

# Mt Stirling Central HREE Discovery Confirmed

---

## Highlights:

**Torian Resources confirms presence of all 5 critical REEs  
Dysprosium (Dy), Terbium (Tb), Europium (Eu), Neodymium (Nd) and Yttrium (Y)  
at “YTTRIA”;**

### **Western Australia’s newest HREE Discovery**

- Yttrium and Heavy Rare Earth Elements (**HREEs**) have been confirmed to occur throughout oxide horizons across multiple regional scale survey lines @ Yttria, close to the Arktos Fault
- Rare Earth Elements (**REEs**) + Yttrium (**Y**) together with anomalous Co (**Cobalt**)-Sc (**Scandium**)-Ni (**Nickel**)-Cr (**Chromium**) – Pd (**Palladium**) and Pt (**Platinum**) are enriched within clays and regolith horizons for a distance of > 1km
- Enrichment zone(s) are limited to extents of regional reconnaissance area drilled, and open in all directions
- Elevated concentrations of Y vary between 100 and ~ 500 ppm (identified by p-XRF)
- Y is an excellent pathfinder for the high value and rare, HREEs
- 25g auger vacuum samples were analysed following aqua regia (**AR**) leach for Y REE and other trace elements, as well as for selected major elements by ICPMS and OES. These yielded Y concentrations up to **544 ppm Y<sub>2</sub>O<sub>3</sub>** (MSV 1382)
- HREYO (**heavy rare earth oxide + yttrium oxide**) to TREYO (**total rare earth + yttrium oxide**) ratio of **0.62 ± 0.14** (average ± SD) **indicating significant enrichment in the high value and rare HREEs**
- The critical metal **Scandium** also occurs in anomalous concentrations with Sc<sub>2</sub>O<sub>3</sub> (**Scandium Oxide**) values of up to **76 ppm**

#### Directors

- During QA/QC it became apparent that the AR-based analytical method significantly underestimated the absolute REE and Y concentrations, because refractory REEY-bearing minerals were incompletely digested by AR
- Selective sample pulps (21) have been submitted to an alternate laboratory (LabWest Minerals Analysis Pty Ltd (LabWest)) for immediate analysis with high HREE standards using a mixture of acids (HF, HCl and HNO<sub>3</sub>) under high pressure (~25 bar) at temperature of ~180° C in sealed Teflon vessels by microwave digestion (**MMA**) and ICPMS
- The entire suite of AV samples is also being reanalysed by fusion digestion ICPMS
- Interpretation of the preliminary Co, Ni, Cr, Sc, Pt, Pd and Au assay data together with the elevated Y and REEs indicates that metals were derived from a mafic to ultramafic **alkaline igneous intrusion**
- Chondrite normalised plots for the reconnaissance REEY data show similar HREY enrichments to those reported from several significant REE mineral deposits
- A dedicated AV rig **continues to expand the footprint** of the regolith-hosted mineral system at Yttria.
- An upgrade analysis of MMA samples is expected within a week
- Torian Resources holds a 100% interest in the **16km Arktos Fault strike continuity for the Yttria mineral system**
- The magmatic source of the metals will be modelled using geophysical techniques to target primary mineralisation
- Torian is well funded for ongoing exploration through the continuous conversion of the TNRO options (partially underwritten to \$3,000,000)

Torian Resources Limited (ASX: TNR) (**Torian or the Company**) is pleased to announce the discovery of “Yttria”, a significant **HREE-Y-Co-Sc-Ni-Cr-Pd- Pt** enriched broad **~1km occurrence** at its Mt Stirling Central project area. Yttrium is a key pathfinder indicator of high value Heavy Rare Earth Elements used in Critical Metals exploration.

Rare earth elements are in high demand because they are critical components (the "vitamins") to many technologies that drive the modern world. However, as the supply of REEs is dominated by China, there is significant geopolitical risk to the supply chain in the west. This has created urgency to discover alternative sources of supply.

**The five most critical REEs are Dysprosium (Dy), Terbium (Tb), Europium (Eu), Neodymium (Nd) and Yttrium (Y). These are all present in Yttria mineralisation.**

As part of the Company's ongoing systematic exploration of the Mt Stirling Gold Project, a total of 151 AV drill holes systematically targeted the Arktos Fault and adjacent structures at the Wishbone Prospect for arsenic and other Au vectoring pathfinders. Reconnaissance field work confirmed the presence of prospective breccias within Archaean granites and Proterozoic mafic dykes, where the potential for Rare Earth mineral structural/lithological model was recognised.

Focus on Yttrium anomalism was initially confirmed by pXRF analysis of soils to guide AV drilling, for gold exploration. Subsequently oxide intervals observed in AV drilling samples revealed a broad (**1km scale**) extent of discrete Y anomalies in the area.

To provide additional analytical support for the discovery, 21 selected AV samples from 1m intervals, containing an average of  $536\pm 193$  ppm **HREYO**; with HREYO/TREYO ratio of  $0.63\pm 0.1$  were submitted for additional analysis at Lab West (Malaga, Western Australia) by ICPMS following MMA 4 acid digestion to ensure complete dissolution of refractory HREE-bearing minerals such as xenotime.

Immediate follow-up exploration continues to expand the Yttria footprint through surface detailed pXRF surveys and reconnaissance AV drilling.

Full mineralised intercepts will be reported on once systematic submission of entire horizon zones of interest are processed. Turn-around on these assays is expected within 4 weeks.

**Figure 1: Regional reconnaissance AV drilling**



**Torian's Executive Chairman Mr Paul Summers said:**

*"Torian's exploration undertaking over the past 2 years has been exceptional, and we are now benefiting from a well-managed program to increase our gold resource.*

*If undertaken methodically, exploration can offer many surprises. During a field traverse with our chief exploration manager Claudio Sheriff Zegers in December 2021 we came across some interesting ground which really stood out.*

*From that chance find, and the interest generated, we find ourself today releasing a most exciting discovery. It has the likelihood of being a company maker, an outstanding opportunity for our shareholders.*

*It now appears to our team that this exciting discovery will morph Torian into an advanced minerals exploration Company"*

**Torian's exploration manager Claudio Sheriff-Zegers added:**

*"I'm incredibly proud of the small pragmatic and dedicated Torian Exploration team; Strataprobe Drilling and Portable Analytical Solutions (PAS) support.*

*Never could we have imagined that Yttria's REE spectrum would likely materialise with one of the highest ratios of HREO's to TREO's occurrences.*

*Discoveries like these don't happen overnight. Timing is ever critical. Thank you to the team @ MinAnalytical and to Paul and Torian Directors for believing the science; and setting Torian exploration up for technical success.*



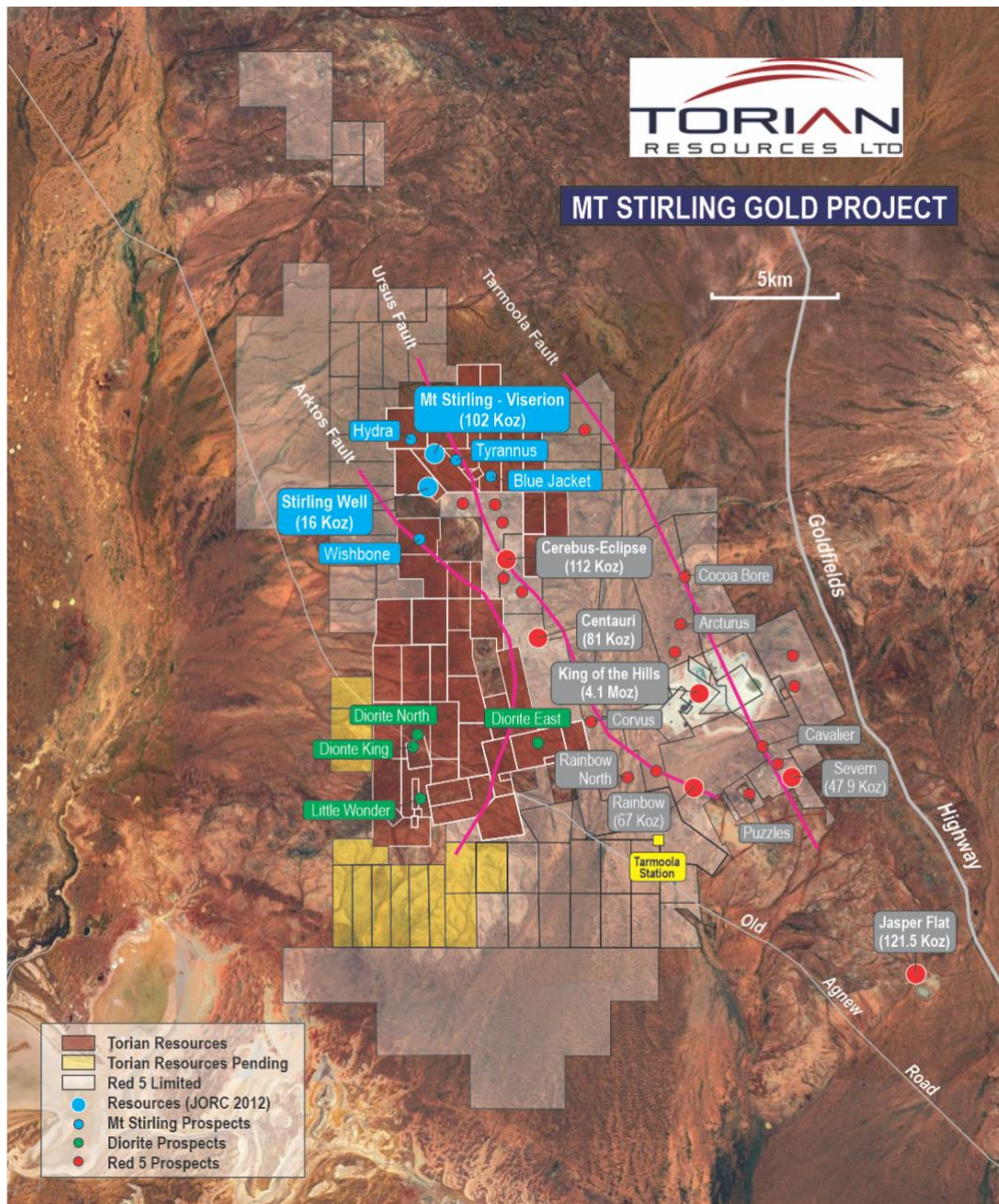
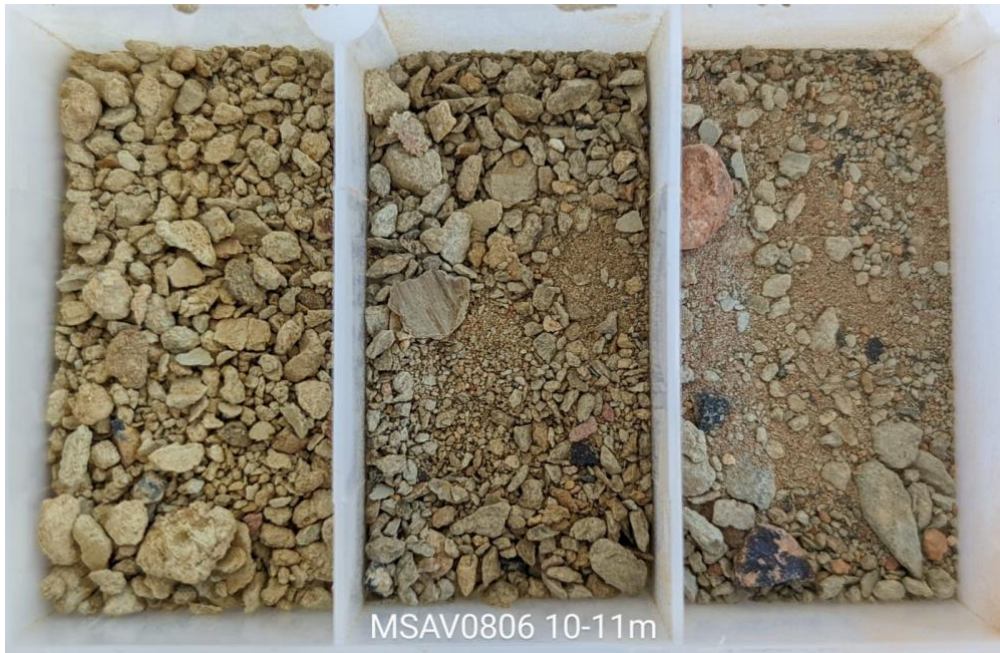


Figure 2: Mt Stirling Gold Project tenements Regional Map



**Figures 3a; 3b; 3c Mt Stirling Central Yttria MSAV\* Chip tray photos**



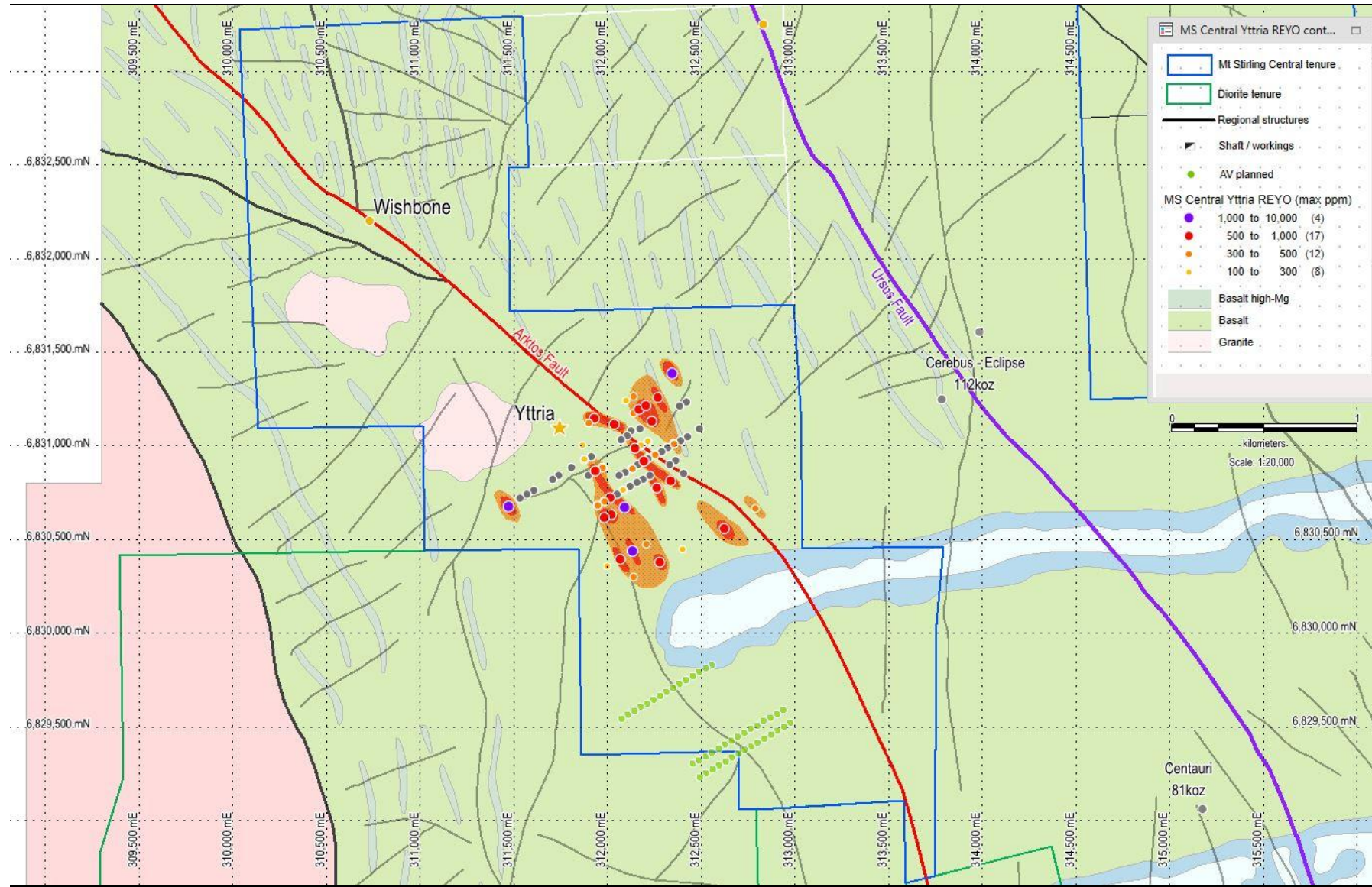
**1492 ppm TREO**



**1258 ppm TREO**



**Figure 4: MS Central Yttria – Solid Geology and TREY contours**





**Figure 5: MS Central Yttria TREY contours against TMI 1VD (NEagcs NL) image**

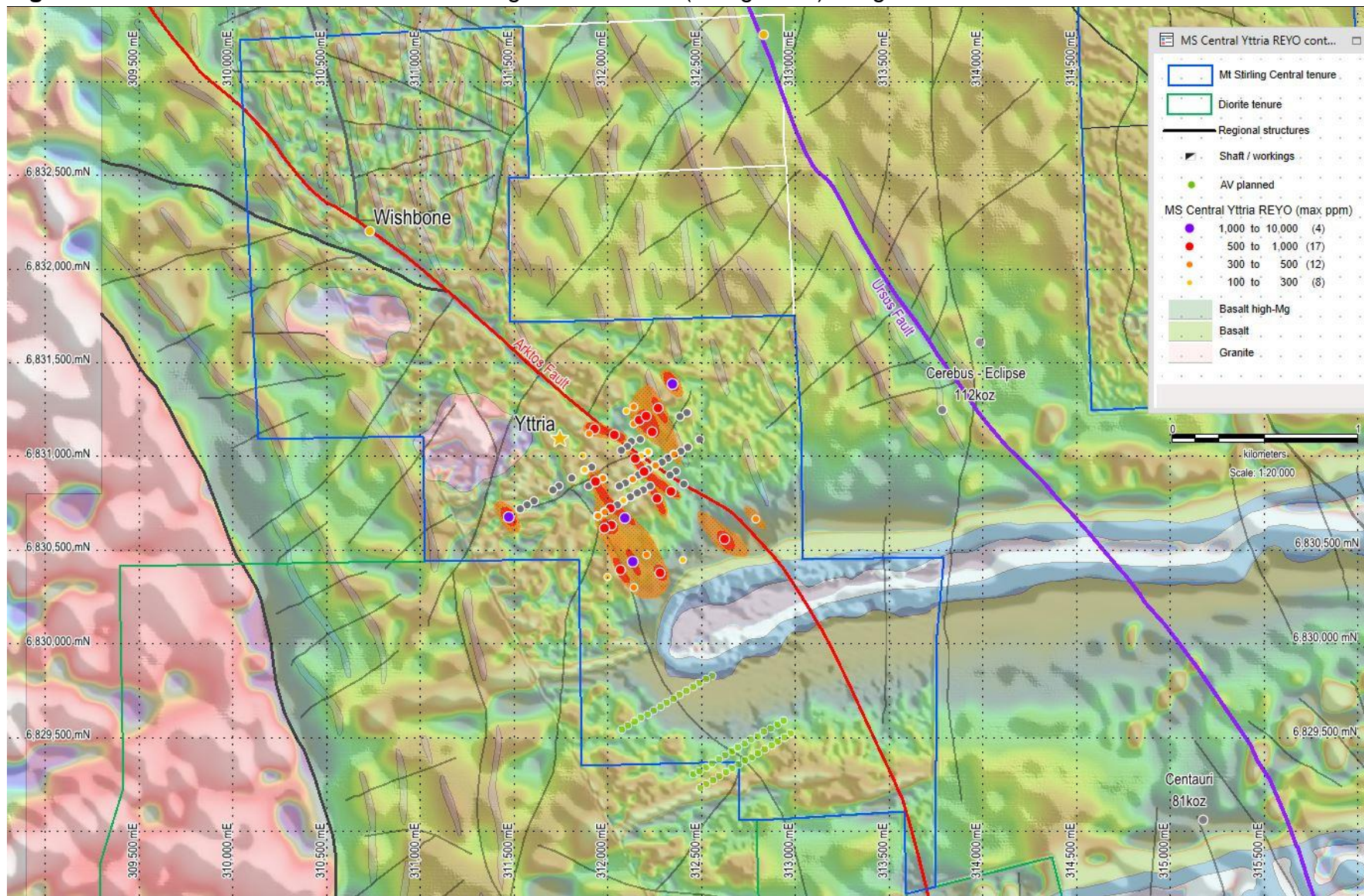




Figure 6: MS Central Yttrium >100ppm (pXRF) contour

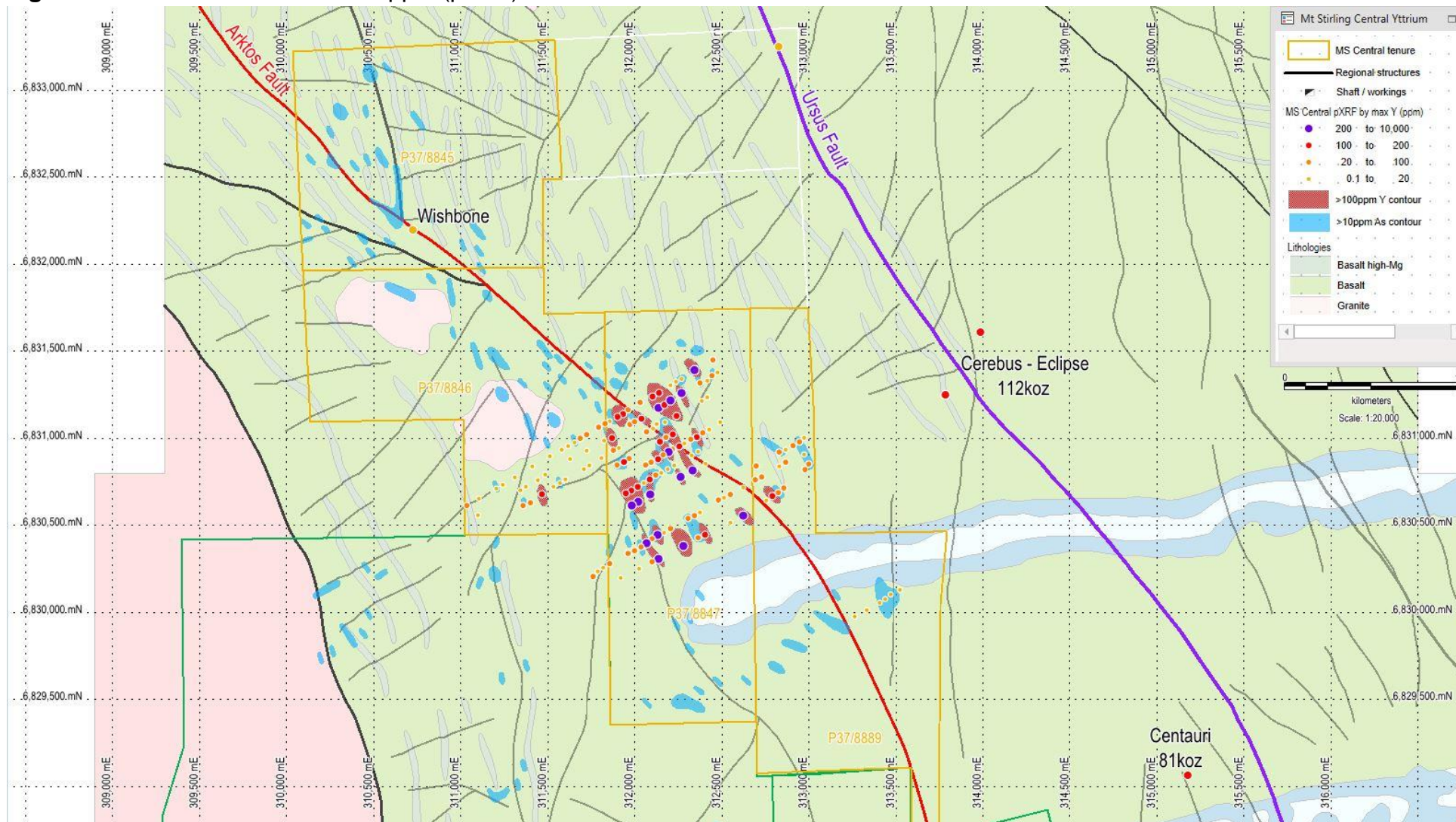
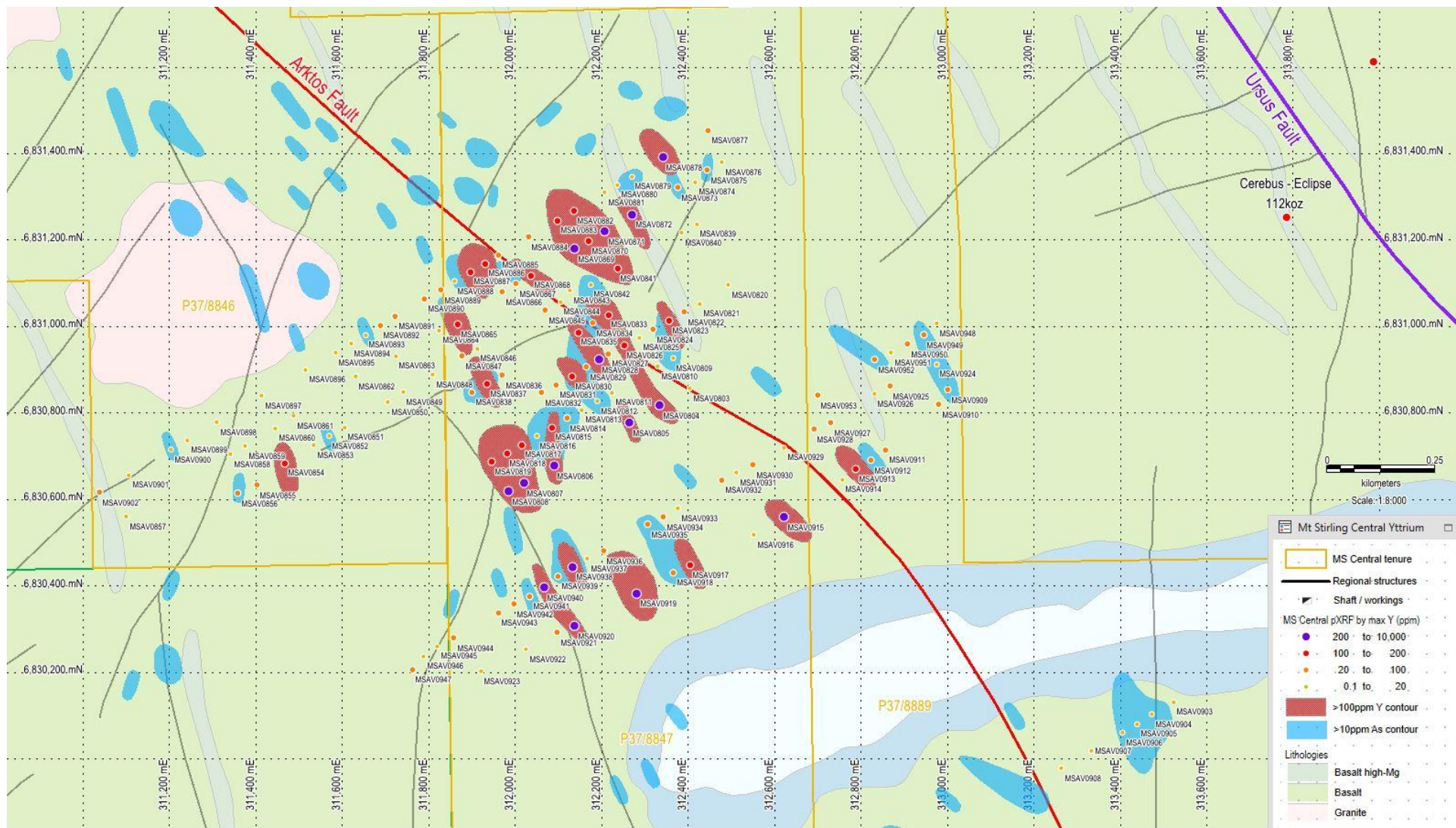




Figure 7: MS Central Yttrium MSAV DHs





## Rare Earth Elements

The group of elements from lanthanum to lutetium (atomic number from 57 to 71) are known as the lanthanides. They are divided according to atomic number into two groups: the light rare-earth elements (LREEs) and the heavy rare-earth elements (HREEs). According to the IUPAC (International Union of Pure and Applied Chemistry) classification, the elements from La to Eu are termed the LREEs, and the elements from Gd to Lu and Y are the HREEs.

Scandium and Yttrium are not REEs but they have similar properties

H <sup>1</sup>																	He <sup>2</sup>
Li <sup>3</sup>	Be <sup>4</sup>											B <sup>5</sup>	C <sup>6</sup>	N <sup>7</sup>	O <sup>8</sup>	F <sup>9</sup>	Ne <sup>10</sup>
Na <sup>11</sup>	Mg <sup>12</sup>											Al <sup>13</sup>	Si <sup>14</sup>	P <sup>15</sup>	S <sup>16</sup>	Cl <sup>17</sup>	Ar <sup>18</sup>
K <sup>19</sup>	Ca <sup>20</sup>	Sc <sup>21</sup>	Ti <sup>22</sup>	V <sup>23</sup>	Cr <sup>24</sup>	Mn <sup>25</sup>	Fe <sup>26</sup>	Co <sup>27</sup>	Ni <sup>28</sup>	Cu <sup>29</sup>	Zn <sup>30</sup>	Ga <sup>31</sup>	Ge <sup>32</sup>	As <sup>33</sup>	Se <sup>34</sup>	Br <sup>35</sup>	Kr <sup>36</sup>
Rb <sup>37</sup>	Sr <sup>38</sup>	Y <sup>39</sup>	Zr <sup>40</sup>	Nb <sup>41</sup>	Mo <sup>42</sup>	Tc <sup>43</sup>	Ru <sup>44</sup>	Rh <sup>45</sup>	Pd <sup>46</sup>	Ag <sup>47</sup>	Cd <sup>48</sup>	In <sup>49</sup>	Sn <sup>50</sup>	Sb <sup>51</sup>	Te <sup>52</sup>	I <sup>53</sup>	Xe <sup>54</sup>
Cs <sup>55</sup>	Ba <sup>56</sup>	*	Hf <sup>72</sup>	Ta <sup>73</sup>	W <sup>74</sup>	Re <sup>75</sup>	Os <sup>76</sup>	Ir <sup>77</sup>	Pt <sup>78</sup>	Au <sup>79</sup>	Hg <sup>80</sup>	Tl <sup>81</sup>	Pb <sup>82</sup>	Bi <sup>83</sup>	Po <sup>84</sup>	At <sup>85</sup>	Rn <sup>86</sup>
Fr <sup>87</sup>	Ra <sup>88</sup>	**	Rf <sup>104</sup>	Db <sup>105</sup>	Sg <sup>106</sup>	Bh <sup>107</sup>	Hs <sup>108</sup>	Mt <sup>109</sup>	Ds <sup>110</sup>	Rg <sup>111</sup>	Cn <sup>112</sup>	Fl <sup>114</sup>		Lv <sup>116</sup>			

High Field Strength Elements (HSFEs)

← Light REEs →							← Heavy REEs →						
----------------	--	--	--	--	--	--	----------------	--	--	--	--	--	--

	La <sup>57</sup> *	Ce <sup>58</sup>	Pr <sup>59</sup>	Nd <sup>60</sup>	Pm <sup>61</sup>	Sm <sup>62</sup>	Eu <sup>63</sup>	Gd <sup>64</sup>	Tb <sup>65</sup>	Dy <sup>66</sup>	Ho <sup>67</sup>	Er <sup>68</sup>	Tm <sup>69</sup>	Yb <sup>70</sup>	Lu <sup>71</sup>
Rare Earth Elements	Ac <sup>89</sup> **	Th <sup>90</sup>	Pa <sup>91</sup>	U <sup>92</sup>	Np <sup>93</sup>	Pu <sup>94</sup>	Am <sup>95</sup>	Cm <sup>96</sup>	Bk <sup>97</sup>	Cf <sup>98</sup>	Es <sup>99</sup>	Fm <sup>100</sup>	Md <sup>101</sup>	No <sup>102</sup>	Lr <sup>103</sup>

- Figure 8: Periodic Table of the Elements showing the Light and Heavy Rare Earth Elements as well as the Scandium and Yttrium

The LREEs are generally more abundant, and except for **Praseodymium** (Pr) and **Neodymium** (Nd) – Nd-Pr, are less valuable than the HREEs.

**Yttrium** (n = 39) and **Scandium** (n = 21), despite having lower atomic numbers are included with the HREE lanthanides because their ionic radii. Their behavioural properties are closer to the HREEs than to the LREEs.

**Yttrium** is an excellent pathfinder for the presence of HREEs in rock samples. In exploration Ce, La, Nd and Y can all be determined in the field by handheld x-ray fluorescence spectroscopy (p-XRF). This provides a real time opportunity to locate LREE-rich and HREE-rich in rock chips and soils during field work, or when examining cores. This technique formed the basis for the Ytria discovery.

Although scandium is classified as a REE, it behaves very differently from the rest of the lanthanides. This is because Sc has an ionic radius similar to iron and magnesium, and thus it

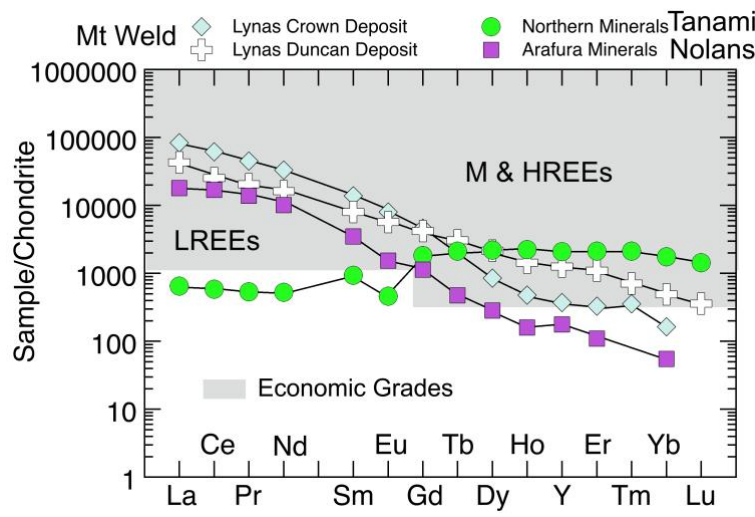
substitutes in major Fe and Mg bearing rock-forming minerals e.g., clinopyroxene. As **Sc** is quite a rare element, with a crustal abundance of 14 ppm the presence of a population of Yttria AV samples containing  $35 \pm 6$  ppm, with some values **>50 ppm** is quite significant.

**Portraying REE Data to Compare Levels of REE Enrichment**

REEs with even atomic number are more abundant than their neighbours with odd atomic numbers. Thus to allow relative abundances of LREE to HREE to be shown graphically REE concentrations are normalised to the measured REE abundances in chondritic meteorites (the objects that accreted to form Earth). The normalised REE data are then arranged in order of increasing atomic numbers from La to Lu and plotted on a logarithmic scale.

***Ore-grade hard rock deposits must have LREE (La to Eu) abundances that >1,000 to >10,000 chondritic levels and the HREE (Gd to Lu) abundances >~1,000 times chondrites.***

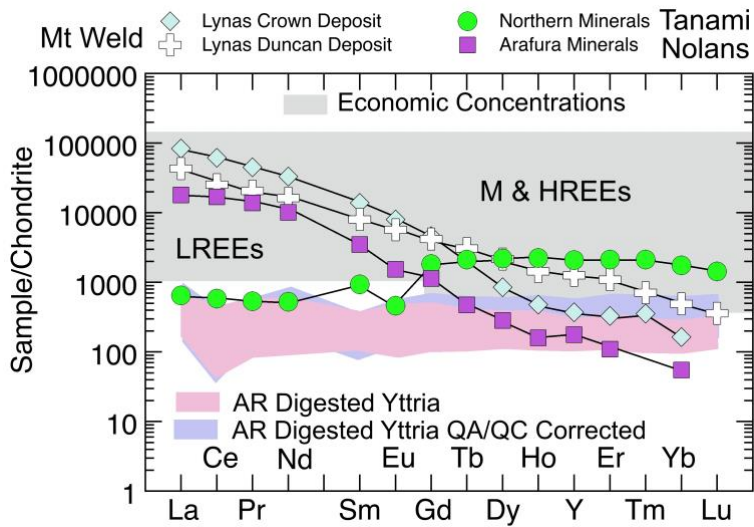
A chondrite normalised plot showing several Australian REE deposits is presented in Figure 9. Mount Weld a laterite-hosted deposit occurring in the weathered zone above a large carbonatite intrusion shows strong LREE enrichment with elevated La-Sm, typical of carbonatites. Nolans Bore deposit is also strongly LREE enriched and is also related to carbonatite magmatism. The most important HREE deposits in Australia occur in the Tanami region of northern Western Australia and the Western Northern Territory. These systems contain a light REE enriched mineral (florencite) as well as strongly HREE enriched phase (xenotime). The mixture of these two minerals gives a flat REE profile.



**Figure 9: Chondrite normalised plot showing the LREE enriched character of carbonatite REE systems Mt Weld and Nolans Bore and the typical REE pattern of Tanami mineralisation from Browns Range (Tanami data from REE "certified" laboratory standard)**



Fields in Figure 10 show the ranges of chondrite normalised REE data for the AV samples from the Yttria discovery that have been submitted to Lab West for microwave digestion ICPMS analysis confirms their HREE enrichment.



**Figure 10: Chondrite normalised plot comparing the AR digested REE data and QA/QC corrected values from Yttria. This shows that Yttria has similar LREE and HREE enrichment. Comparative data is also shown for carbonatite REE systems and Tanami mineralisation**

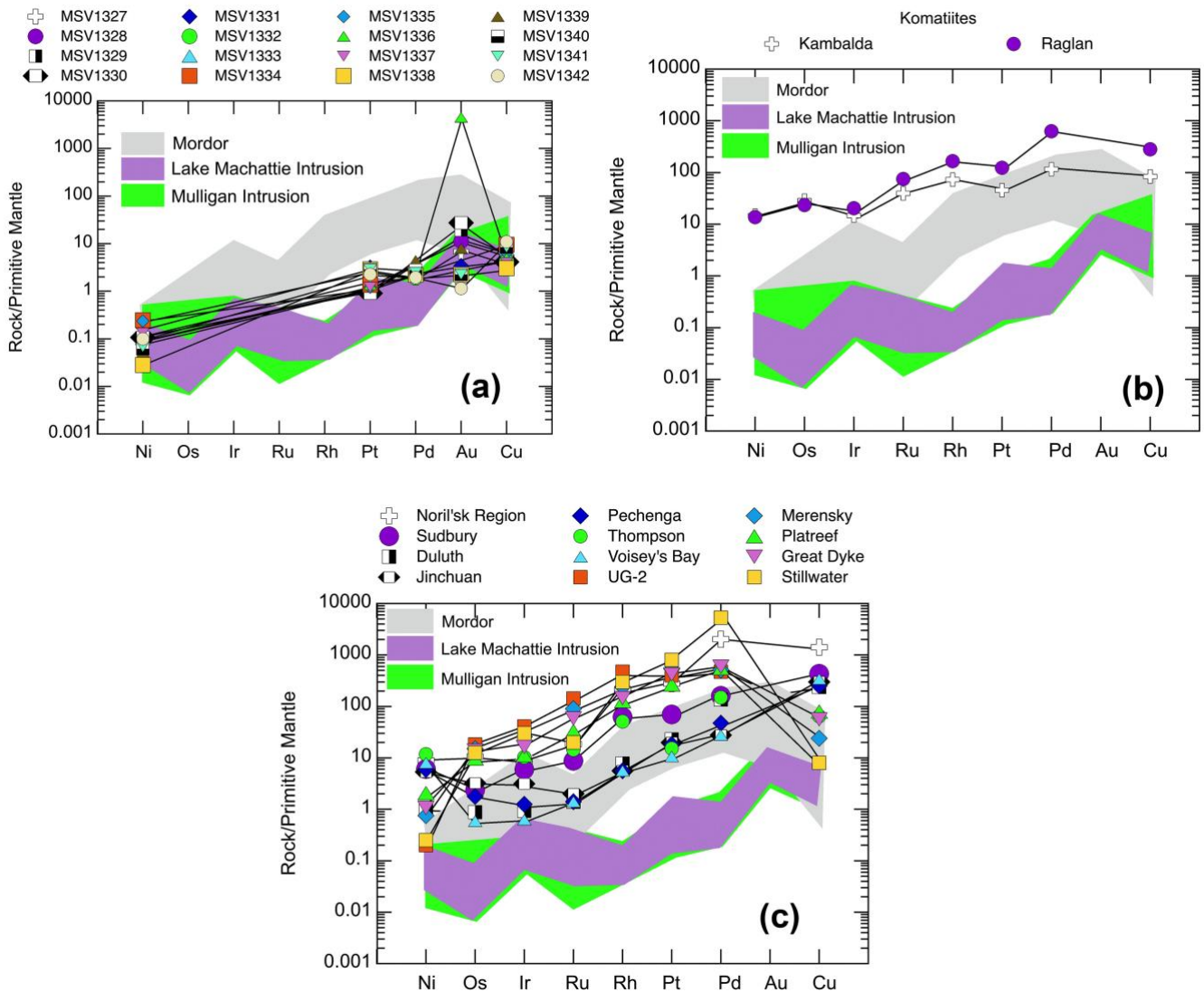
### The source of metals at Yttria

Chalcophile Ni Cu together with PGE and Au abundance plots normalised to primitive mantle concentrations (Figures 11 b & c ) show that the Ni Cu PGEs and Au, and by association the REEs and Y are not derived from (b) komatiite or (c) tholeiitic basaltic intrusions. This confirms that the metals were not sourced from the Proterozoic mafic dykes that occur at Yttria.

Importantly, alkaline source of the Yttria mineral system is shown in Figure 11 a, where normalised Ni Cu PGE and Au values plot in the identical field to that of alkaline igneous intrusions e.g., Lake Machattie and Mulligan intrusion in Western Queensland (Collerson 2014). These very large intrusions (>10 km in diameter) contain highly metal fertile lithologies including pyroxenite-ijolite-phoscorite-carbonatite.

These alkaline intrusions have high Sc contents ( $33 \pm 13$  ppm) that are identical to values in Kola Peninsula Intrusions in Russia, viz.,  $27 \pm 30$  ppm (olivinites, pyroxenites, ijolite-melteigites and melitolites rocks) and  $22 \pm 8$  ppm (carbonatite), which are important sources of critical metals.

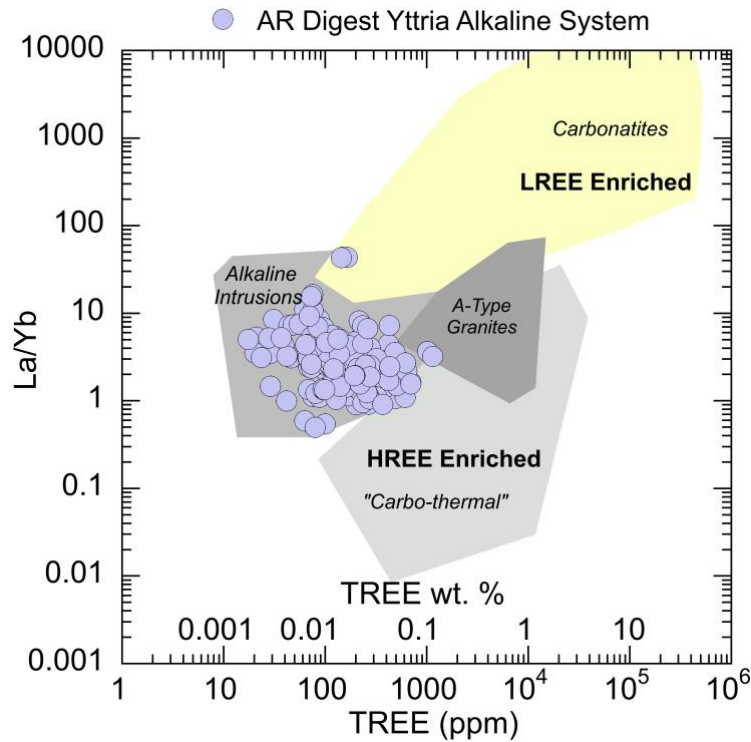
**Our data show that the Yttria samples have an even higher mean Sc  $35 \pm 6$  ppm contents This clearly has significant additional prospectivity implications for the Yttria discovery.**



**Figure 11: Mantle normalized multi-element plots comparing AR assay data from (a) Yttria with the compositional fields exhibited by the Mulligan and Lake Machattie alkaline intrusions from Western Queensland and the Mordor potassic intrusion from the Northern Territory (Barnes et al., 2008). The Yttria data fall entirely within the field shown by Mulligan and Lake Machattie alkaline intrusions. This is interpreted to indicate the Yttria anomalism was derived from an underlying intrusion of similar composition. By contrast, (b) komatiites (high Mg Archaean lavas) and (c) layered basaltic intrusions define entirely different fields with significantly higher Rock/Primitive mantle ratios. Data from (b) and (c) are from Naldrett (2010).**



Additional support for the Yttria mineral system source is provided by Figure 13, where the AR digested ICPMS assays from Yttria plot entirely within the field of alkaline intrusions with a high content of HREEs (indicated by their very low La/Yb ratios).



**Figure 12: Plot showing La/Yb ratio versus TREE concentration for the AR digested samples from Yttria. Figure base on plot given in Loubet et al., (1972) with fields expanded using recent data from the literature (KDC compilation)**

**According to Torian's REE consultant Prof. Ken Collerson:**

*" Yttria could emerge as a very large regolith hosted HREE resource with higher grades and more extreme HREE enrichment than that reported from AR3's recently discovered Koppamurra deposit in SA."*

AR3 have a combined JORC 2021 Inferred Mineral Resource of **39.9Mt @ 725ppm TREO**

**Table 1A: TREY assays by AR digest for selected AV samples from MS Central Yttria.**

Hole ID	Sample ID	From	To	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm	Lu ppm	Y ppm	TREY ppm
MSAV0804	MSV1255	7	8	40.3	99.55	15.08	81.73	24.96	9.83	44.46	7.94	60.42	14.1	46.16	6.14	37.91	5.45	471.28	965.31
MSAV0805	MSV1257	2	3	64.4	97.04	21.58	103.75	26.26	8.46	25.98	4.15	27.63	5.14	15.4	2.15	14.6	1.91	103.34	521.79
MSAV0806	MSV1267	10	11	167.4	51.67	59.05	293.03	75.38	26.07	96.27	15.25	97.92	20.2	56.91	7.33	45.85	6.43	473.61	1492.37
MSAV0807	MSV1271	9	10	47.4	16.24	20.48	106	29.18	10.38	39.15	6.57	46.57	9.94	31.04	4.14	25.47	3.63	293.65	689.84
MSAV0808	MSV1279	11	12	69.4	4.34	22.28	114.92	30.35	10.57	44.27	7.02	49.11	10.53	31.66	4.02	23.31	3.26	325.16	750.2
MSAV0815	MSV1281	3	4	13.3	15.57	4.16	20.6	5.1	1.83	7.56	1.24	9.02	1.95	6.05	0.79	4.82	0.68	69.09	161.76
MSAV0817	MSV1284	9	10	20.9	62.17	9.17	47.38	15.54	6.02	24.69	4.63	35.05	7.57	23.97	3.2	19.59	2.68	229.29	511.85
MSAV0818	MSV1288	10	11	36.9	50.9	10.74	52.92	14.28	5.4	22.4	3.69	25.6	5.52	16.57	2.14	12.51	1.75	177.24	438.56
MSAV0819	MSV1293	12	13	17.6	64.88	6.97	35.99	11.96	4.51	17.97	3.47	26.95	5.64	17.81	2.44	15.6	2.09	151.19	385.07
MSAV0823	MSV1299	13	14	30.5	67.34	9.91	47.96	11.89	4.09	15	2.48	17.81	3.73	11.45	1.48	8.92	1.22	113.46	347.24
MSAV0826	MSV1304	8	9	17	19.35	6.29	32.24	10.63	4.01	16.2	3.08	23.49	5.14	16.47	2.3	14.94	2.01	168.59	341.74
MSAV0828	MSV1308	7	8	52.1	78.12	21.27	102.36	28.34	9.73	34.52	6.06	42.9	8.55	26.54	3.72	23.76	3.19	209.65	650.81
MSAV0830	MSV1310	4	5	59	32.62	11.22	48.53	9.71	3.31	13.32	2.1	14.52	3	9.04	1.19	7.23	0.98	96.17	311.94
MSAV0833	MSV1315	11	12	17.9	34.86	5.44	27.52	8.1	3.02	11.87	2.08	15.24	3.23	10.03	1.31	8.14	1.11	100.81	250.66
MSAV0834	MSV1317	2	3	9	121.31	3.4	16.05	5	1.86	7.05	1.4	10.66	2.28	7.23	0.99	6.27	0.83	63.74	257.07
MSAV0835	MSV1321	7	8	47.8	226.42	15.53	76.39	19.75	6.73	24.13	3.84	26.83	5.47	16.46	2.16	13.36	1.76	151.02	637.65
MSAV0836	MSV1328	10	11	48.2	27.23	12.33	62.13	14.73	5.13	20.83	2.82	17.71	3.51	9.47	1.17	6.73	0.92	111.79	344.7
MSAV0847	MSV1332	7	8	13.3	58.97	3.6	15.94	4.22	1.48	5.36	0.94	6.74	1.41	4.31	0.59	3.68	0.49	40.57	161.6
MSAV0854	MSV1333	12	13	34	960.33	11.91	51.56	12.81	4.14	14.28	2.6	19.25	4.02	12.44	1.71	10.59	1.4	117.3	1258.34
MSAV0841	MSV1343	14	15	18.2	214.56	6.33	34.4	12.04	4.84	20.97	3.54	25.8	5.43	16.56	2.14	13.03	1.77	168.12	547.73
MSAV0837	MSV1347	3	4	87.2	40.97	24.84	120.88	30.21	9.85	36.93	5.14	31.9	6.12	16.94	2.09	12.02	1.58	181.73	608.4
MSAV0865	MSV1353	1	2	29.2	7.36	7.11	35.93	8.7	3.03	13.3	1.98	13.9	3.08	9.14	1.09	5.75	0.82	121.82	262.21
MSAV0868	MSV1358	7	8	27.6	83.61	8.44	43.98	13.48	5.24	23.31	4.12	31.69	7.11	22.24	2.91	17	2.35	230.93	524.01
MSAV0869	MSV1365	6	7	18.9	49.45	8.56	39.63	11.56	4.39	19.09	3.48	27.03	5.74	18.04	2.41	15.23	2.1	181.95	407.56
MSAV0870	MSV1368	8	9	16.7	135.73	10.26	47.13	14.48	5.13	20.13	3.6	26.7	5.57	17.57	2.39	15.13	2.05	178.72	501.29
MSAV0871	MSV1373	8	9	48.4	101.8	21.8	96.81	28.01	10.15	41.09	7.55	57.81	12.13	38.1	5.2	32.67	4.41	356.7	862.63
MSAV0872	MSV1377	10	11	17.8	38.86	8.46	38.88	15.48	6.58	28.29	5.99	45.78	9.3	27.5	3.35	19.4	2.5	247.13	515.3



**Table 1B: TREY assays by AR digest for selected AV samples from MS Central Yttria (Continued)**

Hole ID	Sample ID	From	To	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm	Lu ppm	Y ppm	TREY ppm
MSAV0878	MSV1382	4	5	75.8	107.47	30.55	131.31	37.57	13.6	55.09	9.58	70.5	15.01	45.72	5.75	34.98	4.68	428.4	1066.01
MSAV0882	MSV1390	1	2	14.4	95.21	5.81	25.82	9.09	3.38	14.47	2.91	23.27	4.99	16.12	2.29	15.13	2.07	152.77	387.73
MSAV0883	MSV1392	5	6	16.6	32.57	6.11	28.05	8.09	2.92	13.39	2.32	17.69	3.83	12	1.59	9.87	1.35	134.21	290.59
MSAV0886	MSV1394	3	4	53.1	312.12	21.61	86.77	21.14	6.82	24.65	4.3	32.24	6.71	21.21	2.97	19.57	2.67	192.25	808.13
MSAV0887	MSV1401	3	4	39.6	73.92	17.54	67.38	15.5	4.55	13.18	2.04	12.97	2.28	6.57	0.91	5.91	0.77	49.29	312.41
MSAV0913	MSV1404	10	11	24.3	12.32	13.83	63.07	20.87	7.41	25.3	4.67	33.07	6.36	19.72	2.82	19.65	2.63	183.52	439.54
MSAV0915	MSV1409	9	10	24.9	85.95	13.58	62.91	20.75	7.68	29.95	5.74	43.59	9.12	29.07	4.1	27.48	3.69	260.31	628.82
MSAV0917	MSV1414	8	9	16.5	9.5	5.92	26.52	7.82	3.02	14.26	2.52	19.57	4.41	14.19	1.88	11.31	1.58	155.49	294.49
MSAV0919	MSV1417	7	8	27.7	200.11	11.37	53.12	16.63	6.13	24.22	4.26	31.05	6.39	19.56	2.58	16.25	2.15	197.26	618.78
MSAV0920	MSV1420	11	12	26.5	68.93	11.43	55	14.21	5.36	21.46	4.29	27.45	5.75	17.62	2.32	14.16	1.91	184.63	461.02
MSAV0936	MSV1422	9	10	19.2	41.58	9.24	44.66	11.06	3.91	15.14	3.04	19.13	3.96	12.11	1.62	9.9	1.34	107.83	303.72
MSAV0938	MSV1426	8	9	49.2	268.27	21.94	107	30.38	11.42	44.84	9.27	60.63	12.72	39.23	5.09	31.72	4.24	381.47	1077.42
MSAV0940	MSV1427	11	12	47.1	148.25	15.84	75.19	17.83	6.42	27.46	5.37	35.44	7.47	23.19	3.05	19.18	2.61	255.77	690.17
MSAV0942	MSV1430	1	2	15.3	21.13	5.59	27.34	6.41	2.26	9.99	1.87	12	2.59	8.12	1.09	6.63	0.92	81.01	202.25

**Table 2:** Elevated vector element concentrations used to constrain the source of Y and HREE anomalism in AV samples from MS Central Yttria

Hole ID	Sample ID	From	To	Co ppm	Sc ppm	Ni ppm	Cr ppm	Pd ppb	Pt ppb	As ppm	Au ppb
MSAV0804	MSV1255	7	8	329.9	37.8	238.8	262	10	31	12.2	1
MSAV0805	MSV1257	2	3	184.8	11.2	88.2	87	<5	21	1	4
MSAV0806	MSV1267	10	11	224.3	24.2	410.2	305	10	13	1	2
MSAV0807	MSV1271	9	10	275.9	18.2	587.1	229	11	18	5.5	2
MSAV0808	MSV1279	11	12	114.6	19.7	431.7	214	8	12	4.8	2
MSAV0815	MSV1281	3	4	115.8	17.3	167.5	194	6	9	2.2	2
MSAV0817	MSV1284	9	10	609.4	25.1	299.8	256	6	10	6	1
MSAV0818	MSV1288	10	11	69.4	31.4	427.8	281	<5	12	2.1	5
MSAV0819	MSV1293	12	13	384.8	22.6	405.2	244	6	12	6.2	25
MSAV0823	MSV1299	13	14	95	38.2	134.8	158	13	18	5.5	3
MSAV0826	MSV1304	8	9	392.9	28.8	273.6	107	12	18	5.3	<1
MSAV0828	MSV1308	7	8	558.1	32.4	609.4	295	5	17	4.7	<1
MSAV0830	MSV1310	4	5	105.4	26.5	206.9	203	<5	11	2.2	<1
MSAV0833	MSV1315	11	12	85.9	34.8	201.3	162	12	8	3.5	<1
MSAV0834	MSV1317	2	3	102.1	29.4	110.1	134	10	17	5.6	<1
MSAV0835	MSV1321	7	8	134.9	26.8	172.7	236	5	12	3.3	<1
MSAV0836	MSV1328	10	11	45.2	35.2	192.6	258	<5	7	1.5	10
MSAV0847	MSV1332	7	8	651.6	33.5	443	299	7	17	2.1	<1
MSAV0854	MSV1333	12	13	83.3	28.8	204.4	294	<5	10	1.6	<1
MSAV0841	MSV1343	14	15	85	40.1	243.7	166	10	17	4	2
MSAV0837	MSV1347	3	4	30.5	31.7	122.6	250	6	13	<0.5	3
MSAV0865	MSV1353	1	2	51.7	24.2	149.7	250	<5	10	1.9	9
MSAV0868	MSV1358	7	8	194.5	27.9	144.2	127	8	17	5.1	<1
MSAV0869	MSV1365	6	7	157.1	30.5	159.3	135	15	31	5.5	1
MSAV0870	MSV1368	8	9	598.9	32.2	331.2	133	12	28	4.1	<1
MSAV0871	MSV1373	8	9	466.6	35.9	575.3	154	12	29	11.6	<1
MSAV0872	MSV1377	10	11	133.4	31.5	417.6	216	8	13	10.3	46
MSAV0878	MSV1382	4	5	631.8	33.7	534.2	132	18	41	13.7	5
MSAV0882	MSV1390	1	2	591.1	28.3	319.2	144	10	17	5.4	3
MSAV0883	MSV1392	5	6	272.3	27.5	154.1	60	7	11	4	1
MSAV0886	MSV1394	3	4	148.9	23.8	316.1	258	6	13	4.2	1
MSAV0887	MSV1401	3	4	71.3	36.2	288.1	336	7	9	1.8	3
MSAV0913	MSV1404	10	11	157.9	39.8	385.5	205	12	24	3.4	7
MSAV0915	MSV1409	9	10	1194.7	30.2	1122.1	155	6	16	6.4	3
MSAV0917	MSV1414	8	9	181.6	27.6	210.6	278	<5	11	3.4	<1
MSAV0919	MSV1417	7	8	381.1	37.7	272.9	346	5	12	4.8	1
MSAV0920	MSV1420	11	12	316.3	32.5	383.7	293	11	21	5.7	<1
MSAV0936	MSV1422	9	10	347	22.1	245.6	280	<5	9	2.4	8
MSAV0938	MSV1426	8	9	417.6	23.4	252.3	258	11	49	9.4	<1
MSAV0940	MSV1427	11	12	488.4	27.1	446.9	260	6	10	7.4	4
MSAV0942	MSV1430	1	2	53.5	10.3	80.4	143	10	8	4.2	3

**Table 3: MS Central AV Collars for p-XRF data shown in Table 2**

Hole ID	Easting GDA94	Northing GDA94	Dip	Sample ID	From	To	Depth m
MSAV0804	312335	6830820	-90	MSV1255	7	8	9
MSAV0805	312265	6830780	-90	MSV1257	2	3	18
MSAV0806	312090	6830680	-90	MSV1267	10	11	12
MSAV0807	312020	6830640	-90	MSV1271	9	10	18
MSAV0808	311985	6830620	-90	MSV1279	11	12	13
MSAV0815	312085	6830770	-90	MSV1281	3	4	8
MSAV0817	312015	6830730	-90	MSV1284	9	10	13
MSAV0818	311980	6830710	-90	MSV1288	10	11	19
MSAV0819	311945	6830690	-90	MSV1293	12	13	21
MSAV0823	312355	6831016	-90	MSV1299	13	14	17
MSAV0826	312251	6830959	-90	MSV1304	8	9	15
MSAV0828	312194	6830925	-90	MSV1308	7	8	11
MSAV0830	312131	6830888	-90	MSV1310	4	5	8
MSAV0833	312215	6831030	-90	MSV1315	11	12	16
MSAV0834	312180	6831010	-90	MSV1317	2	3	8
MSAV0835	312145	6830990	-90	MSV1321	7	8	18
MSAV0836	311970	6830890	-90	MSV1328	10	11	21
MSAV0847	311878	6830934	-90	MSV1332	7	8	14
MSAV0854	311467	6830687	-90	MSV1333	12	13	16
MSAV0841	312236	6831137	-90	MSV1343	14	15	17
MSAV0837	311935	6830870	-90	MSV1347	3	4	13
MSAV0865	311867	6831008	-90	MSV1353	1	2	19
MSAV0868	312036	6831121	-90	MSV1358	7	8	14
MSAV0869	312137	6831181	-90	MSV1365	6	7	13
MSAV0870	312170	6831201	-90	MSV1368	8	9	17
MSAV0871	312207	6831222	-90	MSV1373	8	9	15
MSAV0872	312271	6831261	-90	MSV1377	10	11	14
MSAV0878	312342	6831393	-90	MSV1382	4	5	16
MSAV0882	312135	6831271	-90	MSV1390	1	2	3
MSAV0883	312098	6831248	-90	MSV1392	5	6	9
MSAV0886	311930	6831149	-90	MSV1394	3	4	13
MSAV0887	311897	6831130	-90	MSV1401	3	4	6
MSAV0913	312788	6830674	-90	MSV1404	10	11	14
MSAV0915	312623	6830561	-90	MSV1409	9	10	14
MSAV0917	312403	6830451	-90	MSV1414	8	9	21
MSAV0919	312281	6830385	-90	MSV1417	7	8	20
MSAV0920	312138	6830310	-90	MSV1420	11	12	22
MSAV0936	312204	6830483	-90	MSV1422	9	10	19
MSAV0938	312133	6830446	-90	MSV1426	8	9	9
MSAV0940	312067	6830398	-90	MSV1427	11	12	23
MSAV0942	311997	6830360	-90	MSV1430	1	2	5



**Table 4A: MS Central AV Collars showing reconnaissance pXRF ppm concentrations for Yttrium (Y) and other selected vector elements**

Hole ID	Easting	Northing	Dip	EOH Depth	As ppm	Cu ppm	Zn ppm	Ni ppm	Co ppm	Y ppm	Th ppm
MSAV0803	312,405	6,830,860	-90	7	9.47	<b>322.32</b>	<b>406.26</b>	418.10	<b>596.29</b>	14.10	8.75
MSAV0804	312,335	6,830,820	-90	9	7.74	218.95	274.65	224.58	470.59	<b>268.90</b>	9.75
MSAV0805	312,265	6,830,780	-90	18	8.56	<b>346.69</b>	272.21	272.52	294.25	<b>222.26</b>	14.56
MSAV0806	312,090	6,830,680	-90	12	6.76	242.48	<b>313.49</b>	368.48	399.41	<b>318.12</b>	10.67
MSAV0807	312,020	6,830,640	-90	18	7.91	<b>302.84</b>	273.65	<b>784.22</b>	<b>564.37</b>	<b>253.92</b>	7.67
MSAV0808	311,985	6,830,620	-90	13	9.31	<b>303.27</b>	286.98	458.39	<b>541.40</b>	<b>350.24</b>	14.13
MSAV0809	312,365	6,830,930	-90	7	<b>10.95</b>	<b>349.94</b>	203.04	294.35	297.06	17.44	9.75
MSAV0810	312,330	6,830,910	-90	6	5.40	205.16	167.66	198.85	284.13	8.52	0.00
MSAV0811	312,225	6,830,850	-90	16	6.52	<b>392.27</b>	<b>333.33</b>	67.27	<b>713.31</b>	10.34	22.67
MSAV0812	312,190	6,830,830	-90	8	7.84	<b>300.69</b>	252.71	252.43	390.85	18.93	8.57
MSAV0813	312,155	6,830,810	-90	5	6.14	<b>303.27</b>	<b>319.74</b>	79.30	354.12	15.49	15.43
MSAV0814	312,120	6,830,790	-90	5	<b>11.46</b>	296.99	299.52	222.81	305.85	37.08	14.69
MSAV0815	312,085	6,830,770	-90	8	6.64	292.68	255.40	476.30	428.92	<b>107.36</b>	7.94
MSAV0816	312,050	6,830,750	-90	9	6.75	183.71	121.03	117.62	234.12	17.00	6.48
MSAV0817	312,015	6,830,730	-90	13	6.34	<b>313.38</b>	<b>317.03</b>	341.07	<b>504.48</b>	<b>180.98</b>	15.19
MSAV0818	311,980	6,830,710	-90	19	9.78	<b>428.46</b>	<b>749.80</b>	322.11	<b>788.60</b>	<b>156.63</b>	15.06
MSAV0819	311,945	6,830,690	-90	21	5.18	286.07	263.07	241.06	264.71	<b>140.15</b>	16.91
MSAV0820	312493	6831099	-90	5	8.15	<b>308.07</b>	208.78	109.77	290.32	16.40	20.07
MSAV0821	312,427	6,831,056	-90	5	5.88	<b>343.35</b>	<b>317.95</b>	91.40	<b>507.84</b>	17.93	15.71
MSAV0822	312,392	6,831,036	-90	5	9.71	271.21	254.74	90.42	271.86	20.45	14.03
MSAV0823	312,355	6,831,016	-90	17	9.58	208.09	<b>325.84</b>	85.42	435.03	<b>124.31</b>	9.60
MSAV0825	312,288	6,830,977	-90	5	5.16	294.51	264.61	144.23	251.30	5.58	11.74
MSAV0826	312,251	6,830,959	-90	15	7.25	<b>327.31</b>	283.78	404.69	<b>679.18</b>	<b>117.09</b>	15.57
MSAV0827	312216	6830939	-90	14	7.95	298.36	277.01	344.98	418.93	77.83	10.87
MSAV0828	312,194	6,830,925	-90	11	7.20	230.92	<b>528.34</b>	390.71	253.45	<b>465.27</b>	12.56
MSAV0829	312,165	6,830,908	-90	12	7.07	204.13	192.86	250.46	270.43	92.35	10.00
MSAV0830	312,131	6,830,888	-90	8	8.62	<b>323.67</b>	<b>314.70</b>	304.27	446.15	<b>184.92</b>	12.21
MSAV0831	312,096	6,830,867	-90	10	7.84	149.35	140.64	54.10	276.87	38.71	12.06
MSAV0832	312,061	6,830,849	-90	6	4.90	195.79	175.49	200.55	169.62	24.92	6.96
MSAV0833	312,215	6,831,030	-90	16	7.17	<b>350.26</b>	<b>365.47</b>	129.78	<b>516.11</b>	<b>110.59</b>	16.24
MSAV0834	312,180	6,831,010	-90	8	7.34	224.36	260.74	48.37	208.42	98.08	13.09
MSAV0835	312,145	6,830,990	-90	18	6.46	249.48	<b>581.97</b>	225.52	<b>528.84</b>	<b>122.71</b>	13.66

**Table 4B: MS Central AV Collars showing reconnaissance pXRF ppm concentrations for Yttrium (Y) and other selected vector elements**

Hole ID	Easting	Northing	Dip	EOH Depth	As ppm	Cu ppm	Zn ppm	Ni ppm	Co ppm	Y ppm	Th ppm
MSAV0836	311,970	6,830,890	-90	21	11.64	350.79	335.05	251.39	995.79	96.00	11.88
MSAV0839	312,420	6,831,240	-90	6	7.60	188.82	213.57	72.36	0.00	13.83	0.00
MSAV0840	312,385	6,831,220	-90	5	6.18	345.78	409.31	165.56	393.96	12.98	14.38
MSAV0844	312,105	6,831,060	-90	9	7.26	201.38	136.20	0.00	201.65	6.36	13.13
MSAV0845	312,070	6,831,040	-90	16	11.78	358.39	368.30	147.55	535.64	53.91	14.21
MSAV0846	311,912	6,830,952	-90	4	7.68	114.64	137.09	61.56	162.66	15.41	0.00
MSAV0847	311,878	6,830,934	-90	14	8.11	243.66	263.06	379.63	543.00	98.02	9.74
MSAV0848	311,810	6,830,891	-90	2	0.00	321.79	282.96	88.40	244.85	16.39	13.89
MSAV0849	311,741	6,830,851	-90	2	5.66	295.98	119.58	0.00	0.00	14.40	13.34
MSAV0850	311,706	6,830,828	-90	1	8.97	105.34	63.96	0.00	0.00	13.88	10.61
MSAV0851	311,605	6,830,770	-90	2	7.24	297.77	132.29	149.09	160.88	15.69	10.37
MSAV0852	311,569	6,830,750	-90	1	8.57	154.66	80.16	0.00	0.00	17.16	9.09
MSAV0853	311,534	6,830,728	-90	1	5.80	132.02	58.86	0.00	0.00	11.75	0.00
MSAV0854	311,467	6,830,687	-90	16	5.21	328.42	272.70	353.09	396.49	130.52	17.01
MSAV0903	313523	6830135	-90	6	13.59	98.46	56.77	0.00	0.00	6.28	0.00
MSAV0904	313473	6830107	-90	20	1149.24	242.47	104.17	64.27	328.43	9.73	9.48
MSAV0905	313439	6830084	-90	22	1288.26	216.74	175.66	97.98	539.45	19.46	11.64
MSAV0906	313405	6830064	-90	17	18.14	286.29	173.31	126.72	779.15	12.77	8.50
MSAV0907	313334	6830022	-90	18	10.06	278.43	94.10	0.00	495.45	13.65	9.42
MSAV0908	313264	6829981	-90	12	11.52	194.88	148.48	0.00	940.38	16.03	11.90
MSAV0824	312,320	6,830,996	-90	16	1.09	208.43	367.07	187.99	828.16	52.83	0.00
MSAV0841	312236	6831137	-90	17	1.81	391.25	506.80	198.06	726.99	128.66	2.38
MSAV0842	312,175	6,831,100	-90	4	3.54	140.12	147.54	60.67	344.94	14.25	17.51
MSAV0843	312127	6831087	-90	4	4.12	148.13	167.84	68.18	320.03	12.09	2.72
MSAV0838	311,900	6,830,850	-90	15	1.29	294.78	316.54	435.12	788.34	69.27	4.96
MSAV0837	311,935	6,830,870	-90	13	0.00	238.80	348.48	355.12	709.08	115.29	6.91
MSAV0855	311402	6830636	-90	4	7.03	206.85	134.04	87.60	71.06	26.65	1.57
MSAV0856	311359	6830616	-90	2	0.00	138.43	97.06	87.57	71.50	20.76	2.20
MSAV0857	311,101	6,830,564	-90	2	0.00	160.30	67.23	80.16	0.00	10.98	2.99
MSAV0858	311,342	6,830,708	-90	3	2.39	99.50	51.88	76.45	0.00	3.49	3.30
MSAV0859	311,376	6,830,727	-90	2	0.00	153.14	94.64	179.79	0.00	8.00	2.34
MSAV0860	311,445	6,830,768	-90	2	0.00	221.12	137.73	229.68	0.00	14.58	0.00
MSAV0861	311488	6830797	-90	1	0.00	117.02	58.74	20.43	0.00	9.16	0.00
MSAV0862	311631	6830887	-90	4	5.55	223.50	100.42	85.58	118.31	9.12	5.49
MSAV0863	311,724	6,830,935	-90	8	2.45	307.81	105.31	97.74	0.00	10.72	4.29
MSAV0864	311,824	6,830,994	-90	1	0.00	104.72	48.98	49.99	67.19	16.87	6.01
MSAV0865	311867	6831008	-90	19	2.94	204.23	151.29	218.43	307.39	151.79	1.74
MSAV0866	311,971	6,831,082	-90	19	0.00	296.52	247.96	251.63	875.27	50.80	8.83
MSAV0867	312,002	6,831,101	-90	17	3.18	260.70	376.86	395.95	269.80	69.05	9.52
MSAV0868	312,036	6,831,121	-90	14	1.24	238.71	240.83	173.74	460.82	177.47	7.03
MSAV0869	312,137	6,831,181	-90	13	2.15	197.35	224.35	175.58	323.33	200.35	4.71
MSAV0870	312,170	6,831,201	-90	17	1.21	200.57	275.05	282.71	563.26	168.04	7.53
MSAV0871	312,207	6,831,222	-90	15	2.92	289.52	427.60	717.17	719.99	366.77	3.86
MSAV0872	312,271	6,831,261	-90	14	4.04	276.58	541.94	363.26	533.90	475.59	5.82
MSAV0873	312,377	6,831,324	-90	4	1.17	201.49	208.68	136.10	277.27	25.98	3.95
MSAV0874	312417	6831337	-90	1	0.00	103.44	129.12	75.80	0.00	16.96	3.38
MSAV0875	312,445	6,831,364	-90	7	2.89	212.94	222.34	90.77	261.08	37.08	0.00
MSAV0876	312,478	6,831,383	-90	2	0.00	212.29	255.94	106.09	94.07	9.85	1.74

**Table 4C:** MS Central AV Collars showing reconnaissance pXRF ppm concentrations for Yttrium (Y) and other selected vector elements

Hole ID	Easting	Northing	Dip	EOH Depth	As ppm	Cu ppm	Zn ppm	Ni ppm	Co ppm	Y ppm	Th ppm
MSAV0877	312,447	6,831,456	-90	1	0.00	166.21	214.18	116.33	240.06	30.20	0.00
MSAV0878	312,342	6,831,393	-90	16	4.25	<b>354.15</b>	<b>659.14</b>	<b>613.90</b>	<b>1594.20</b>	<b>521.93</b>	2.97
MSAV0879	312,270	6,831,350	-90	3	0.00	297.33	253.94	116.08	441.66	17.40	0.00
MSAV0880	312,237	6,831,331	-90	3	2.52	293.88	296.09	92.62	288.01	14.15	0.00
MSAV0881	312,207	6,831,313	-90	7	1.76	209.68	224.05	89.66	292.17	17.33	2.23
MSAV0882	312,135	6,831,271	-90	3	0.00	178.47	<b>339.03</b>	223.68	<b>750.46</b>	<b>159.61</b>	7.38
MSAV0883	312,098	6,831,248	-90	9	2.04	261.90	215.34	115.34	454.60	<b>113.09</b>	8.36
MSAV0884	312,031	6,831,209	-90	18	5.10	279.50	<b>356.41</b>	179.00	302.47	59.84	0.00
MSAV0885	311,962	6,831,168	-90	12	1.13	<b>317.90</b>	245.05	324.31	264.55	79.13	7.03
MSAV0886	311,930	6,831,149	-90	13	1.62	234.98	<b>344.38</b>	477.24	265.85	<b>185.16</b>	7.23
MSAV0887	311,897	6,831,130	-90	6	2.01	158.82	198.56	226.13	270.68	<b>110.06</b>	5.52
MSAV0888	311,859	6,831,107	-90	1	0.00	110.46	121.38	56.88	0.00	14.89	6.55
MSAV0889	311,828	6,831,087	-90	15	4.29	237.76	<b>313.31</b>	119.88	<b>520.89</b>	68.73	3.38
MSAV0890	311,791	6,831,066	-90	7	0.00	241.56	252.00	198.85	265.76	56.88	5.96
MSAV0891	311,723	6,831,026	-90	3	0.00	296.18	208.90	221.00	241.01	26.38	2.62
MSAV0892	311,688	6,831,005	-90	5	0.00	<b>359.62</b>	204.78	144.83	487.96	34.60	0.00
MSAV0893	311,654	6,830,984	-90	1	0.00	221.77	77.24	72.03	63.01	10.99	0.00
MSAV0894	311,620	6,830,964	-90	1	0.00	245.69	142.48	23.67	151.98	8.73	6.91
MSAV0895	311,584	6,830,943	-90	1	0.00	116.63	52.41	40.06	0.00	8.99	5.90
MSAV0896	311,515	6,830,903	-90	1	0.00	148.96	53.89	37.15	91.94	8.11	5.82
MSAV0897	311,414	6,830,843	-90	3	2.21	205.40	134.79	87.27	300.33	3.77	1.57
MSAV0898	311,310	6,830,781	-90	1	0.00	153.48	90.04	42.16	79.15	12.80	3.72
MSAV0899	311,242	6,830,740	-90	1	0.00	180.05	82.90	24.98	96.80	9.09	0.00
MSAV0900	311,204	6,830,718	-90	1	0.00	135.18	67.71	48.41	60.87	10.83	4.87
MSAV0901	311,107	6,830,660	-90	6	2.42	267.37	153.40	143.55	150.35	6.08	0.00
MSAV0902	311,038	6,830,619	-90	3	1.62	215.68	106.05	136.56	183.73	35.72	2.21
MSAV0909	313,001	6,830,855	-90	5	1.80	202.93	<b>598.98</b>	185.49	<b>576.73</b>	24.77	10.04
MSAV0910	312,980	6,830,822	-90	20	<b>13.65</b>	225.33	122.35	85.50	428.13	27.21	10.22
MSAV0911	312,857	6,830,717	-90	5	0.00	177.94	<b>306.74</b>	310.12	484.58	63.45	8.36
MSAV0912	312,824	6,830,693	-90	19	<b>11.49</b>	<b>319.20</b>	<b>661.08</b>	288.16	<b>1325.30</b>	84.86	7.51
MSAV0913	312,788	6,830,674	-90	14	3.00	252.39	280.33	461.05	<b>622.43</b>	<b>118.30</b>	3.06
MSAV0914	312,757	6,830,649	-90	9	0.00	<b>478.04</b>	<b>329.43</b>	279.78	<b>665.88</b>	14.41	8.45
MSAV0915	312,623	6,830,561	-90	14	0.00	208.68	<b>336.90</b>	<b>738.23</b>	<b>902.62</b>	<b>257.42</b>	4.96
MSAV0916	312,552	6,830,521	-90	11	0.00	213.14	201.21	128.74	311.90	15.32	13.85
MSAV0917	312,403	6,830,451	-90	21	2.87	256.58	178.87	336.47	<b>598.99</b>	<b>141.24</b>	5.78
MSAV0918	312,366	6,830,433	-90	22	1.26	<b>327.22</b>	195.85	254.33	<b>570.67</b>	63.55	5.57
MSAV0919	312,281	6,830,385	-90	20	3.36	237.43	219.27	264.80	<b>554.81</b>	<b>287.22</b>	8.36
MSAV0920	312,138	6,830,310	-90	22	6.18	<b>333.10</b>	<b>417.63</b>	405.22	<b>795.40</b>	<b>236.41</b>	4.68
MSAV0921	312,098	6,830,294	-90	13	0.00	<b>305.77</b>	<b>400.47</b>	107.43	378.56	42.12	4.76
MSAV0922	312,026	6,830,256	-90	1	0.00	133.29	126.94	31.87	0.00	4.87	0.00
MSAV0923	311,921	6,830,206	-90	4	2.64	269.32	249.94	141.29	408.01	13.97	0.00
MSAV0924	312,975	6,830,916	-90	9	3.62	191.05	203.29	57.18	299.69	14.78	4.44
MSAV0925	312,867	6,830,864	-90	6	0.00	147.76	216.92	76.00	316.47	20.79	11.72
MSAV0926	312,831	6,830,847	-90	7	0.00	207.57	160.76	73.29	<b>520.18</b>	17.15	9.79
MSAV0927	312,731	6,830,780	-90	15	8.09	218.92	<b>467.86</b>	245.08	<b>810.43</b>	81.55	6.19
MSAV0928	312,691	6,830,765	-90	18	8.38	228.17	<b>321.82</b>	183.60	417.21	87.51	3.30
MSAV0929	312,623	6,830,723	-90	4	2.46	108.28	144.58	63.17	391.12	11.78	4.95
MSAV0930	312,550	6,830,682	-90	20	2.69	230.81	<b>352.13</b>	329.02	<b>551.97</b>	65.43	6.40



**Table 4D: MS Central AV Collars showing reconnaissance pXRF ppm concentrations for Yttrium (Y) and other selected vector elements**

Hole ID	Easting	Northing	Dip	EOH Depth	As ppm	Cu ppm	Zn ppm	Ni ppm	Co ppm	Y ppm	Th ppm
MSAV0931	312,513	6,830,665	-90	7	0.00	172.15	253.91	72.84	<b>548.01</b>	16.39	8.13
MSAV0932	312,479	6,830,647	-90	10	2.27	<b>303.71</b>	<b>390.42</b>	162.01	491.74	68.96	2.15
MSAV0933	312,377	6,830,583	-90	5	1.73	248.32	<b>351.10</b>	116.34	<b>689.78</b>	17.88	8.70
MSAV0934	312,343	6,830,562	-90	4	2.27	191.90	284.46	68.22	380.90	28.34	9.07
MSAV0935	312,307	6,830,544	-90	5	1.42	220.89	<b>360.22</b>	45.70	<b>788.71</b>	21.20	4.98
MSAV0936	312,204	6,830,483	-90	19	0.00	218.16	<b>315.91</b>	241.56	499.22	91.92	4.46
MSAV0937	312,168	6,830,466	-90	6	0.00	214.47	<b>316.93</b>	57.37	<b>826.03</b>	18.90	8.35
MSAV0938	312,133	6,830,446	-90	9	0.00	180.82	<b>313.24</b>	189.52	<b>1094.92</b>	<b>443.51</b>	5.59
MSAV0939	312,099	6,830,425	-90	5	1.38	251.94	<b>359.19</b>	87.34	<b>1043.96</b>	58.52	12.87
MSAV0940	312,067	6,830,398	-90	23	0.00	254.97	<b>311.44</b>	490.44	<b>908.19</b>	<b>346.25</b>	7.85
MSAV0941	312,034	6,830,378	-90	18	1.78	<b>353.02</b>	<b>501.35</b>	129.14	<b>730.01</b>	82.87	8.89
MSAV0942	311,997	6,830,360	-90	5	0.00	266.30	280.80	103.91	421.61	99.93	5.83
MSAV0943	311,961	6,830,340	-90	9	0.00	288.22	<b>356.04</b>	89.07	<b>594.47</b>	21.39	1.53
MSAV0944	311,858	6,830,282	-90	1	0.00	162.08	146.82	29.25	227.01	31.66	5.60
MSAV0945	311,820	6,830,264	-90	4	2.81	150.82	157.27	38.07	303.94	18.41	2.19
MSAV0946	311,788	6,830,241	-90	1	0.00	203.92	299.44	8.41	340.99	13.47	4.77
MSAV0947	311,762	6,830,209	-90	5	1.22	200.22	184.62	119.45	361.32	35.81	6.36
MSAV0948	312,975	6,831,010	-90	7	1.97	118.67	100.81	14.99	321.25	9.17	5.04
MSAV0949	312,945	6,830,983	-90	17	12.07	180.13	<b>339.01</b>	190.40	346.63	78.88	9.30
MSAV0950	312,908	6,830,962	-90	6	5.95	144.21	142.45	62.00	348.65	20.59	10.17
MSAV0951	312,870	6,830,943	-90	10	2.46	212.43	202.38	117.02	<b>653.69</b>	17.29	12.12
MSAV0952	312,832	6,830,926	-90	10	1.28	146.94	151.51	70.27	477.65	20.47	11.47
MSAV0953	312,700	6,830,843	-90	16	0.00	<b>307.12</b>	<b>350.74</b>	153.46	<b>1099.71</b>	81.32	5.52

Further details of the Company's regional exploration will be presented in an upcoming company announcement.

*This announcement has been authorised for release by the Board.*

Paul Summers  
 Executive Chairman  
**Torian Resources Ltd**  
[info@torianresources.com.au](mailto:info@torianresources.com.au)

**References:**

- Collerson, K. D., (2014) Application of spinifex biogeochemistry to identify mineralisation targets in obscured basement terranes beneath the Simpson Desert in South Western Queensland – Final Report, 93 pp.  
 (https://qdexguest.deedi.qld.gov.au/portal/site/qdex/search?REPORT\_ID=88754&COLLECTION\_ID=999A)

- Barnes, S. J., Anderson, J. A. C., Smith, T. R., Bagas, L., (2008) The Mordor Alkaline Igneous Complex, Central Australia: PGE-enriched disseminated sulfide layers in cumulates from a lamprophyric magma. *Miner. Deposita*, 43, 641-662.
- Loubet, M., Bernat, M., Javoy, M., Allegre, C.J., (1972) Rare earth contents in carbonatites. *Earth Planet. Sci. Lett.* 14, 226-232.
- Naldrett, A.R. (2010) Secular variation in magmatic sulphide deposits and their source magmas. *Econ. Geol.* 105, 669-688.

### **About Torian:**

Torian Resources Ltd (ASX: TNR) is a highly active gold and rare earths exploration and development company with an extensive and strategic land holding comprising six projects and over 400km<sup>2</sup> of tenure in the Goldfields Region of Western Australia. All projects are nearby to excellent infrastructure and lie within 50km of major mining towns.

Torian's flagship Mt Stirling Project is situated approximately 40km NW of Leonora, and neighbours Red 5's Kind of the Hills mine. The region has recently produced approximately 14M oz of gold from mines such as Tower Hills, Sons of Gwalia, Thunderbox, Harbour Lights and Gwalia.

Rare Earths with an extremely high ratio of the significant critical and valuable Heavy Rare Earths (HREEs) to Total Rare Earths (TREEs) have been discovered throughout clays and regolith horizons @ Ytria in Mt Stirling Central. Although regional proximity to the World Class Mt Weld high grade Rare Earth oxide deposit, preliminary results indicate a likeness more fitting to Northern Minerals Browns Range Heavy Rare Earths Deposits, due to Ytria's high ratio of HREOs to TREOs and the presence of all five most critical REEs; Dysprosium / Terbium / Europium / Neodymium and Yttrium, with significant anomalous concentrations of Scandium.

The Mt Stirling Project consists of 2 blocks:

1. The Stirling Block to the north which contains two JORC compliant resources at a 0.5g/t Au cut-off: (refer ASX release 27/5/21 for further information)
  - a. Mt Stirling – 355,000t at 1.7 g/t Au for 20,000oz (Indicated)  
- 1,695,000 at 1.5 g/t Au for 82,000oz (Inferred)
  - b. Stirling Well – 253,500t at 2.01 g/t Au for 16,384oz (Inferred)
2. The Diorite Block to the south, home of the historic 73 g/t Au Diorite King Mine.

Torian's other projects within the Kalgoorlie region include the 50/50% Credo Well JV with Zuleika Gold Ltd (ASX: ZAG), host of a JORC Inferred resource of 86,419t at 4.41 g/t Au for 12,259 oz.

Torian also holds ~10.7% of Monger Gold (ASX:MMG) as well as a 20% free carried JV interest in its projects. Significant High-grade gold was recently intercepted at Providence with 8m @ 16.15 g/t Au from 60m (MNRC004); inc 1m @ 111.40 g/t Au from 61m; and 8m @ 31.84 g/t Au from 66m (MNRC007); inc 1m @ 190.06 g/t Au from 70m.

Torian is the Pastoral Lease holder of the 172,662 hectare Tarmoola Station, which is home to Torian's Mt Stirling Project, in addition to exploration assets and operating mines of numerous other resource companies, including RED5 (ASX:RED) and St Barbara (ASX:SBM).

There are numerous operating businesses on the Tarmoola station including a 20 person accommodation camp with approvals in place to expand to a 50 person camp, a mining services business, and cattle farming. The station is also entitled to approximately \$360,000 (av in each year) worth of carbon credits over a 15 year period.

Torian holds approximately 7% of BullionFX, a gold backed crypto currency company. As a shareholder of 15,000,000 shares Torian is entitled to 15,000,000 BULL tokens. The paper value of Torian's tokens is ~USD\$3.375m (27/01/21).

### **Competent Person Statement**

The information in this report relating to exploration results and Mineral Resource Estimates is based on information compiled, reviewed and relied upon by Professor K.D. Collerson. Professor Collerson a Principal of KDC Consulting, compiled and interpreted recently received data, reviewed and relied upon prior data and ASX releases dated 27 May 2021, 25 February 2019 and 29 January 2020. Professor Collerson BSc (Hons), PhD., FAusIMM has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Professor Collerson consents to the inclusion in the report of the matters based on information in the form and context in which it appears.

Torian Resources confirms in the subsequent public report that it is not aware of any new information or data that materially affects the information included in the relevant market announcements on the 25 February 2019, 29 January 2020 and 27 May 2021 and, in the case of the exploration results, that all material assumptions and technical parameters underpinning the results in the relevant market announcement reviewed by Mr Dale Schultz continue to apply and have not materially changed.

### **Cautionary Note Regarding Forward-Looking Statements**

This news release contains "forward-looking information" within the meaning of applicable securities laws. Generally, any statements that are not historical facts may contain forward-looking information, and forward looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget" "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or indicates that certain actions, events or results "may", "could", "would", "might" or "will be" taken, "occur" or "be achieved." Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, Gold and other metal prices, the estimation of initial and sustaining capital requirements, the estimation of labour costs, the estimation of mineral reserves and resources, assumptions with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the Project, permitting and such other assumptions and factors as set out herein.



Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: risks related to changes in Gold prices; sources and cost of power and water for the Project; the estimation of initial capital requirements; the lack of historical operations; the estimation of labour costs; general global markets and economic conditions; risks associated with exploration of mineral deposits; the estimation of initial targeted mineral resource tonnage and grade for the Project; risks associated with uninsurable risks arising during the course of exploration; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support exploration activities; risks associated with changes in the mining regulatory regime governing the Company and the Project; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalisation and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the Project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issuance of additional common shares of the Company; the risk of litigation.

Although the Company has attempted to identify important factors that cause results not to be as anticipated, estimated or intended, there can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Forward looking information is made as of the date of this announcement and the Company does not undertake to update or revise any forward-looking information this is included herein, except in accordance with applicable securities laws.

## Mt Stirling Project: JORC Table 1

### Section 1 - Sampling Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>• Drilling results reported from previous and current exploration completed by Torian Resources Ltd and historical explorers.</li> <li>• Reverse circulation drilling for Au was used to obtain 1m split samples from which 2-3kg was pulverised to produce a 500g tub for Photon assay; and/or a 50g Fire Assay. Sampling has been carried out to company methodology and QA/QC to industry best practice. Zones of interest were 1m split sampled, and comp spear sampling was carried out on interpreted barren zones. Samples were dispatched to MinAnalytical in Kalgoorlie / Nagrom Laboratory in Kelmscott; were prep included sorting, drying and pulverisation for a 500gm Photon Assay (PAAU02) and/or a 50g Fire Assay (FA50)</li> <li>• Auger Vacuum low-impact drilling is utilised to obtain 1m uncontaminated samples to produce a 500g tub for Photon assay; and/or a 50g Fire Assay; and/or 25g AR 4acid ICPMS assays.</li> <li>• Surface soil sample locations are directly analysed using a Niton XL5portable XRF analyser (pXRF). Drill sample pXRF measurements are obtained from the primary split sample taken off the drilling rig's static cone splitter and/or Auger Vacuum Perspex flask, with a single measurement from each respective meter sample, through a respective green mining bag.</li> <li>• Calibration on the pXRF is carried out daily when used, with the instrument also serviced and calibrated as required. Standards and blank material are also used under Torians QAQC protocols in line with industry standard practice and fit for purpose.</li> <li>• Exploration results reported are pXRF preliminary results which are superceded by laboratory analysis when available.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>• Historical drilling techniques include reverse circulation (RC) drilling. Standard industry techniques have been used where documented. RC drilling was carried out by PXD and Orlando utilising a Schramm truck and track mounted rig respectively. Reddog Drilling and ASX Drilling are currently drilling at the Project.</li> <li>• Auger Vacuum drilling is carried out by Strataprobe Drilling utilising a tractor-mounted auger drill system capable of drilling through the regolith.</li> <li>• The more recent RC drilling utilised a face sampling hammer with holes usually 155mm in diameter.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• Drill recovery has not been routinely recorded on historical work, and is captured for all recent drilling.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• Geological logs are accessible and have been examined over the priority prospect areas. The majority of the logging is of high quality and has sufficiently captured key geological attributes including lithology, weathering, alteration and veining.</li> <li>• ·Logging is qualitative in nature, to company logging coding.</li> <li>• ·All samples / intersections have been logged. 100% of relevant length intersections have been logged.</li> </ul>
<i>Sub-sampling techniques and</i>	<ul style="list-style-type: none"> <li>• Standard industry sampling practices have been undertaken by the historical exploration companies. Appropriate analytical methods have been used considering the style of mineralisation being sought.</li> </ul>

<p><i>sample preparation</i></p>	<ul style="list-style-type: none"> <li>• Sample sizes are considered appropriate.</li> <li>• QC/QC data is absent in the historical data with the exception of the more recent Torian drilling, where sample standards and blanks are routinely used.</li> <li>• In the more recent Torian drilling duplicate samples (same sample duplicated) were commonly inserted for every 20 samples taken. Certified Reference Materials (CRM's), blanks and duplicates, are included and analysed in each batch of samples.</li> <li>• pXRF sampling is fit for purpose as a preliminary exploration technique, with data being acquired and compiled into an extensive regional database.</li> <li>• pXRF readings have a diminished precision due to grain size effect (homogeneity) when obtained from naturally occurring settings. The Competent Person considers this diminished precision acceptable within the context of reporting exploration results.</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>• The historical drill sample gold assays are a combination of Fire Assay and Aqua Regia. The assay techniques and detection limits are appropriate for the included results.</li> <li>• Various independent laboratories have assayed samples from the historical explorers drilling. In general they were internationally accredited for QAQC in mineral analysis.</li> <li>• The laboratories inserted blank and check samples for each batch of samples analysed and reports these accordingly with all results.</li> <li>• Reference Photon pulps have been submitted to Nagrom Laboratory, in order to verify MinAnalytical mineralised assays accuracy and precision.</li> <li>• Samples were analysed for gold via a 50 gram Lead collection fire assay and Inductively Coupled Plasma optical (Atomic) Emission Spectrometry to a detection limited of 0.005ppm Au.</li> <li>• Intertek Genalysis routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring.</li> <li>• The laboratory QAQC has been assessed in respect of the RC chip sample assays and it has been determined that the levels of accuracy and precision relating to the samples are acceptable.</li> <li>• Where pXRF analysis reported, field analysis only; laboratory assay not yet carried out. Multi-element analysis will be carried out by MinAnalytical.</li> <li>• Rare Earth element (and multi-element) analysis have been obtained utilising an Aqua Reggia 4acid digest preliminary method; along with a Au Fire Assay. Improved methods of analysis are being trialled to improve concentrations of elements of interest by utilising a complete dissolution through fusion and/or 3 acid microwave digestion (MMS) and ICPMS.</li> <li>• A portable Niton XL5 instrument was used to measure preliminary quantitative amounts of associated mineralisation elements. Reading time of 30 seconds, over grid survey grid position, or drill metre interval respective green bags</li> <li>• Daily calibration of pXRF conducted with standards and silica blanks.</li> </ul>
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> <li>• The historical and current drill intercepts reported for Au have been calculated using a 0.5g/t cut-off, with a maximum 2m internal waste.</li> <li>• Documentation of primary data is field log sheets (handwritten) or logging to laptop templates. Primary data is entered into application specific data base. The data base is subjected to data verification program, erroneous data is corrected. Data storage is retention of physical log sheet, two electronic backup storage devices and primary electronic database.</li> <li>• pXRF analytical data obtained has been downloaded by digital transfer to working excel sheets inclusive of QAQC data. Data is checked by technical personnel and uploaded to drill hole or grid survey respective files, in preparation for database import.</li> </ul>
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> <li>• Drill hole collars were located using a handheld GPS system. The coordinated are stored in a digital exploration database and are referenced to MGA Zone 51 Datum GDA 94.</li> <li>• Location of the majority of the historical drill holes has been using a handheld GPS system, or local grids that have been converted to MGA Zone 51 Datum GDA 94. Survey control used is handheld GPS for historic holes and</li> </ul>



	<ul style="list-style-type: none"> <li>The more recent Torian drilling has been located utilising a differential GPS and the majority of these holes have been surveyed downhole.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>The historical drill spacing is variable over the project as depicted on map plan diagrams.</li> <li>Sample compositing has been used in areas where mineralisation is not expected to be intersected. If results return indicate mineralisation, 1m split samples were submitted for analysis.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>The orientation of the drilling is not at right angles to the known mineralisation trend and so gives a misrepresentation of the true width of mineralisation intersected.</li> <li>Efforts to counteract to as reasonably as perpendicular to interpreted controlling mineralisation structures and trends has gone into drill planning.</li> <li>No sampling bias is believed to occur due to the orientation of the drilling.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>Drill samples were compiled and collected by Torian employees/contractors. All sample were bagged into calico bags and tied. Samples were transported from site to the MinAnalytical laboratory in Kalgoorlie and Nagrom laboratory in Kelmscott by Torian employees/contractors.</li> <li>A sample submission form containing laboratory instructions was submitted to the laboratory. The sample submission form and sample summary digitised records were compiled and reviewed so as to check for discrepancies.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>A review of historical data over the main Mt Stirling and Stirling Well Prospects has been undertaken. The QA/QC on data over the remainder of the project tenements is ongoing.</li> <li>Alternate laboratories verify through improved analytical techniques, previously generated assay data.</li> </ul>

## Section 2 - Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Mt Stirling Central tenure is held by Torian Resources Limited.</li> <li>Diorite East is located on P37/8857 held by Torian Resources Limited, and Diorite North on P37/8868 and forms part of the Mt Stirling Joint Venture. This tenement is held by a third party on behalf of the Joint Venture. Torian Resources is the Manager of the Joint Venture and holds executed transfers which will permit this tenement becoming the property of the Joint Venture.</li> <li>The tenements are in good standing.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Previous exploration completed by Torian Resources Ltd and historical explorers including Hill Minerals and Jupiter Mines Ltd.</li> </ul>

<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li>• The Mt Stirling Project tenements are located 40 km northwest of Leonora within the Mt Malcolm District of the Mt Margaret Mineral Field.</li> <li>• The project tenements are located within the Norseman-Wiluna Greenstone Belt in the Eastern Goldfields of Western Australia.</li> <li>• The project tenements cover a succession of variolitic, pillowed high Mg basalts that have been intruded by syenogranites/monzogranites.</li> <li>• Historical prospecting and exploration activities have identified areas of gold mineralisation at various prospects. The orogenic style gold mineralisation appears in different manifestations at each of the prospects.</li> <li>• At the Mt Stirling Prospect gold mineralisation is associated with zones of alteration, shearing and quartz veining within massive to variolitic high Mg basalt. The alteration zones comprise quartz-carbonate-sericite-pyrite+/- chlorite.</li> <li>• At the Stirling Well Prospect gold mineralisation is associated with millimetre to centimetre scale quartz veining within the Mt Stirling syenogranite/monzogranite. The gold mineralised quartz veins have narrow sericite/muscovite- epidote-pyrite alteration selvages.</li> <li>• Gold mineralisation at the Diorite King group of mine workings is hosted by dolerite and metabasalts which strike NE-SW predominantly and are associated with sub-vertical stockwork quartz. Other historical gold workings in the Project area occur along quartz veined contact zones between mafic intrusive and mafic schist units.</li> <li>• The characteristic of each prospect adheres to generally accepted features of orogenic gold mineralisation of the Eastern Goldfields of Western Australia.</li> </ul>
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <li>• The location of drill holes is based on historical reports and data originally located on handheld GPS devices.</li> <li>• Northing and easting data for historic drilling is generally within 10m accuracy.</li> <li>• Recent Torian RC drill holes located with differential GPS.</li> <li>• No material information, results or data have been excluded.</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>• Best gold in drill hole was calculated by taking the maximum gold value in an individual down hole interval from each drill hole and plotting at the corresponding drill hole collar position. Individual downhole intervals were mostly 1m, but vary from 1m to 4m in down hole length.</li> <li>• In relation to the reported historical drill hole intersection a weighted average was calculated by a simple weighting of from and to distances down hole. The samples were 2m down hole samples. No top cuts were applied.</li> <li>• The current drill hole intersection is reported using a weighted average calculation by a simple weighting of from and to distances down hole at 1m intervals per sample.</li> <li>• The historical drilling intercept reported has been calculated using a 1g/t Au cut off, no internal waste and with a total intercept of greater than 1 g/t Au.</li> <li>• No metal equivalent values are used</li> <li>• Total Rare Earth and Yttrium oxides are calculated by incorporating all respective lanthanides + Yttrium and presented as an aggregate total.</li> </ul>
<p><i>Relationship between mineralisation</i></p>	<ul style="list-style-type: none"> <li>• The orientation of the drilling is approximately at right angles to the known trend mineralisation.</li> </ul>

<i>widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• Down hole lengths are reported, true width not known.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• The data has been presented using appropriate scales and using standard aggregating techniques for the display of data at prospect scale.</li> <li>• Geological and mineralisation interpretations based off current understanding and will change with further exploration.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• Historical Diorite results have been reported in TNR:ASX announcements dated: 08/10/2020, 06/10/2020, 27/07/2020, 29/01/2020.</li> <li>• Preliminary MS Central pXRF results were reported in ASX announcement dated 14<sup>th</sup> January 2022.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• Geological interpretations are taken from historical and ongoing exploration activities. Historical exploration within the existing Diorite North Prospect has provided a reasonable understanding of the style and distribution of local gold mineralised structures at the prospect.</li> <li>• Other areas outside of the existing Diorite historical workings are at a relatively early stage and further work will enhance the understanding of the gold prospectivity of these areas.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• A review of the historical exploration data is ongoing with a view to identify and rank additional target areas for further exploration.</li> <li>• The results of this ongoing review will determine the nature and scale of future exploration programs.</li> <li>• Diagrams are presented in this report outlining areas of existing gold mineralisation and the additional gold target areas identified to date.</li> <li>• Selective preliminary pXRF analytical results are confirmed by laboratory analysis as further planning to advance exploration is contingent on confirmatory assays and further targeting analysis.</li> </ul>