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**COMBINED ANNUAL REPORT FOR THE
MULGA GROUP
MLC's 38, 253 – 261, 376 – 387, 432 & 522**

21 JULY 2015 – 20 JULY 2016

GR371

LICENSEE:

SANTEXCO PTY LTD

A.B.N.002 910 296

GIANTS REEF EXPLORATION PTY LTD

A.B.N.009 200 346

(Both are wholly owned subsidiaries of Emmerson Resources Ltd)

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Emmerson Resources Ltd

MAP SHEETS:

TENNANT CREEK	SE53-14
	1:250 000
TENNANT CREEK	5758
	1:100 000

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1.0 SUMMARY

The titles of the Mulga Group were acquired by Santexco Pty Ltd (Santexco) and Giants Reef Exploration Pty Ltd (Giants Reef) to search for Tennant Creek style iron oxide copper-gold deposits (IOCG). Santexco and Giants Reef are wholly owned subsidiaries of Emmerson Resources Ltd (Emmerson).

This combined report records the exploration work completed on these titles during the period from 21 July 2015 to the 20 July 2016.

Exploration activity conducted consisted of drill testing a number of targets identified as part of the Kenex targeting exercise. Kenex targets are generated from the Kenex Pty Ltd (Kenex) predictive modelling of the Tennant Creek Mineral Field, this product is a statistical predictive tool for predicting the possible prospective sites for Tennant Creek style mineralisation. The model produced many target areas which contain all or some of the essential criteria for possible economic mineralisation in the Tennant Creek Mineral Field. Emmerson is assessing the generated targets and ranking them in order of potential prospectivity. The highly ranked targets are selected for field visits and desktop data compilation and validation. All this data is compiled and some rock chipping may take place during site visits to compile a geological and geophysical assessment of the target which is then ranked for future exploration. The targets identified in the Mulga Group were rated as highest priority and drill tested during the reporting year with Pprb values between 0.121661 and 0.98597.

Drilling consisted of Rotary Air Blast (RAB) (MGRB001 – 018, totalling 1,166m), Reverse Circulation (RC) (MGRC003 – 005, totalling 705m) and Diamond (DDH) (MGDD001 – 002, totalling 934.3m consisting of 432m for the RC pre-collars and 502.3m of DDH). Drill results were disappointing and significant mineralisation wasn't encountered, therefore further work has been placed on hold pending a detailed review of the results.

Further to this exploration Emmerson is currently trialing the application of a new technology 'Archimedes' which is the application of a proprietary algorithm to geophysical data, this is done by the Archimedes group. The aim is to define the existence of ironstones at depth, whether magnetite or hematite and a more accurate representation of the position of such an ironstone in 3D space. Emmerson is trialing this at two separate areas, one in the Eastern Project Area (The Susan Block) located 7.5km SW of the Mulga Group, and one in the Northern Project Area (Gecko Block). The success of this technology may have large implications for targeting techniques in the entire Tennant Creek Mineral Field, but more specifically the Mulga Group.

2.0 INTRODUCTION

The titles of the Mulga Group were acquired by Santexco and Giants Reef to search for Tennant Creek style iron oxide copper-gold deposits (IOCG). Santexco and Giants Reef are wholly owned subsidiaries of Emmerson.

This combined report records the exploration work completed on these titles during the period from 21 June 2015 to the 20 July 2016.

Figure 1 shows the location of the Mulga Group with respect to the Tennant Creek Township and figure 2 details the tenure of the Mulga Group.

3.0 LOCATION

The Mulga Group is located approximately between 11.5km and 14.5km north east of the Tennant Creek Township. The Licence falls on the Tennant Creek (5758) 1:100,000 scale map sheet.

Access to the group area is east via Peko Road, then north along Kaczinsky Road until you reach the Lone Star Mine road which runs north east of Kaczinsky Road. The Lone Star Mine road also runs past the Gem, Explorer 109 and True Blue mines before reaching the Lone Star Historical Mine, continue on this road for another 2 – 3km when the road begins to run through the Mulga Group of titles. Further access to the area is via a series of unsealed, 4x4 and fence line tracks, which during and immediately after rain the area is generally inaccessible.

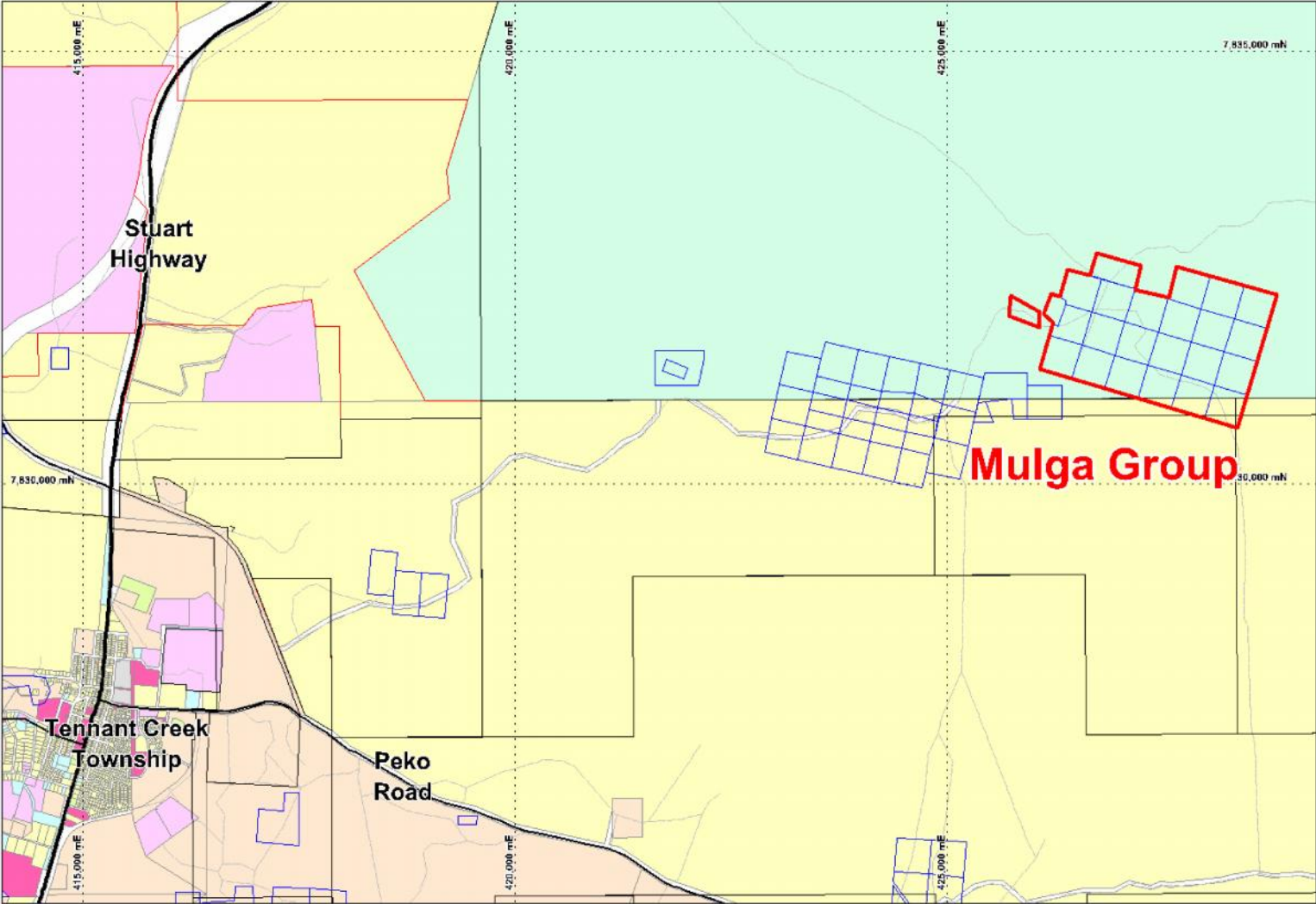


Figure 1: Location of the Mulga Group with respect to the Tennant Creek Township

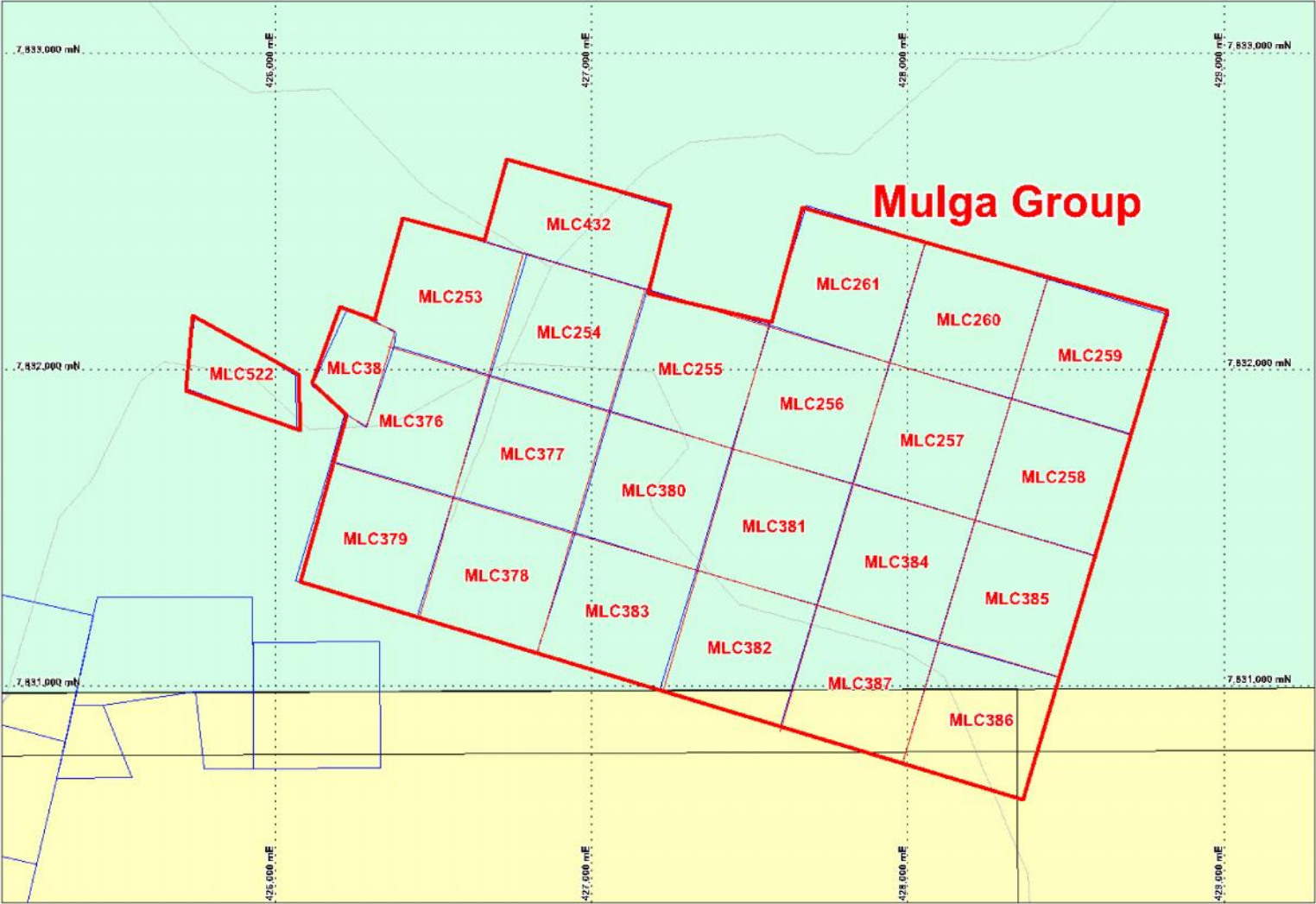


Figure 2: Tenure of the Mulga Group

4.0 TENURE

The tenure details of the Mulga Group are detailed in the following table;

Tenement ID	Tenement Name	Holder	Interest	Grant Date	Effective Date	Expiry Date	Area (Ha)
MLC253	Mulga 1	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC254	Mulga 1	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC255	Mulga 1	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC256	Mulga 2	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC257	Mulga 2	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC258	Mulga 2	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC259	Mulga 2	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC260	Mulga 2	San	100	2/09/1959	2/09/1959	31/12/2018	16
MLC261	Mulga 2	San	100	15/12/1977	15/12/1977	31/12/2018	16
MLC376	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC377	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC378	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC379	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC38	Memsahib East	San	100	13/11/1961	13/11/1961	31/12/2023	9
MLC380	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC381	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC382	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC383	Mulga 1	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC384	Mulga 2	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC385	Mulga 2	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC386	Mulga 2	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC387	Mulga 2	San	100	20/12/1977	20/12/1977	31/12/2018	16
MLC432	Mulga 1	San	100	5/08/1981	5/08/1981	31/12/2022	15
MLC522	Aga Khan	GRE	100	29/07/1953	31/12/2014	31/12/2024	8

Table 1: Mulga Group Tenure Details

The Mulga Group comprises 24 granted Mineral Leases, refer to figure 2 and table 1, covering an area of 368 hectares.

The leases are located on –

- NT Parcel 00494, Perpetual Pastoral Lease 1142, Tennant Creek Station
- NT Parcel 03735, Aboriginal Freehold Land held by the Warumungu Aboriginal Land Trust

The Mulga Group has six CLC and one AAPA registered sacred sites within the area.

5.0 GEOLOGY

5.1 Regional Geology

The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp. 829-861, to gain a good introduction to the regional geology and styles of gold-copper mineralisation of the area.

In 1995 the Northern Territory Geological Survey released a geological map and explanatory notes for the Short Range and Flynn 1:100,000 sheets, which cover the area of the Licences.

The rocks of the Warramunga Formation host most of the orebodies in the region and underlie most of the Exploration Licences.

5.2 Geology of the Mulga Group

The Mulga Group is located in the central east region of the Tennant Creek Province. Outcrops, which coincide with ridges and isolated hills, are dominate throughout the group, these ridges and isolated hills consist of weathered siltstone and greywacke of the Palaeoproterozoic Warramunga Formation and most likely underlie Cainozoic colluvium scree, alluvial red soil plains, quartz rich dissected colluvial fan deposits and less extensive alluvial deposits in active channels and on flood plains. The Quartz Hill Fault system dominates the structure of the licence, and is the major control on mineralisation and ironstone emplacement.

Mine Geology

The Mulga Group contains a number of historical mine workings as detailed in the table below;

Mine Name	Operating Period/s	Production	Grade	Produced Metal
Golden Key	1939	10.8t	44.4g/t Au	15.4oz Au
Valhalla	1939	?	?	?
Aga Khan	1958 – 1959	11t	272.7g/t Au	96.5oz Au
Memsahib	1937 – 49	204.6t	26.3g/t Au	173.2oz Au

Table 2: Historical Mines of the Mulga Group

6.0 WORK DONE DURING THE REPORT PERIOD

Exploration activity conducted consisted of drill testing a number of targets identified as part of the Kenex targeting exercise. Kenex targets are generated from the Kenex Pty Ltd (Kenex) predictive modelling of the Tennant Creek Mineral Field, this product is a statistical predictive tool for predicting the possible prospective sites for Tennant Creek style mineralisation. The model produced many target areas which contain all or some of the essential criteria for possible economic mineralisation in the Tennant Creek Mineral Field. Emmerson is assessing the generated targets and ranking them in order of potential prospectivity. The highly ranked targets are selected for field visits and desktop data compilation and validation. All this data is compiled and some rock chipping may take place during site visits to compile a geological and geophysical assessment of the target which is then ranked for future exploration. The targets identified in the Mulga Group were rated as highest priority and drill tested during the reporting year with Pprb values between 0.121661 and 0.98597.

Emmerson provided Kenex with the Tennant Creek Datasets available, from these data sets Kenex generated 15 predictive maps of 15 key parameters, as listed in the table below. Kenex run to models a Weights of Evidence (WOE) model, which used all 15 predictive maps, a Lineal Regression (LR) model which used 12 of the 15 predictive maps and they also generated a 3D model which used 11 of the predictive maps.

A selected area for target generation is gridded into cells and these predictive maps give a numerical weighting for each cell in terms of its adherence to the parameter being assessed. The values for each parameter are combined to give a number of resultant values predicting different statistical relationships. The aim of these resultant values is to generate a target area that has the essential parameters to host Tennant Creek Style Mineralisation. Of all the resultant values Emmerson uses the Post Probability (Pprb) value to identify and rank its targets, in a range of 0 – 1, with 1 being the highest potential value and values above 0.85 to be very significant, although all targets need to be considered in the context of “if the assessed cell has a low value” is it because the relevant data isn’t significant or has it not been recorded/captured.

	PARAMETER	Description
1	Warramunga Formation	Spatial relationship of stratigraphy to mineralisation
2	Distance to porphyry	Distance to porphyries that pre-date or are synchronous with mineralisation
3	Distance to mafics (Mafic Lithologies)	Spatial relationship of mafic lithologies older than cover to mineralisation
4	Radiometry - U	Anomalous U relation to mineralisation
5	Distance to D ₀ -D ₁ major faults	Faults of D1 age relation to mineralisation
6	Distance to low order faults (Faults length < 1 km)	Fault length pre to syn mineralisation
7	Distance to F1 Antidines	Spatial relationship of antiforms pre to syn mineralisation to mineralisation.
8	Distance to F1 Synclines	Spatial relationship of synforms pre to syn

		mineralisation to mineralisation.
9	Distance to Redox boundaries	Base of oxidation as the boundary between haematite/magnetite.
10	Distance to IOCG Haematite end-member	Relationship of iron alteration to mineralisation
11	Distance to mag and gravity slope highs coincident	Proximity to dense, magnetic highs
12	Distance to ironstones	Ironstones - All
13	Ironstones - high mag/gravity coincident	Ironstones - All - High gravity & mag
14	Distance to anomalous rock/DH geochem	Combined anomalous Au, Cu and Bi buffered ((Au \geq 0.1ppm, Bi \geq 10ppm, Cu \geq 100ppm)
15	Distance to anomalous regolith Au geochem	Soil & Vacuum Au

Table 2: Kenex Predictive Modelling Parameters

Drilling consisted of Rotary Air Blast (RAB) (MGRB001 – 018, totalling 1,166m), Reverse Circulation (RC) (MGR003 – 005, totalling 705m) and Diamond (DDH) (MGDD001 – 002, totalling 934.3m consisting of 432m for the RC pre-collars and 502.3m of DDH). Drill results were disappointing and significant mineralisation wasn't encountered, therefore further work has been placed on hold pending a detailed review of the results.

Further to this exploration Emmerson is currently trialing the application of a new technology 'Archimedes' which is the application of a proprietary algorithm to geophysical data, this is done by the Archimedes group. The aim is to define the existence of ironstones at depth, whether magnetite or hematite and a more accurate representation of the position of such an ironstone in 3D space. Emmerson is trialing this at two separate areas, one in the Eastern Project Area (The Susan Block) located 6.5km SW of the Lone Star Group, and one in the Northern Project Area (Gecko Block). The success of this technology may have large implications for targeting techniques in the entire Tennant Creek Mineral Field, but more specifically the Mulga Group.

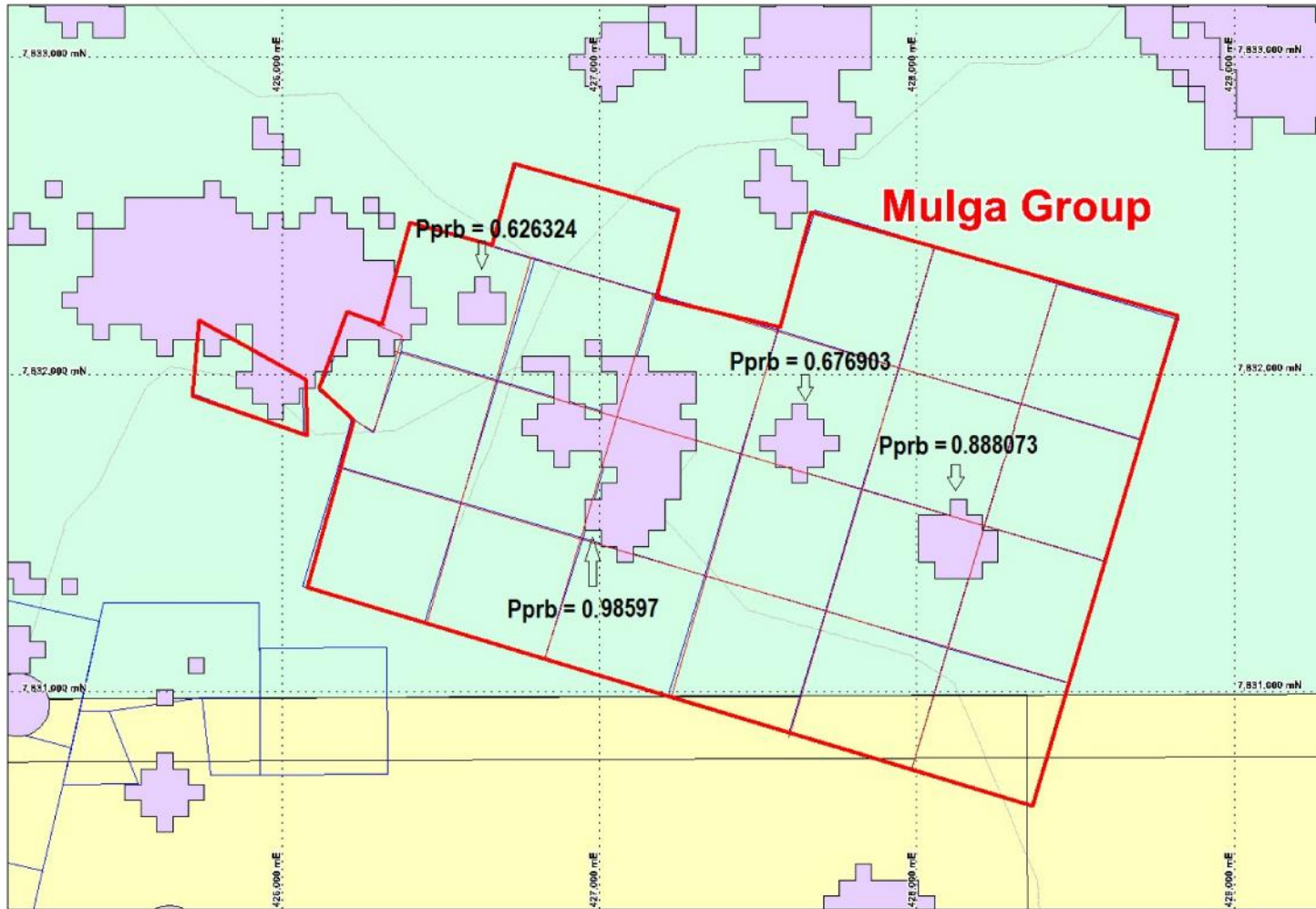


Figure 5: Mulga Group vs. Kenex generated targets (magenta polygons)

7.0 REHABILITATION

Rehabilitation was not required as no ground disturbing activities were conducted. All future rehabilitation will be completed and performed as detailed in the EPA Mining Management Plan – Authorisation 0463-04 which includes the titles of the Mulga Group.

8.0 CONCLUSIONS

Exploration activity conducted consisted of drill testing a number of targets identified as part of the Kenex targeting exercise. The targets identified in the Mulga Group were rated as highest priority and drill tested during the reporting year with Pprb values between 0.121661 and 0.98597. Drill results were disappointing and further testing has been postponed until a detail review of the results has been completed.

Further to this, the success of the application of the ‘Archimedes’ technology which has the aim of defining the existence of ironstones at depth, whether magnetite or hematite and a more accurate representation of the position of such an ironstone in 3D space, may have large implications for targeting techniques in the entire Tennant Creek Mineral Field, but more specifically the Mulga Group.

9.0 COPYRIGHT STATEMENT

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