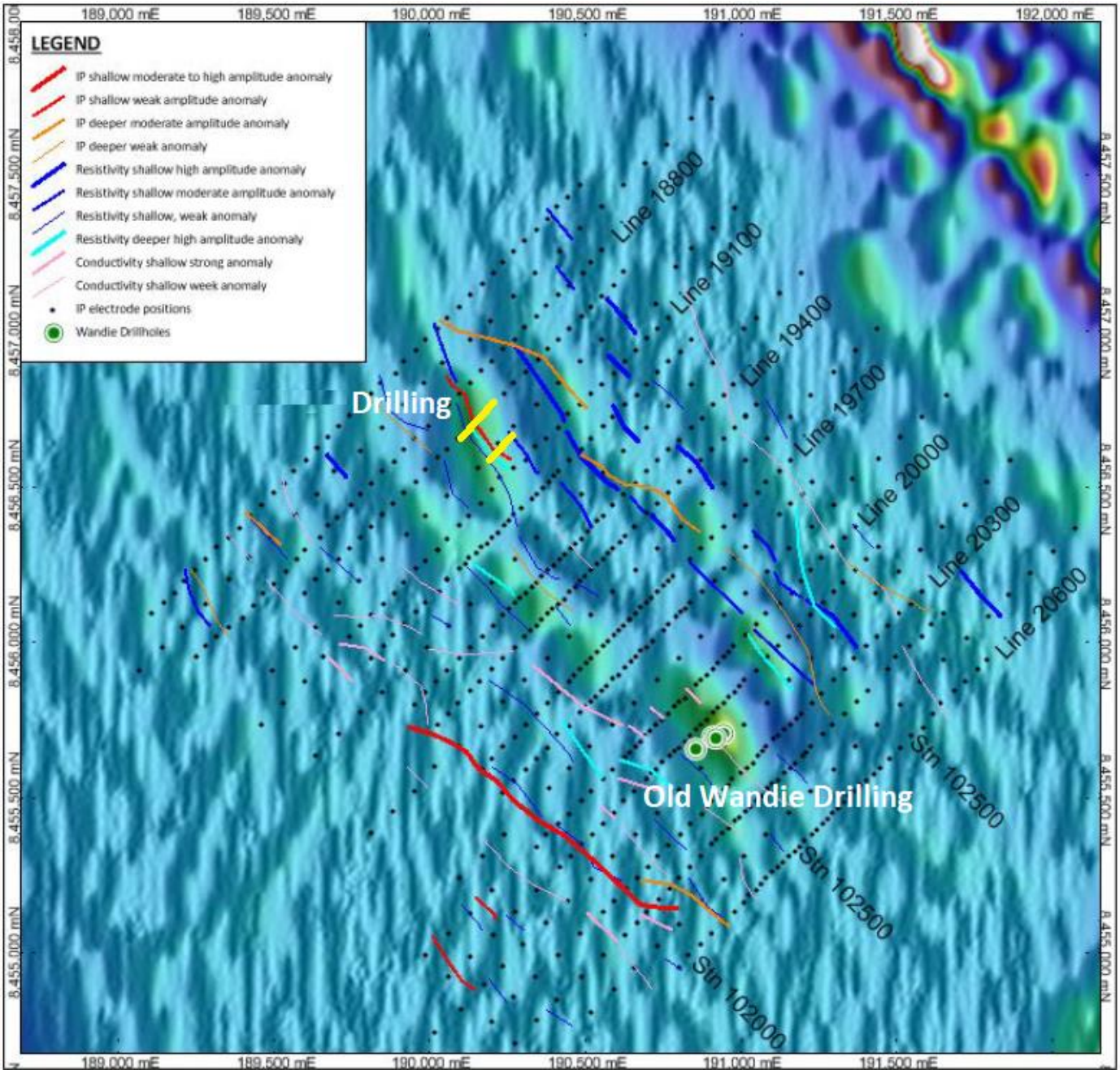


**Figure 8 1st VD magnetic image showing drillhole locations**



## 4.1 Amended Drill collar locations

Drilling was conducted at Wandie South in 2016, which failed to intersect any significant gold mineralization, however significant iron oxides and copper was intersected. Continued soil sampling, mapping and rock-chip sampling identified numerous other targets in the Wandie area and a review by Grant Osborne with his widely recognized expertise in Tennant Creek Style IOCG's confirmed the possibility of Tennant Creek Style IOCG's in the area. To better define the target at depth and also test the other areas of interest an IP survey was planned and carried out. The survey defined 2 areas of interest, the larger appearing to be coincident with the Drilling at Wandie South.

Further investigation by Southern Geoscience, who performed the early Geophysical work on the area identified an error in the transformation of the data by the Geophysical survey company, Gap Geophysics Australia which relocated the primary target some 600m to the south of the drilled Wandie target. This became a new target and given its size, it was proposed as the main target area for the co-funding and drilling at Wandie.

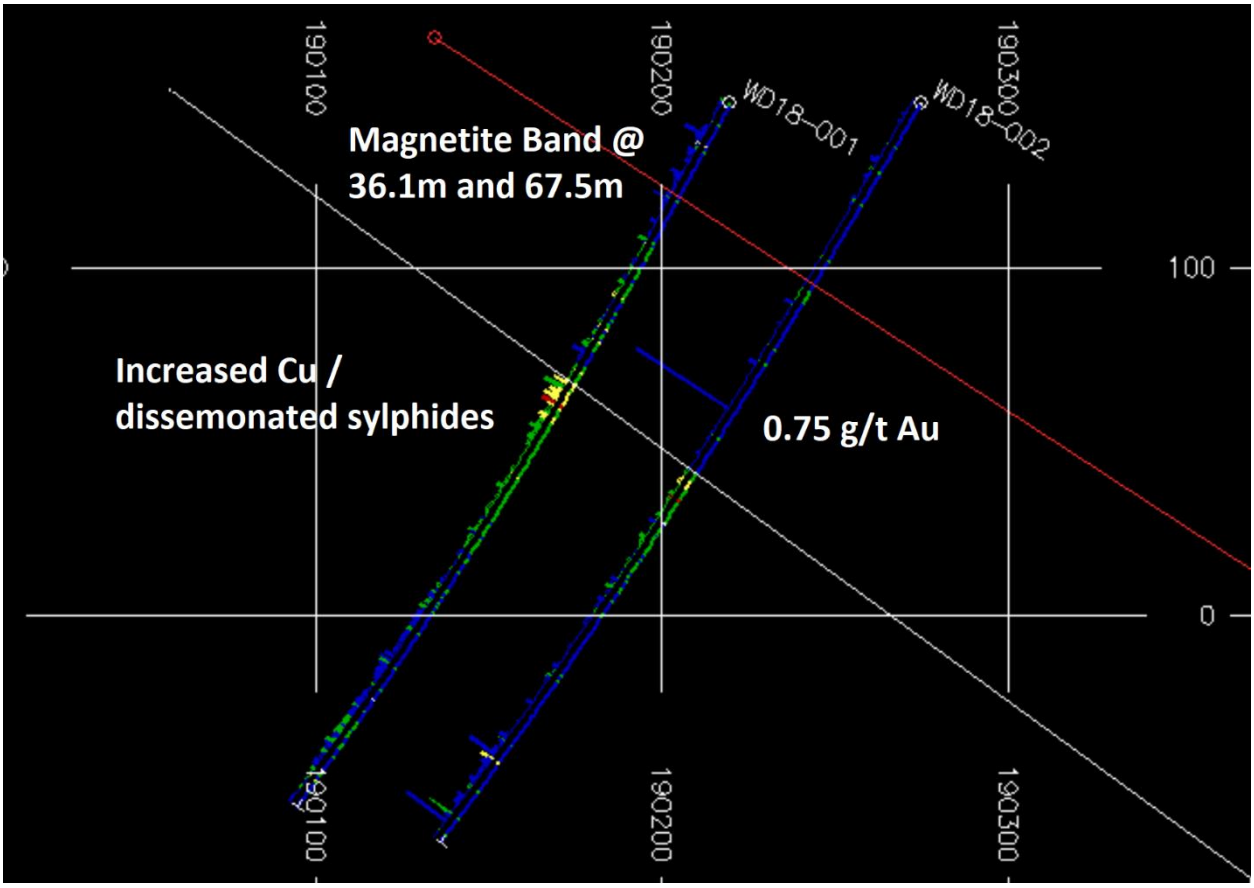
Examination of the geology at the target location proposed by Vista geologists and Grant Osborne failed to find any lithological units of interest or reflecting the conceptual target; furthermore, soils and rock-chips from this area failed to indicate any anomalous values. Work then was focused on the northern IP anomaly, which showed far more prospectivity. This work and Osborne's review Has led Vista to believe the second IP target to the north of the drilling at Wandie to be the better target.

The northern IP anomaly is coincident with a magnetic high, elevated Bi, Cu + minor Au in soils, and an in-field examination has identified a gossanous unit outcropping, which returned point values of Au this target is deemed to be far more likely to lead to success than the original proposed target.

Drilling commenced on the 14$^{th}$ of October 2018 and the final hole was completed on the 5$^{th}$ of the 11$^{th}$ 2018. Au assays were returned mid December and the Multi element work mid February, following delays at NAL. All the core was logged fully, including oriented vein and structure data and sample intervals were defined using geological intervals.

The holes intersected variable amounts of disseminated sulphides, initially Py dominant, then pyrotite dominant deeper in the hole. Chalcopyrite and rare arsenopyrite was identified. There appears to bee a loose correlation of Au with Cu a closer one between Au and Bi, Qtz vein density however seems to not have a controlling influence over mineralization, however the Pyrrotite and pyrite may be occurring in association with micro fracturing / veining.

**Figure 9 Composite section detailing both drillholes, looking north**

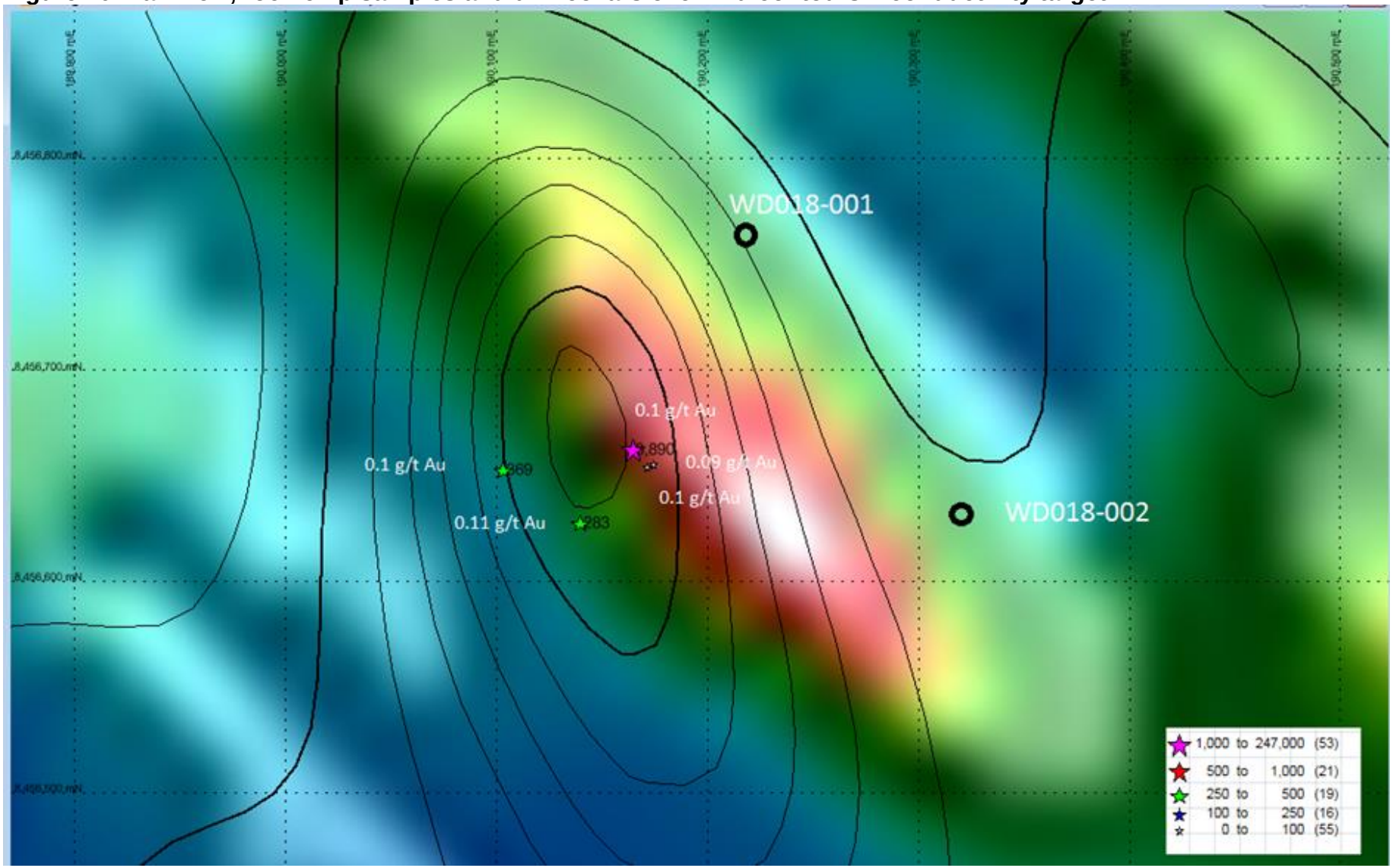



Red line represents Magnetite band intersected in both holes and is assumed to be the source of the magnetic anomaly, the while line represents the zone of increased Cu mineralisation. Bar-graph on the right of the drillhole trace represents Au mineralization, peak value of 0.75 g/t highlighted .

## Table 3 Rock-chip results Wandie-Azaria

| sample no | ZONE | GDA94 E | GDA94 N | Au1 | Cu | Cu2 | Pb | Zn | As | Ag | Ni | Co | Bi | Al | Ca | Fe | Mn | Sb | Sr | Mg | Mo | Cd | S | Na | K | Sn | W | Ta | Se | Te | Li | Ba | P | U | Th |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VS02447 | 53 L | 190103 | 8456653 | 0.1 | 369 | | -5 | 23 | 352 | -1 | -2 | -2 | 6.64 | 70740 | 362 | 34490 | 72 | 0.86 | 12.52 | 2241 | 0.59 | | 162 | 1463 | 29625 | 23.96 | 85.17 | 1.17 | -0.5 | 0.3 | 19 | 623 | -10 | 4.11 | 7.39 |
| VS02450 | 53 L | 190164 | 8456663 | 0.1 | 3890 | | 41 | 29 | 492 | -1 | 5 | -2 | 221.1 | 56070 | 543 | 51250 | 76 | 2.9 | 46.25 | 2441 | 1.49 | | 278 | 2342 | 26680 | 26.67 | 142.45 | 1.49 | 3.3 | 1.2 | 26 | 661 | -10 | 3.19 | 5.59 |
| VS02451 | 53 L | 190174 | 8456655 | 0.09 | 69 | | 31 | 29 | 366 | -1 | -2 | -2 | 99.23 | 63000 | 576 | 34900 | 46 | 1.72 | 141.51 | 2659 | 0.93 | | 180 | 1916 | 25565 | 20.12 | 73.92 | 1.28 | 1.7 | 0.6 | 23 | 692 | -10 | 2.98 | 7.94 |
| VS02452 | 53 L | 190171 | 8456654 | 0.1 | 95 | | 59 | 99 | 902 | -1 | 8 | -2 | 31.37 | 31650 | 210 | 34030 | 51 | 1.8 | 71.5 | 951 | 1.06 | | 154 | 1132 | 17565 | 19.28 | 40.4 | 0.97 | -0.5 | -0.2 | 19 | 547 | -10 | 2.95 | 11.33 |
| VS02453 | 53 L | 190140 | 8456628 | 0.11 | 283 | | 39 | 47 | 129 | -1 | 4 | -2 | 143.14 | 59490 | 1055 | 62450 | 96 | 0.24 | 80.09 | 2230 | 0.75 | | 281 | 1884 | 25800 | 23.09 | 76.1 | 1.55 | 2.1 | 0.8 | 21 | 650 | -10 | 3.8 | 7.7 |

**Figure 10 Plan view, rock-chip samples and drill collars over 1vd contours + conductivity target**




**Stars represent rock-chip Cu values as per legend, Au values in white.**

**Figure 11 Disseminated sulphides, WD18-001 257.2m**

## 5. Core Processing

A drill plan sheet was approved and provided to the drillers that specified Azimuth, dip, total depth, survey intervals and drill orientation intervals, along with target depth. The rig was visited daily and plod-sheets emailed to Vista that detailed the drill progress, charges and hole orientation. Drilling procedure required the drill crew to orient every run of the core using a digital orientation method (in this instance the REFLEX which proved accurate with the majority of orientation runs matching up.) clean the core of any grease or dirt and place a core block at the end of every run detailing meters drilled, core recovered and any core lost. When the rodstring was pulled, a rod count block was also placed as verification of hole depth.

The diamond core was picked up daily from the drill rig and transported back to site in a modified tray of a Toyota landcruiser. The core was strapped down with lids and put up on the logging racks in the core-shed for markup. Core was then placed by the meter in the orientation rack and matched up, then meter marked.

**Figure 12 core racks in logging shed**

Following markup, the core was geologically logged using a laptop computer and a site developed spreadsheet. Geological sample intervals were generated and marked on the core using blue paint pen.

No sample interval exceeding 1.2m in length or less than 0.2m was selected. The core was half-cut using Almonte automated coresaws preserving the OM line and nominally at 1m spacing, when the geological interval was larger than 2 meters.

**Figure 13 Almonte core saw**

Samples were bagged into pre-numbered calico bags and packed into green plastic bags weighing no more than 20Kg's per bag. A sample submission sheet requesting 50gram Fire assay for Au and ICPOES multi element work were completed and submitted to NAL requesting the following elements Cu, Pb, Zn, As, Ag, Ni, Bi, Co, Al, Ca, Fe, Mn, Sb, Sr, Mg, Mo. 1 in every 20 samples submitted was a standard for QA/QC purposes. The core was transported via landcruiser ute to NAL in Pine creek, who undertook assaying

Sample prep for half core is drying at 110 C, then jaw crushing whole sample to -7mm then cone crushing to -4mm. One Kg of sample is split through a jones riffle splitter and the sample pulverised in a Keegor vertical spindle pulveriser to 90% passing 100 Um. The sample is roll mixed on a rubber mat and 400 to 500 gram cut as the assay sample. The jaw crusher and the cone crusher are cleaned with compressed air between each sample, The Keegormill has a barren quartz coarse sand flush pulverised after every sample and is then cleaned with compressed air.

Au assays are done using a fire assay procedure, a 50 gram sample charge is mixed with 150 gram of fire assay flux in a fire clay crucible and tumbled in a flux/sample mixer for ten minutes.

The flux is predominantly lead oxide with sodium carbonate, sodium tetraborate, silica and carbon [flour] with a small amount of silver nitrate to ensure sufficeint Ag for parting the dore prill after cupellation. The crucible is fired in a gas fired furnace at 1000C for 50 minutes [one hour for high sulphide samples]. After fusion the charge is poured into a cast iron mould and allowed to cool, there are then two phases in the mould, a slag containing all the gangue minerals in the sample and a discreet lead button that contans all the Au & Ag. The button is cupelled in a magnesium oxide cupel in a gas fired muffle furnace at 1020C. the lead button oxidizes and the cupel absorbs the lead oxide until the Au & Ag is all that remains. The cupel is removed from the furnace and cooled. The dore prill is transfered to a new pyrex glass test tube and Nitric acid is added to the tube to dissolve the Ag in the dore prill and the Au dissolved with aqua regia, then diluted with demineralised water and the Au content determined using AAS.

Multi element assays are done using a mixed HNO3/HCl/HClO4/HF acids digestion in a teflon vessel, the sample is taken to white fumes of HClO4 on a hot plate at 180C, cooled and then leached with conc HCl, the assay is diluted with demin water and the elements determined by ICP-OES and ICP-MS instrumentation.

Results were emailed back and following checks on standards, loaded into datamine for interpretation.

## 6. RECOMMENDATIONS

Following the drilling of the IP anomaly, further work is recommended to test the intersection of the Cullen-Australis and Biotite isograd to the West of the current drilling. A deep hole (+400m) should be able to reach down to the intersection of Moline anticline, Mt Bonnie / Burrell Creek interface within the Cullen-Australis Zone.

Soils may be of assistance in testing for leakage from a deep orebody, however Magnetic north / south striking features have already been identified in this position.

The Wandie program has successfully tested the IP / magnetic anomaly and has provided encouragement in the form for gold assays, (albeit low-grade) to continue work in the Wandie area for IOCG analogous mineralization.