

## HREE DISCOVERY AT YTTRIA RECONFIRMED AND UPGRADED

---

### Highlights:

**Torian Resources reconfirms presence of Yttrium and HREEs at “YTTRIA” with a 10% upgrade due to improved assay digestion**

- Replicate analyses of sample pulps from Yttria, have been re-analysed 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
- Greater dissolution of refractory (hard to dissolve) REE-bearing minerals was achieved using the **MMA technique**, with an **increase in grade of ~10%** from previously reported samples analysed using aqua regia digests (AR).
- The new data confirm the presence of Yttrium and Heavy Rare Earth Elements (**HREEs**) throughout shallow oxide horizons across multiple regional scale survey lines at Yttria, close to the Arktos Fault
- Due to improved assay results all samples including those previously analysed have been resubmitted for **fusion dissolution and ICPMS** analysis, which enables the highest level of extraction to achieve optimum dissolution results. These are expected within two weeks and will provide preliminary full intercept assays of 30 AV drilled zones
- A further 118 AV samples have been submitted to complete interpreted mineralised intervals (from an additional 34 AV intercepts) **varying in widths of 1 through to 9m zones**
- Rare Earth Elements (**REEs**) + Yttrium (**Y**) and the presence of anomalous concentrations of Co (**Cobalt**)-Sc (**Scandium**)-Ni (**Nickel**)-Cr (**Chromium**) – Pd (**Palladium**) and Pt (**Platinum**) were reconfirmed within clays and regolith horizons for a distance of > 1km

#### Directors

- Enrichment zone(s) are limited to extents of regional reconnaissance area drilled, and open in all directions
- Elevated concentrations of Y, an excellent pathfinder for the high value and rare, HREEs vary between 130 and ~ **540 ppm**
- These yielded Y concentrations up to **687 ppm Y<sub>2</sub>O<sub>3</sub>** (MSV 1267)
- **HREYO** (heavy rare earth oxide + yttrium oxide) concentrations range from 248 to **1141 ppm** (mean 573±222 ppm) (average ± SD)
- **HREYO to TREYO** (total rare earth + yttrium oxide) ratio of **0.60± 0.14** (average ± SD) **indicating significant enrichment in the high value and rare HREEs**
- The **HREYO to TREYO** ratio at Yttria is significantly higher than that reported for other alkaline systems in the vicinity.
- The critical metal **Scandium** also occurs in anomalous concentrations with Sc<sub>2</sub>O<sub>3</sub> (**Scandium Oxide**) values of up to **110 ppm (MSV1276)**. This compares with 76 ppm reported from previous AR analysis
- Interpretation of the preliminary Co, Ni, Cr, Sc, Pt, Pd and Au assay data together with the elevated Y and REEs as well as specific trace element ratios (Nb/Ta, Pt/Pd, Pt/Au) indicates that metals were derived from a mafic to ultramafic **alkaline igneous intrusion**
- Chondrite normalised plots for the new REEY data are LREE and HREY enriched, yielding unfractionated patterns. These high HREY/TREY ratios that are similar values reported from the HREE mineral systems in the Tanami (Northern Minerals ASX:NTU)
- The HREE pattern of one sample (MSV1377), is interpreted to indicate the presence of xenotime in addition to a LREE-bearing mineral
- Xenotime is the HREE mineral of choice because of its understood metallurgy, high recovery and low radioactivity
- Located within the HREE anomaly at Yttria is a unit that has previously been mapped as granite, field investigation shows that it is a brecciated lithology possibly of mafic alkaline affinity. It is undeformed and clearly post-dates the regional deformation fabric evident in the regional greenstones
- A dedicated AV rig **continues to expand the footprint** of the regolith-hosted mineral system at Yttria, with the magmatic source of the metals to be modelled using geophysical techniques to target primary mineralisation

- An upgrade analysis of fusion samples is expected within 2 weeks
- Torian Resources holds a 100% interest in the **16km Arktos Fault strike continuity for the Yttria mineral system**
- **Torian is well funded with a cash balance of >\$4.2m.**
- Torian will be holding a webinar for investors and shareholders to provide an overview of this discovery and it's future plans for Yttria. The webinar will take place on Thursday Feb 10 at 11:00AM WST / 2:00 PM EDT.

Link to register: <https://tinyurl.com/2p93pewz>

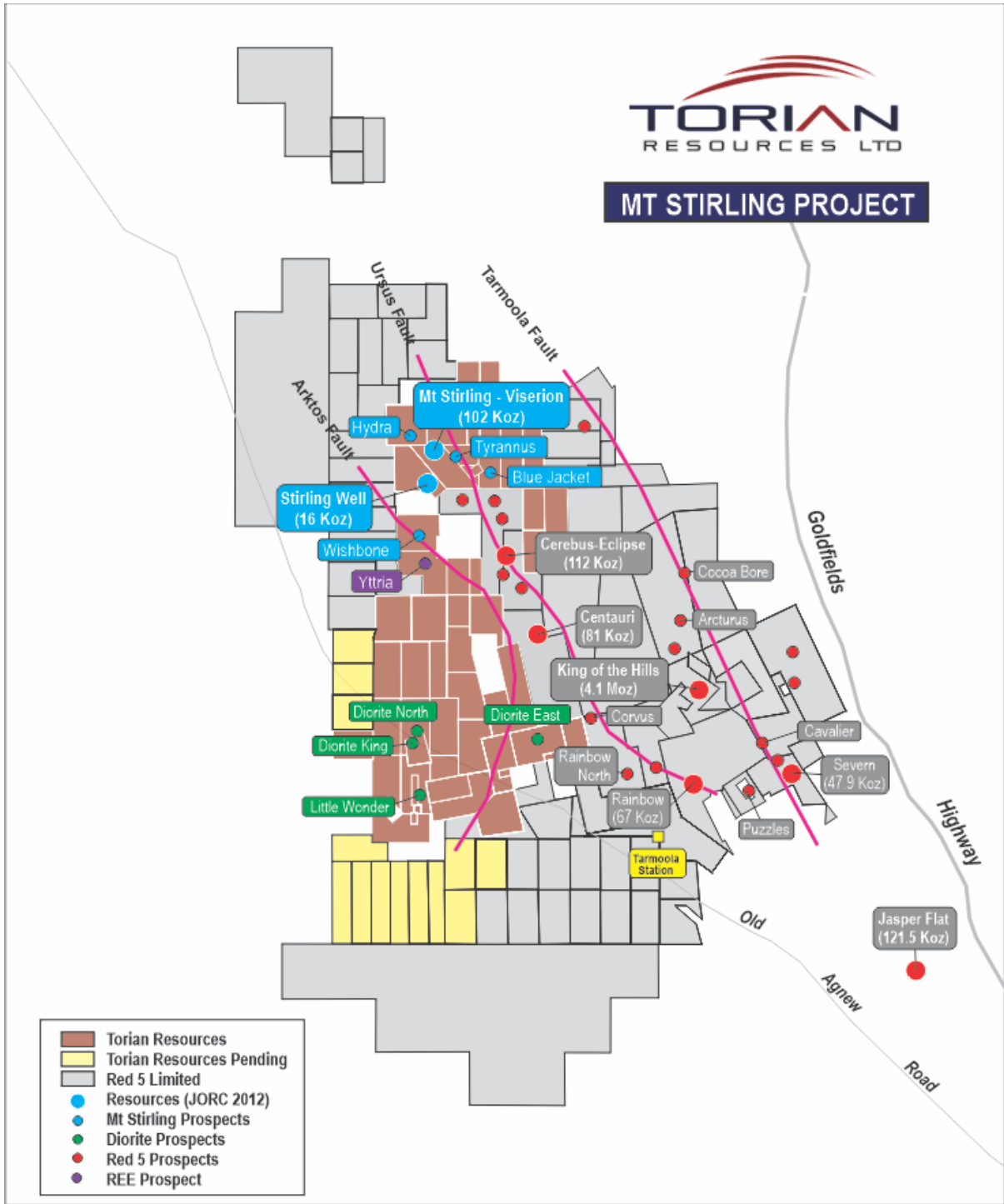
Torian Resources Limited (ASX: TNR) (**Torian or the Company**) is pleased to announce that additional assays using techniques more appropriate to the dissolution of refractory REE-bearing minerals have confirmed that "Yttria", defines a significant **HREE-Y-Co-Sc-Ni-Cr-Pd- Pt** enriched broad **~1km anomaly** 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 Company is also pleased to announced that as a result of recent option conversions it now has a cash balance in excess of \$4.2M. Once all funds from the remaining option conversions have been cleared, the company will issue the remaining converted options, and provide the market with a full summary of the total conversion amount. This is anticipated to occur in the next couple of days. At this stage it does not appear that the company has had to utilise the previously announced underwriting facility.

**Photo 1: Mt Stirling Central Regional reconnaissance AV drilling**





**Figure 1: Mt Stirling Project tenements Regional Map**

Torian's Executive Chairman Mr Paul Summers said:

*"Our recent gold results confirm our continuing effort with gold exploration at the Stirling Project. Our resource continues to expand, with significant positive results towards our upcoming MRE.*

*To now have further confirmation of what is clearly becoming a binary focus of the Company in both gold and rare earths has increased the excitement of our dedicated team. This latter unexpected discovery appears to be exceptional and we eagerly await upcoming assays and RC drilling to further define the magnitude of the Yttria discovery.*

*As the pursuit of a REE resource is relatively inexpensive and expeditious in comparison to gold exploration, the Company is well funded to pursue both in order to achieve a maximum of continuous news and return to our shareholders".*

According to Torian's REE consultant Prof. Ken Collerson; who has provided an expert review of the data:

*"The system is quite unique given the **high proportion of HREY** in the regolith."*

*"Yttria might be related to the same igneous event responsible for the Mt Weld carbonatite, thus the northern Yilgarn could represent an extensive and untested region for critical metal and REEY exploration."*

*"My guess is that **Yttria** is sitting not far above a **very significant ultramafic alkaline intrusion.**"*

***"This discovery by Torian Resources is potentially of considerable geopolitical significance for Critical Metals security".***

The five most critical REEs are Dysprosium (Dy), Terbium (Tb), Europium (Eu), Neodymium (Nd) and Yttrium (Y).

These are all present throughout Yttria mineralisation, with a HREYO (heavy rare earth + yttrium oxide) to TREYO (total rare earth + yttrium oxide) ratio of  $0.60 \pm 0.14$  (average  $\pm$  SD) indicating significant enrichment in the high value and rare HREEs.

### Distribution of Rare Earths - Yttria

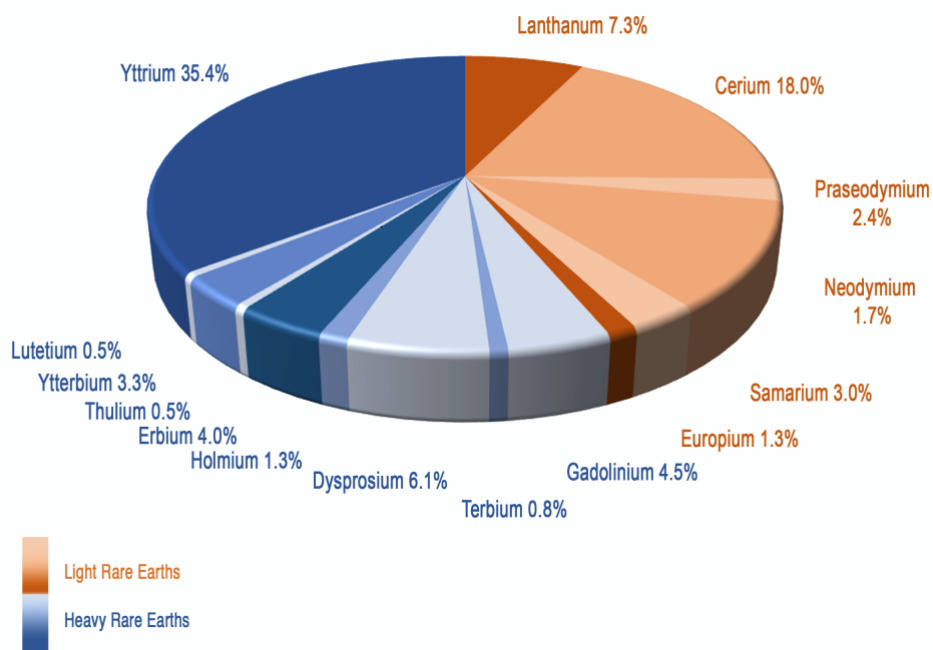


Figure 2: Distribution of Yttria REEs

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 units mapped as Archaean granites and Proterozoic mafic dykes.

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, are reported to contain an average of  $573 \pm 222$  ppm **HREYO**; with HREYO/TREYO ratio of  $0.60 \pm 0.14$ .

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

Full mineralised intercepts varying from 1 to 9m will be reported, with all horizon zones of interest now submitted for fusion and ICPMS, with assays expected within 3 weeks.

**Figure 3: MS Central Yttria – Solid Geology and REYO contours**

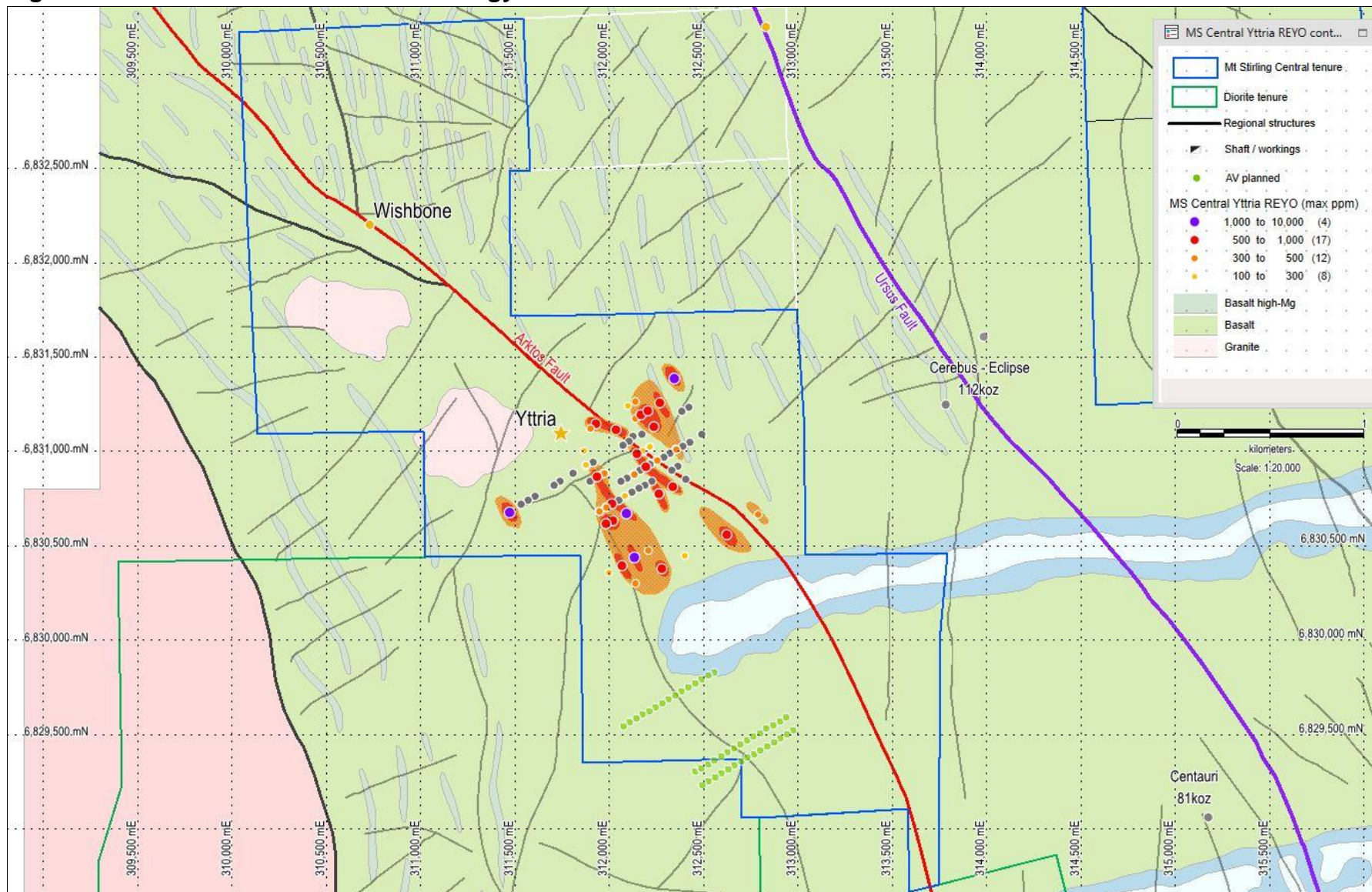




Figure 4: MS Central Yttria – Planned AV extensions

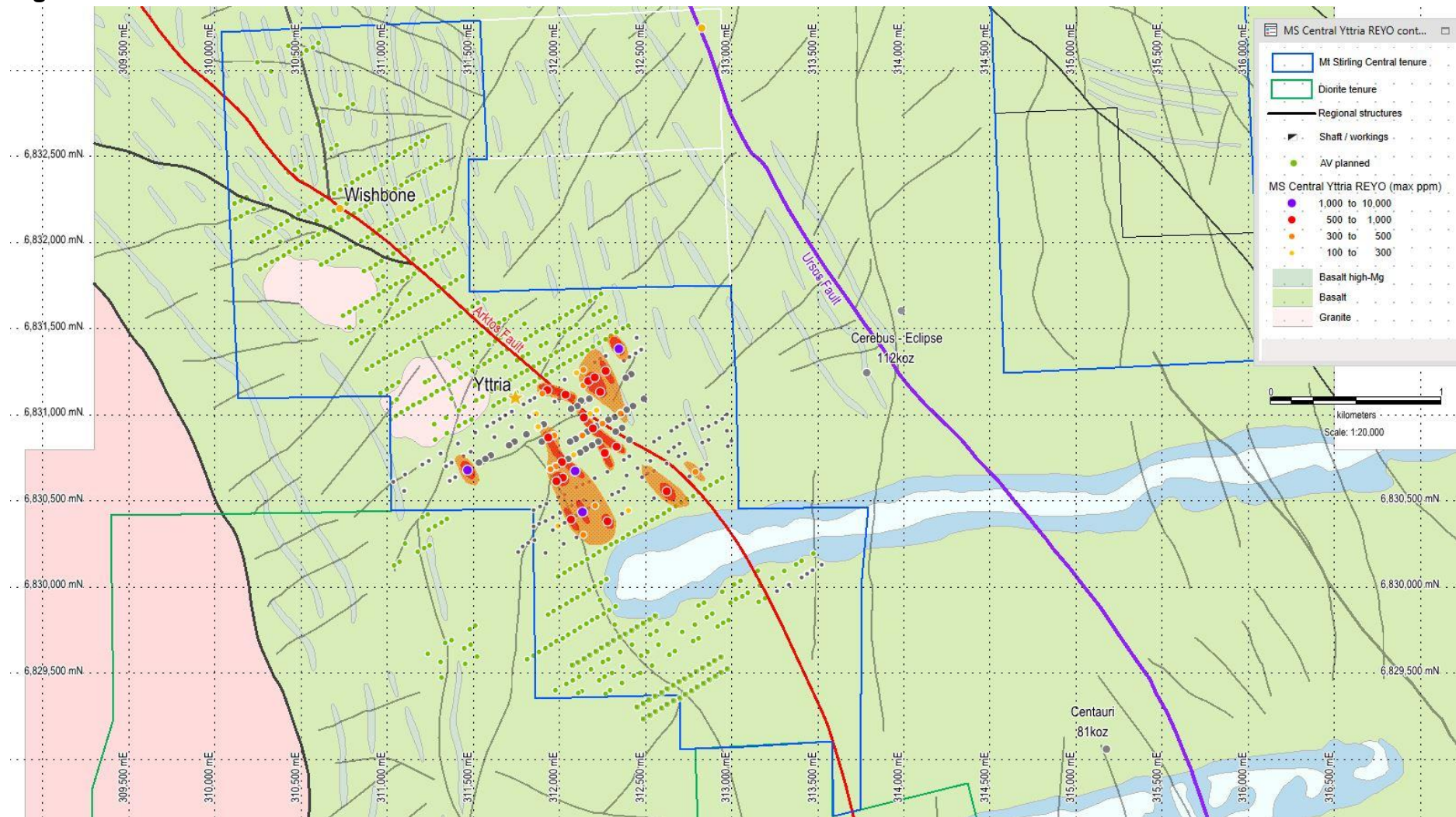


Figure 5: MS Central Yttrium >100ppm (pXRF) contour

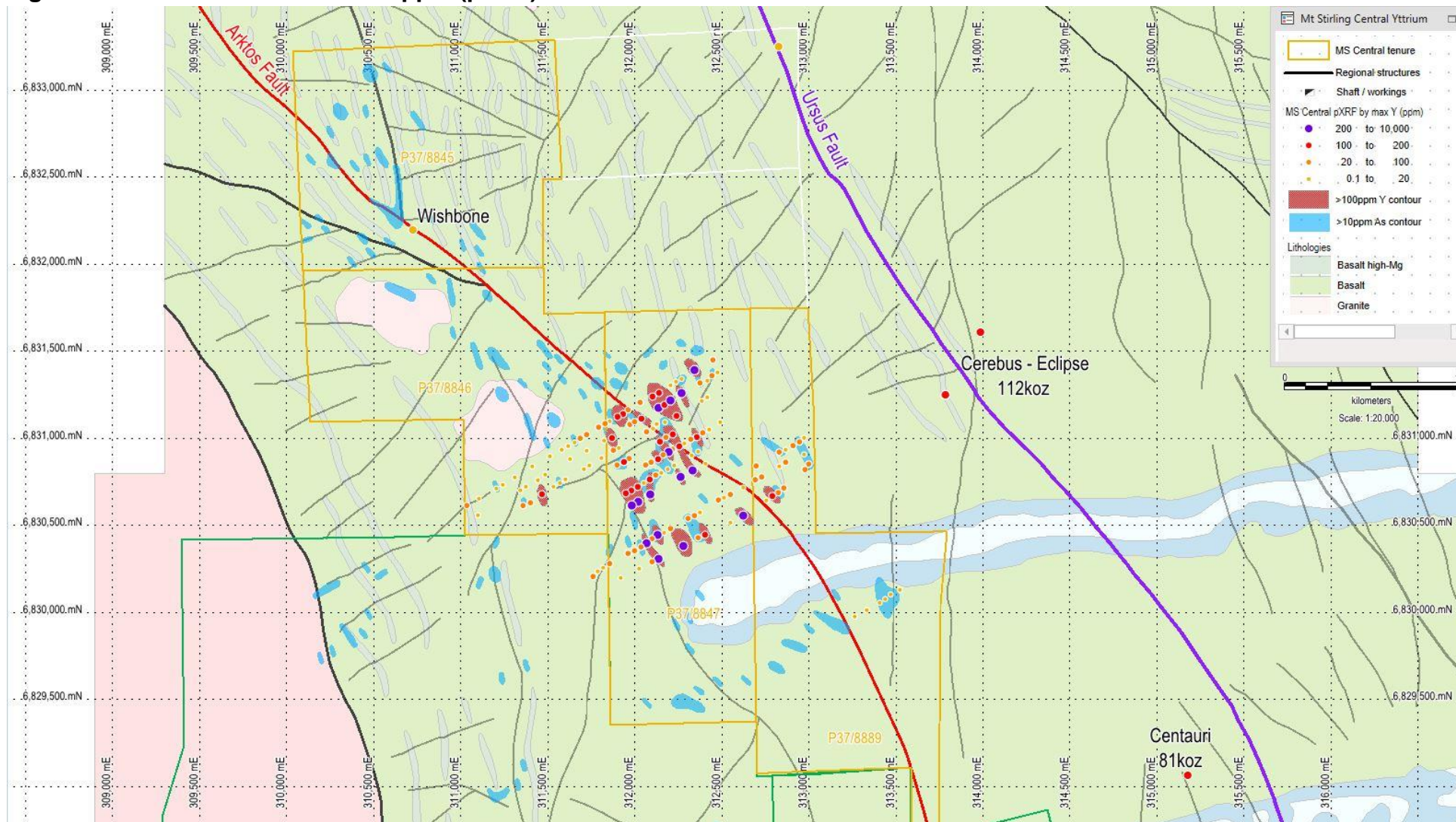
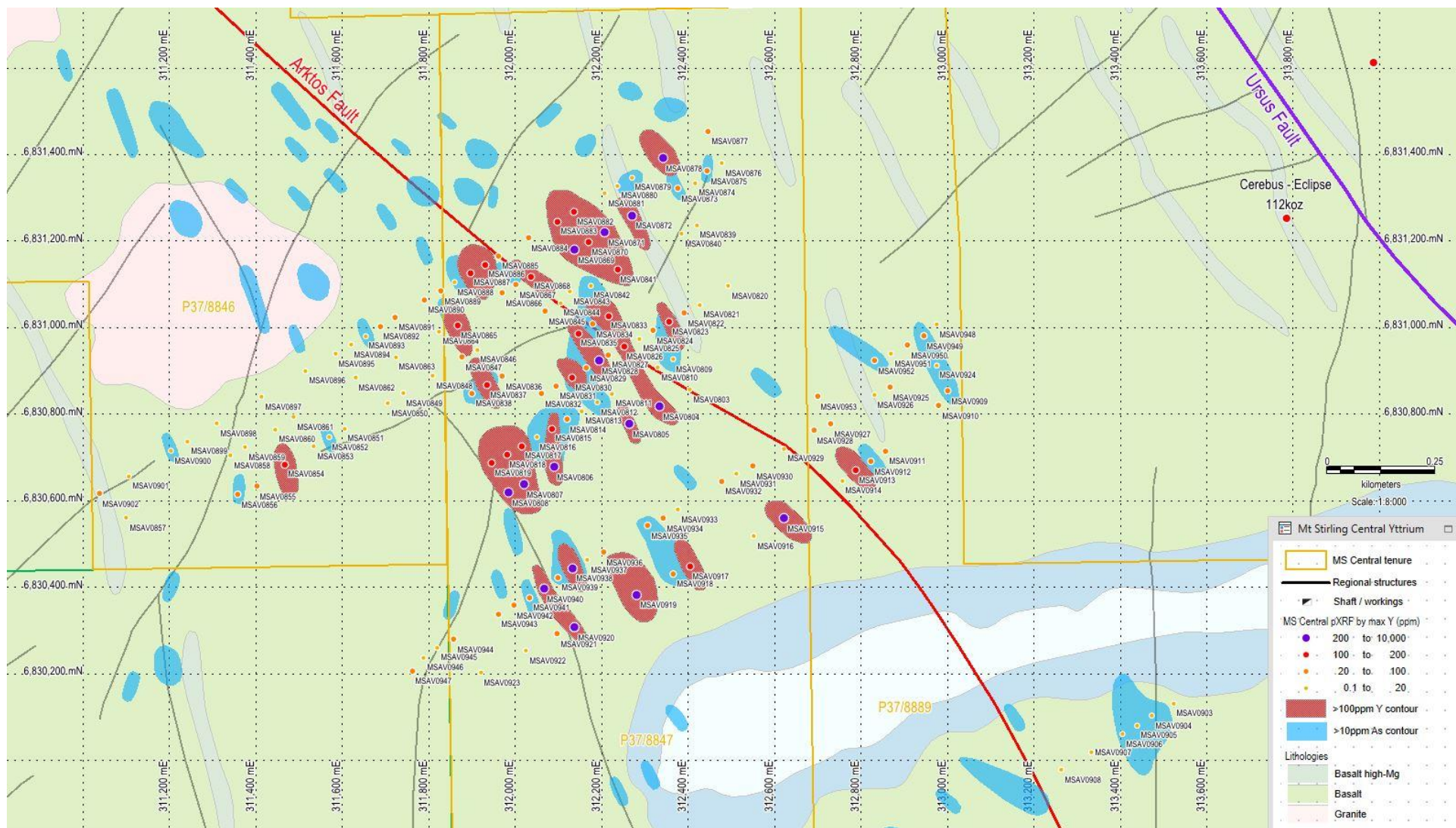


Figure 6: MS Central Yttrium MSAV DHs



## 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 7: Periodic Table of the Elements showing the Light and Heavy Rare Earth Elements as well as the Scandium and Yttrium (from USGS Mineral Commodity Summaries, Rare Earths [www.resourcesandenergy.nsw.gov.au](http://www.resourcesandenergy.nsw.gov.au))

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 Yttria 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.

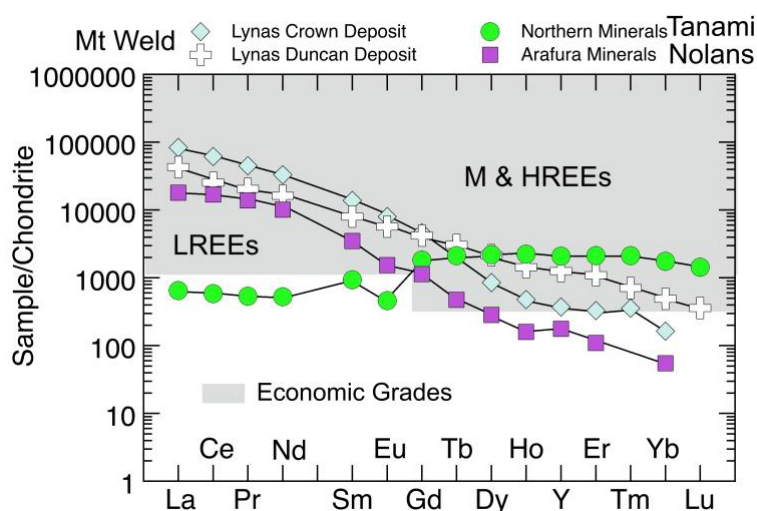
### Portraying REE Data to Compare Levels of REE Enrichment

REEs with even atomic number are more abundant than their neighbours with odd atomic numbers. 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.

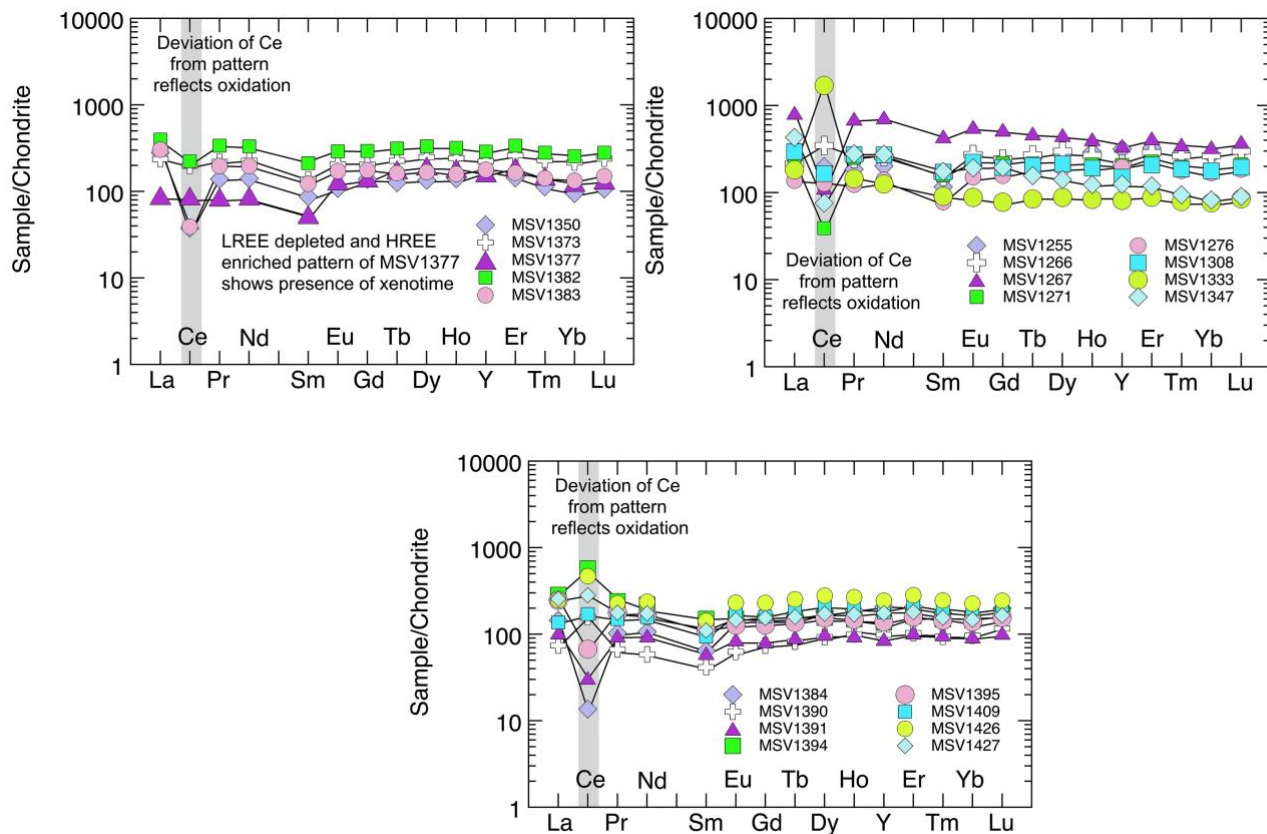
**Ore-grade hard rock deposits must have LREE (La to Eu) abundances that >1,000 to >10,000 chondritic levels and the HREE (Gd to Lu) abundances >~1,000 times chondrites.**

Mt Weld and Nolans are carbonatite derived deposits that show strong LREE enrichment (Figure 8). Northern Minerals Tanami system (Figure 8) contains 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 with high HREOY/Total HREOY ratios similar to the Yttria mineral system

Examples of Chondrite normalise plots for the Lab West REE data are shown in Figure 9.

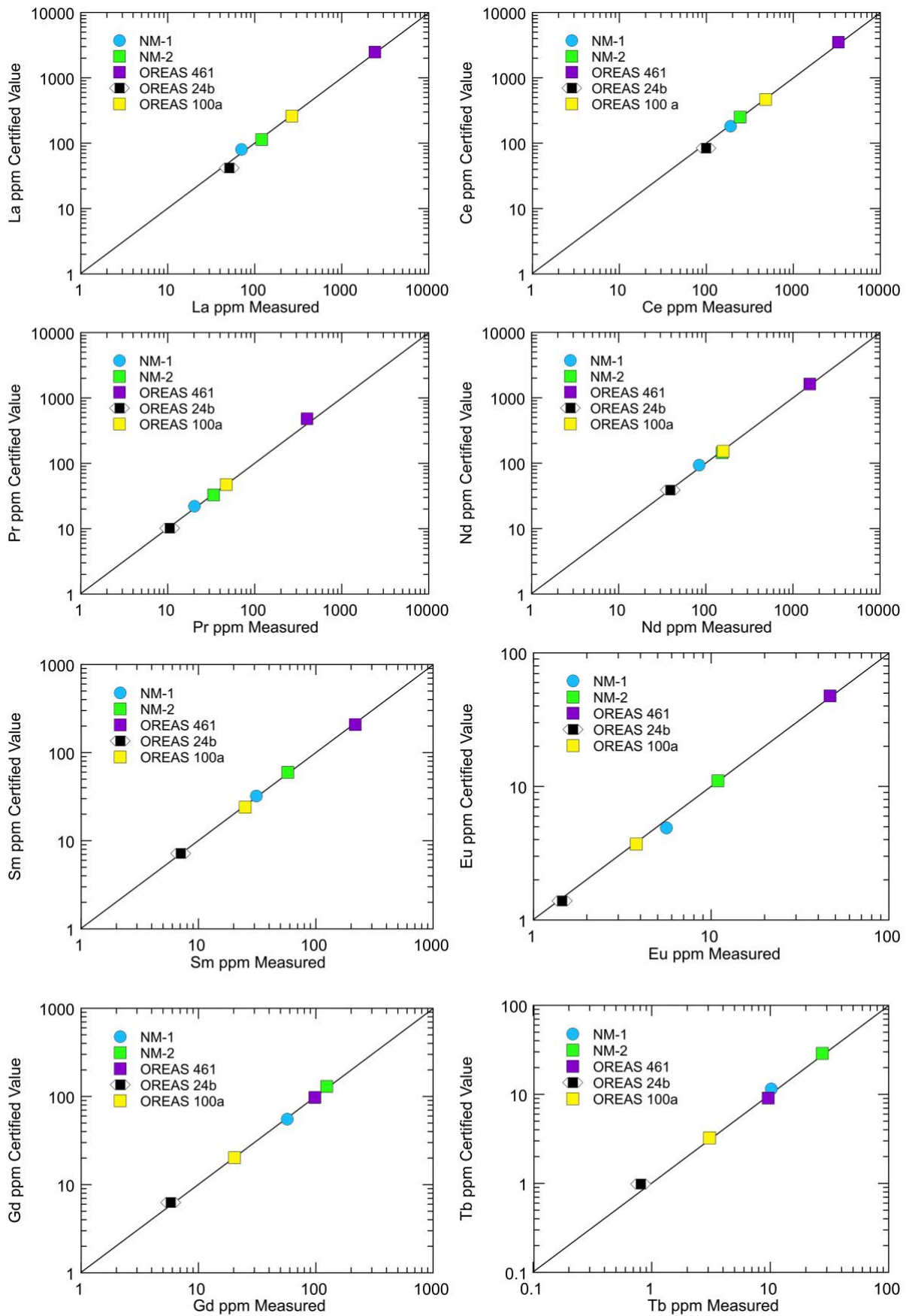


**Figure 8: Chondrite normalised plot showing the LREE enriched character of carbonatite REE systems Mt Weld and Nolans Bore and the typical REE pattern of Tanami mineralisation from Browns Range (data from REE "certified" laboratory standard)**

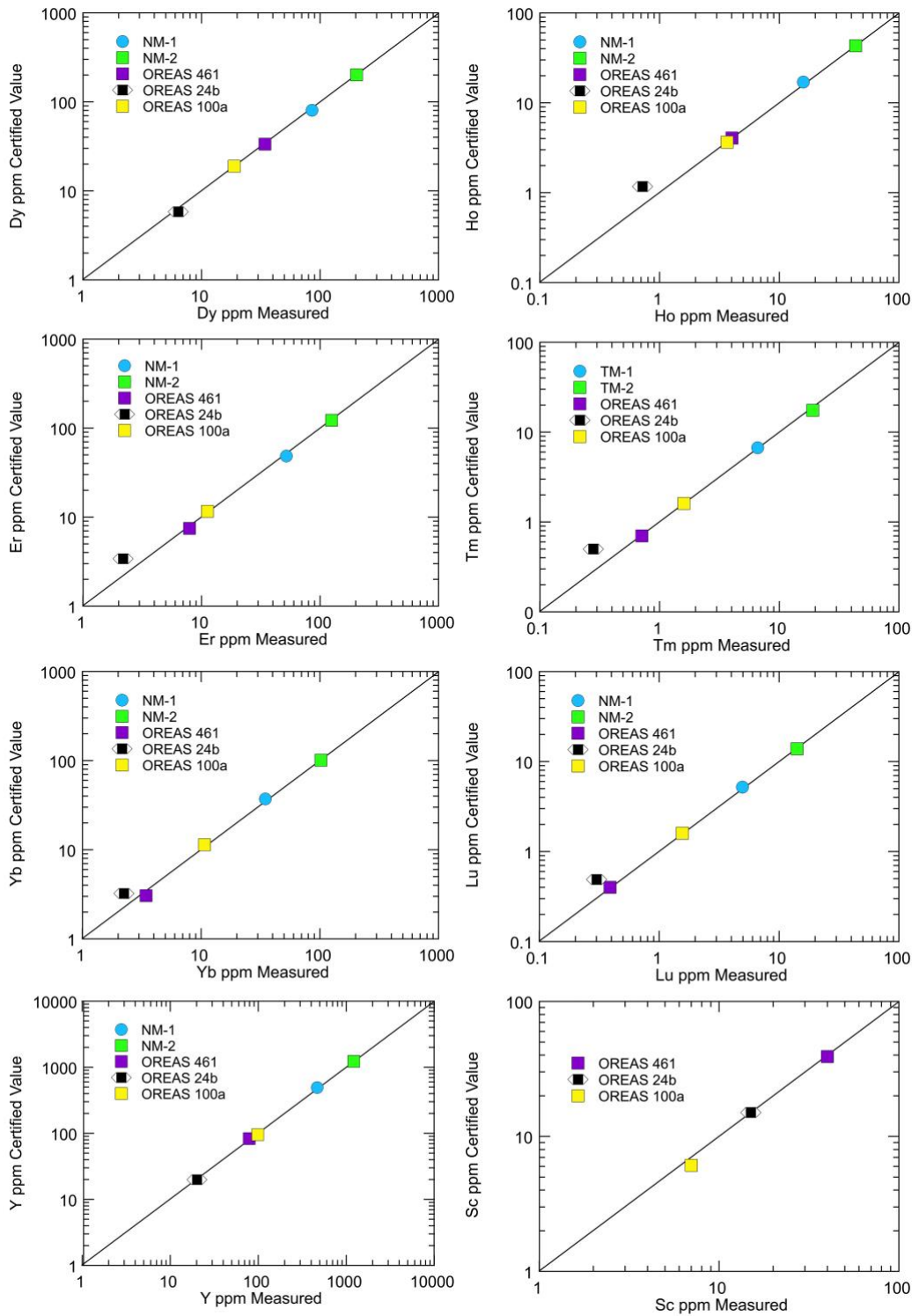


**Figure 9: Chondrite normalised plot showing Lab West microwave digestion REE data for the reassayed Yttria pulps. This shows that Yttria has similar LREE and HREE enrichment to the Browns Range System in the Tamani.**

Figures 10 and 11 show plots of REE elements plus Sc for the standards analysed with the re-assayed pulps plotted against the certified value for each element in the different standards. As all plots show excellent agreement between the measured and certified values, the data reported in Table 1 represent accurate values.



**Figure 10: plots of REE elements plus Sc for the standards analysed with the re-assayed pulps plotted against the certified value for each element in the different standards.**



**Figure 11: Plots showing REEs plus Y and Sc concentrations for the standards analysed with the re-assayed pulps plotted against the certified value for each element in the different standards. This allows the accuracy of the assays to be assessed.**

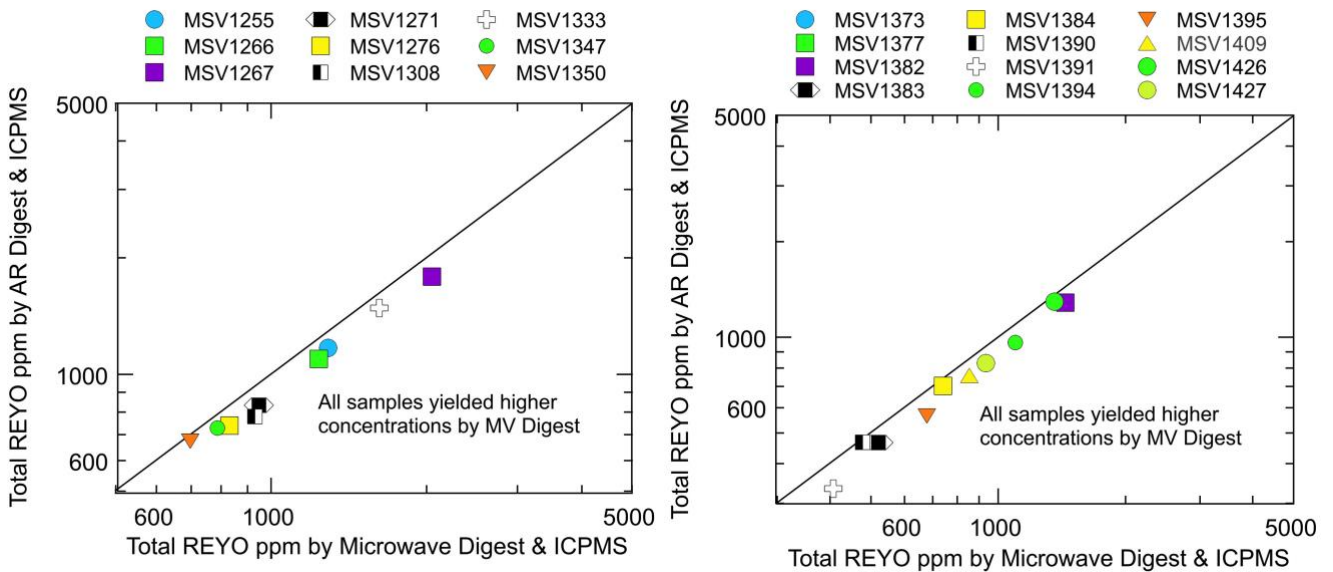
Thus, by using more appropriate analytical technique to dissolve refractory REE-bearing minerals, i.e., a mixture of acids (HF, HCl and HNO<sub>3</sub>) under high pressure (~25 bar) at temperature of ~180° C in sealed Teflon vessels by microwave digestion (**MMA**) and ICPMS (Table 1) there is clearly a noticeable increase in REYO concentration.



**Table 1: REYO and Sc Oxide values in 21 selective re-assayed pulps from Yttria**

	La <sub>2</sub> O <sub>3</sub> ppm	Ce <sub>2</sub> O <sub>3</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>2</sub> O <sub>3</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	Sc <sub>2</sub> O <sub>3</sub> ppm	TREYO ppm	HREYO ppm	HREO/TREO
MSV1255	59.7	142.9	20.8	107.9	29.6	13.3	52.6	10.2	77.6	18.3	59.7	8.0	49.2	7.1	632.4	81.29	1289.1	915.0	0.71
MSV1266	59.6	249.5	27.5	137.6	42.0	17.6	55.8	11.3	84.2	16.7	52.8	7.4	48.7	6.8	419.1	69.02	1236.7	702.9	0.57
MSV1267	229.9	81.6	79.3	389.6	92.1	36.6	121.0	19.9	129.7	25.8	77.1	10.1	61.3	8.7	687.0	67.49	2049.5	1140.6	0.56
MSV1271	70.6	28.1	28.2	141.1	34.8	14.2	49.9	9.0	61.9	13.2	41.5	5.6	33.0	4.8	411.4	58.29	947.2	630.3	0.67
MSV1276	38.1	90.9	13.9	74.9	22.4	9.7	36.0	7.2	54.7	11.8	38.2	5.0	30.9	4.2	392.4	110.44	830.2	580.3	0.70
MSV1308	82.2	118.3	30.7	144.6	35.7	14.4	44.5	8.5	60.3	11.9	37.8	5.3	32.6	4.4	299.7	67.49	931.0	505.0	0.54
MSV1333	50.7	1218.1	16.2	66.8	14.8	5.7	17.8	3.5	24.9	5.2	16.2	2.2	14.0	1.9	162.5	85.89	1620.7	248.3	0.15
MSV1347	119.6	54.3	31.3	147.0	33.4	12.3	44.5	6.5	39.9	7.7	21.8	2.7	15.0	2.0	248.9	70.56	787.1	389.1	0.49
MSV1350	78.1	26.9	15.6	75.2	16.5	7.0	31.7	5.2	38.1	8.8	26.3	3.2	17.3	2.4	344.1	62.89	696.5	477.2	0.69
MSV1373	65.8	141.7	24.6	121.3	31.2	13.3	46.9	9.4	70.4	15.1	47.9	6.5	39.6	5.4	445.7	73.62	1084.9	687.0	0.63
MSV1377	25.0	63.8	9.7	47.1	17.3	8.6	32.7	7.4	55.5	11.6	35.1	4.2	23.3	3.1	327.6	70.56	672.1	500.7	0.74
MSV1382	110.5	160.5	37.9	176.1	45.5	18.8	67.4	13.0	93.7	19.9	61.6	7.9	46.9	6.4	575.3	59.82	1441.3	892.1	0.62
MSV1383	84.4	28.0	22.0	104.6	25.4	11.1	40.3	6.7	47.2	10.0	30.1	4.0	24.4	3.4	354.3	59.82	795.9	520.4	0.65
MSV1384	40.1	9.7	11.5	57.0	19.2	8.2	33.4	6.7	51.8	11.8	37.6	5.0	30.4	4.5	412.7	72.09	739.8	593.9	0.80
MSV1390	20.5	112.9	7.4	31.0	11.0	4.0	16.9	3.4	26.3	6.2	18.9	2.6	17.6	2.6	196.8	58.29	478.4	291.5	0.61
MSV1391	29.0	22.5	10.8	51.6	13.6	5.6	19.0	3.8	28.5	6.0	19.1	2.8	17.2	2.4	175.2	61.35	407.0	274.1	0.67
MSV1394	78.8	411.1	26.8	116.5	24.9	9.7	31.7	6.1	44.0	9.3	30.0	4.2	26.8	3.8	273.0	72.09	1096.8	428.9	0.39
MSV1395	68.4	48.1	19.8	87.6	20.4	8.2	29.3	5.7	43.4	9.2	29.0	4.1	25.4	3.5	275.6	70.56	677.7	425.2	0.63
MSV1409	38.0	123.0	16.8	84.3	24.2	10.8	36.4	7.7	58.3	12.4	39.7	5.5	36.6	4.9	355.6	75.16	854.2	557.0	0.65
MSV1426	68.8	336.2	25.5	126.0	35.6	14.9	52.6	10.5	78.6	16.7	51.6	6.9	41.3	5.5	487.6	53.68	1358.3	751.4	0.55
MSV1427	71.1	202.6	19.8	92.5	22.3	9.4	35.4	6.6	48.5	10.6	32.9	4.4	26.9	3.7	349.2	69.02	935.9	518.2	0.55

This is clearly shown in Figure 12 which compares Total REYO value determined by both methods.

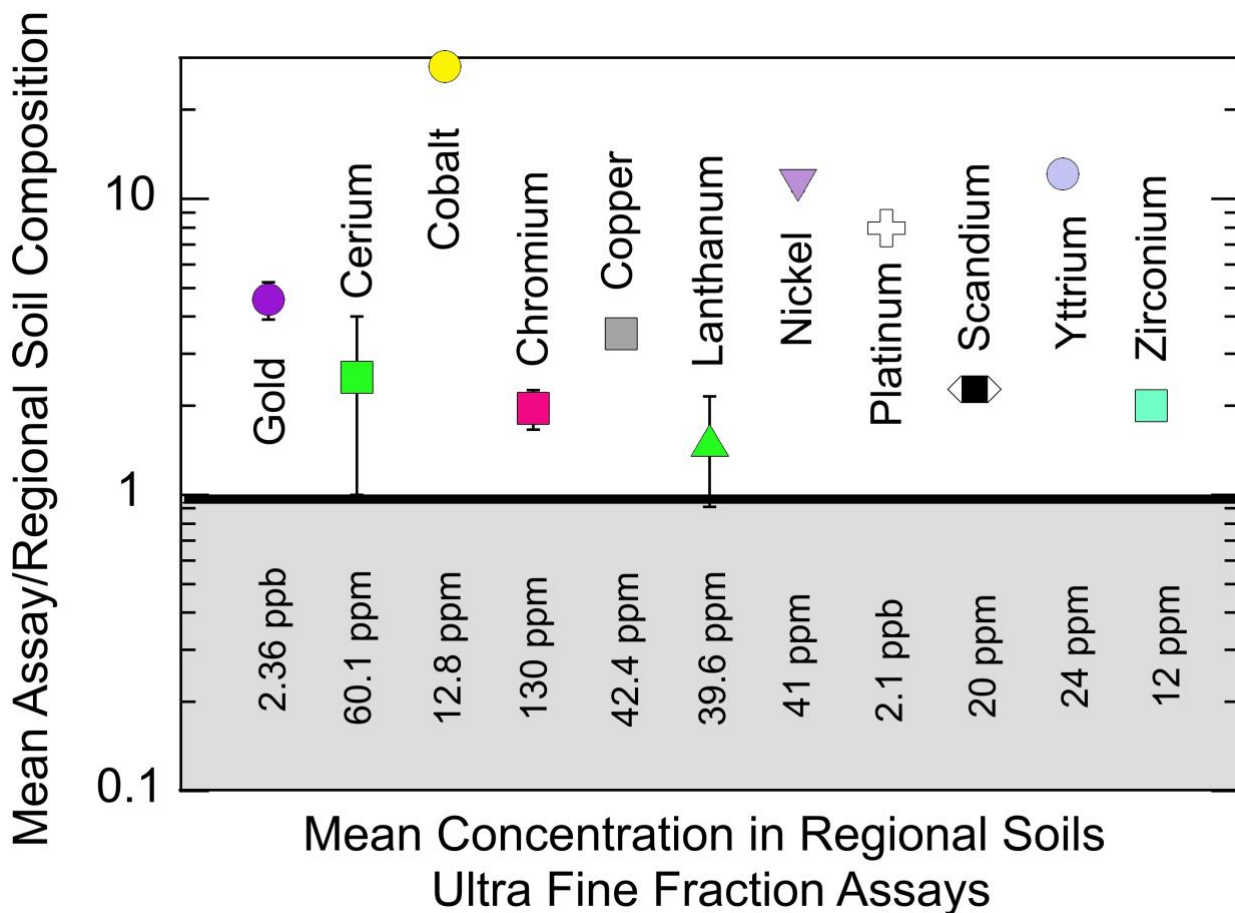


**Figure 12: Plots of Total REY Oxides for the re-assayed pulps showing the Aqua Regia digest results plotted against the microwave digest results.**

Recovery of REY will be tested again with fusion dissolution data for the entire suite of AV samples, and will be reported at a later date.

**Source of the Anomaly at Yttria**

Figure 13 shows Lab West Yttria concentrations divided by the mean composition of (~200) soil samples from the Leonora area from (Noble et al., 2019). The background concentrations are shown at the bottom of the plot.



**Figure 13:** Lab West results from Yttria divided by the mean composition of (~200) soil samples from the Leonora area from (Noble et al., 2019). These values are shown at the bottom of the plot. These soil samples were collected virtually along strike from Yttria. The anomalous concentrations seen at Yttria are elements with ratios > 1. These elements Au, Ce, Co, Cr, Cu, La, Ni, Pt, Sc, Y, Zr form a distinctive population whose chemistry is consistent with derivation from a mafic to ultramafic alkaline source.

Anomalous concentrations at Yttria are elements with ratios > one. These form a distinctive population e.g., Au, Ce, Co, Cr, Cu, La, Ni, Pt, Sc, Y, Zr form a distinctive population whose chemistry is consistent with derivation from a mafic to ultramafic alkaline source (Table 2).

Located within the HREE anomaly at Yttria is a unit that has previously been mapped as granite, field investigation shows that it is a brecciated lithology possibly of mafic alkaline affinity (Photos 2A and 2B). The breccia is undeformed and clearly post-dates the regional deformation fabric of in the regional greenstones.

**Photos 2A & 2B: Post-tectonic Breccias located in the centre of the Y - HREE anomaly at Yttria**



**Table 2: Trace element values indicative of a mafic to ultramafic metal source for all 21 re-assayed Yttria pulps**

	S ppm	Sc ppm	Cr ppm	Co ppm	Ni ppm	Cu ppm	Y ppm	Zr ppm	Nb ppm	Pd ppb	Hf ppm	Ta ppm	Pt ppb	Au ppb	Th ppm	U ppm	Pt/Pd	Pt/Au	Nb/Ta	Zr/Hf
MSV1255	1000	53	318	344	260	178.5	498	31	2	6	0.92	0.12	22	< 5	0.25	2.63	3.67		16.67	33.70
MSV1266	914	45	331	228	362	135.1	330	22	1.5	2	0.64	0.09	10	< 5	0.2	0.56	5.00		16.67	34.38
MSV1267	2010	44	351	242	445	139.6	541	19	1.6	< 1	0.62	0.08	9	< 5	0.22	0.33			20.00	30.65
MSV1271	702	38	275	283	601	149.5	324	15	1.3	3	0.76	0.06	12	< 5	0.16	0.17	4.00		21.67	19.74
MSV1276	1500	72	320	462	358	190.6	309	24	2.3	< 1	0.82	0.11	13	< 5	0.25	0.73			20.91	29.27
MSV1308	657	44	289	602	681	159	236	22	1.7	1	0.93	0.07	13	< 5	0.18	0.91	13.00		24.29	23.66
MSV1333	251	56	421	108	288	237.8	128	22	2	2	0.97	0.09	12	< 5	0.27	0.38	6.00		22.22	22.68
MSV1347	328	46	310	34.1	167	132.2	196	30	1.5	5	0.89	0.06	11	< 5	0.34	0.89	2.20		25.00	33.71
MSV1350	406	41	279	240	425	115.3	271	27	1.4	16	0.91	0.05	11	< 5	0.17	1.84	0.69		28.00	29.67
MSV1373	181	48	152	467	576	140.5	351	27	1.7	29	1.16	0.07	26	< 5	0.24	0.29	0.90		24.29	23.28
MSV1377	< 50	46	225	145	456	222.2	258	23	2.1	9	0.61	0.08	9	34	0.24	0.31	1.00	0.26	26.25	37.70
MSV1382	195	39	125	701	603	227.1	453	22	1.3	10	0.8	0.06	40	12	0.21	1.24	4.00	3.33	21.67	27.50
MSV1383	178	39	137	87.7	339	120.4	279	18	1.3	11	0.82	0.05	12	17	0.2	1.28	1.09	0.71	26.00	21.95
MSV1384	< 50	47	176	109	363	130.8	325	30	1.9	< 1	1.07	0.07	12	14	0.28	0.36		0.86	27.14	28.04
MSV1390	74	38	149	643	343	98.4	155	28	2.1	3	1.6	0.1	15	5	1.95	1.18	5.00	3.00	21.00	17.50
MSV1391	< 50	40	150	137	246	77.1	138	26	2	21	0.78	0.09	12	< 5	0.89	0.5	0.57		22.22	33.33
MSV1394	108	47	310	185	375	123.9	215	25	1.7	< 1	0.83	0.06	19	< 5	0.26	0.3			28.33	30.12
MSV1395	260	46	334	265	539	127.1	217	18	2	3	0.42	0.06	12	< 5	0.37	0.26	4.00		33.33	42.86
MSV1409	195	49	156	1260	1310	140.6	280	32	2.1	33	0.84	0.09	17	< 5	0.26	0.08	0.52		23.33	38.10
MSV1426	772	35	250	443	299	144.4	384	16	1.3	16	0.7	0.05	49	< 5	0.19	1.26	3.06		26.00	22.86
MSV1427	238	45	285	542	503	129.2	275	26	1.7	12	0.91	0.07	15	< 5	0.24	0.7	1.25		24.29	28.57
Mean	553.8	45.6	254.4	358.5	454.2	148.5	293.5	24.0	1.74	10.7	0.86	0.08	16.7	16.4	0.35	0.77	3.29	1.63	23.8	29.08
SD	528.2	7.9	85.7	284.7	237.3	41.4	109.9	4.9	0.32	9.6	0.24	0.02	10.5	10.8	0.40	0.63	3.08	1.42	3.98	6.55
CVR	0.95	0.17	0.34	0.79	0.52	0.28	0.37	0.21	0.18	0.90	0.28	0.26	0.61	0.66	1.13	0.82	0.94	0.87	0.16	0.23

**Table 3: Element ratios that support a plume origin for the Yttria REE and critical metal anomalism**

	Nb/Ta	Zr/Hf	Y/Ho	
Yttria	23.77±3.9	29.0±6.55	27.77±3.16	This Announcement
Leonora Soil		36.4		Noble et al., (2019)
Group 1 Kimberlites	17.87±3.89	43.14±3.83	26.68±0.81	Collerson (unpublished data)
Group 11 Kimberlites	22.97±11.54	42±2.27	24.41±1.84	Collerson (unpublished data)
Mantle Plume HIMU	17.2±0.2	46.1±1.30	24.63±0.26	Collerson (unpublished data)
Mantle Plume EM1	15.82±0.49	43.85±2.78	24.64±0.42	Collerson (unpublished data)
Airies				
Saprolite	20.10416667	34.3902439		Cornelius et al., (2005)
Laterite	18.84615385	38.51851852		Cornelius et al., (2005)
Kimberlite	18.1±2	41.5±1.10	21.8±1.4	Collerson (unpublished data n= 10)
Av. Upper Continental Crust	9.56	37.41	25.82	

Importantly, a number of trace element ratios e.g., Nb/Ta, Pt/Pd and Au/Pt ratios also support the interpretation that the REE and Critical alkaline system mineralisation at Yttria is the result of the impact of a plume. Data presented in Table 3 shows that the mean Pt/Pd and Pt/Au ratios of the Yttria samples resembles values reported for kimberlites and other plume generated magmas including Archaean komatiites. Upper mantle generated basalts (MORBs) have significantly lower Pt/Pd ratios.

**Table 4: Precious metal ratios showing that Yttria has a mantle plume signature which is consistent with the presence of an alkaline generated REE and Critical metal anomaly**

	Pt/Pd	Pt/Au	Source
Yttria	3.29±0.94	1.63±0.87	
Atlantic Superplume (Iceland)	1.73±1.21	5.70±6.37	Hughes et al., (2015)
Atlantic Superplume (Gp. 1 Kimberlites)	1.42 ±0.14	0.22±0.12	McDonald et al., (1995)
Atlantic Superplume (Gp. 11 Kimberlites)	2.59±2.25	0.27±0.07	McDonald et al., (1995)
Pacific Superplume (Louisville Seamount Chain)	1.42±0.19		Tejada et al., (2015)
Pacific Superplume Ontong Java Plateau	1.5±0.52	0.12±0.10	Ely and Neal (2003)
Pacific Superplume Hawaiian Picrites	1.25±0.6		Ireland et al., 2009; Bennett et al., (2000)
Diamantina Plume Track (Mulligan Intrusion )	1.29±0.36	0.43±0.35	Collerson et al (in prep)
Diamantina Plume Track (Lake Machattie Intrusion)	1.62±0.35	0.51±0.66	Collerson et al (in prep)
Komatiites (Kola Peninsula)	1.04±0.35	6.32±1.24	Guo et al., (2020)
Komatiites (Komatii Fm. )	1.09±0.38	5.70±0.39	Maier et al 2003
MORB (Mid-Ocean Ridge Basalts)	0.59±0.13		Bezos et al., (2005)

Mt Weld and other alkaline systems in the vicinity are probably related to the same geodynamic event as suggested previously by Fiorentini et al. 2012).

## Performance Rights

The Company is proposing to issue of Unquoted Performance Rights to Directors and Senior Management (“**Rights**”). The issue of the Rights and a proposed Performance Rights Plan will be Subject to ASX and Shareholder Approval. The Rights will vest upon the achievement of the following milestones (should the below personnel remain in employment at the company at the time that the milestones are achieved).

The structure of the proposed Rights are summarised as follow:

- **Tranche 1:** Following the achievement of a \$50M market capitlisation for 10-day consecutive trading days as measured by the VWAP.

- **Tranche 2:** Following the achievement of a \$100M market capitalisation for 10-day consecutive trading days as measured by the VWAP.
- **Tranche 3:** Following the achievement of a \$150M market capitalisation for 10-day consecutive trading days as measured by the VWAP.

In the event of a takeover or change of control, the vesting conditions will be deemed to have been achieved.

Participants	Number of Performance rights	Issue Date	Expiry Date
Paul Summers, Executive Chair	Tranche 1: 2 Million Tranche 2: 3 Million Tranche 3: 4 Million	Date of issue by Torian following shareholder approval	3 years from date of issue
Peretz Schapiro, Executive Director	Tranche 1: 2 Million Tranche 2: 3 Million Tranche 3: 4 Million	Date of issue by Torian following shareholder approval	3 years from date of issue
Claudio Sheriff-Zegers, Exploration manager*	Tranche 1: 1 Million Tranche 2: 1.25 Million Tranche 3: 1.5 Million	Date of issue by Torian following shareholder approval	3 years from date of issue

\*Conditional upon staying in the employment of the Company through to 30 June 2024

Each Right will, upon vesting and exercise, result in the issue of one ordinary share in the Company. No issue price or exercise price is payable for the Rights. The Board will determine (in its sole discretion) the extent to which the relevant vesting conditions have been satisfied. Rights may vest (and be exercised into shares) progressively by Directors as vesting conditions are satisfied. The Exploration Managers Rights can only be exercised into shares after 30 June 2024, if the Manager is still in the employ of the Company.

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

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



## References:

- Bennet, V.C et al., (2000) Rhenium and platinum group element abundances correlated with mantle source components in Hawaiian picrites sulphides in the plume. *Earth and Planetary Science Letters* 183 513-526
- Bezos A. et al. (2005) Platinum-group element systematics in Mid-Oceanic Ridge basaltic glasses from the Pacific, Atlantic, and Indian Oceans. *Geochimica et Cosmochimica Acta*, Vol. 69, 2613–2627.
- 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](https://qdexguest.deedi.qld.gov.au/portal/site/qdex/search?REPORT_ID=88754&COLLECTION_ID=999A))
- Cornelius, M., Singh, B., Meyer, S. Smith, R.E. Cornelius A.J. (2005) Laterite geochemistry applied to diamond exploration in the Yilgarn Craton, Western Australia. *Geochemistry: Exploration, Environment, Analysis*, Vol. 5 2005, pp. 291–310.
- Ely, J.C. Neal, C.R. (2003) Using platinum-group elements to investigate the origin of the Ontong Java Plateau, SW Pacific. *Chemical Geology* 196 (2003) 235 – 257
- Fiorentini, M.L., O'Neill, C., Giuliani, A., Choi, E., Maas, R., Pirajno, F. Foley, S. (2012) Bushveld superplume drove Proterozoic magmatism and metallogenesis in Australia *Nature Scientific Reports* 10:19729, <https://doi.org/10.1038/s41598-020-76800-0>
- Guo F-T et al., (2020) Geochemistry of komatiites and basalts in Archean greenstone belts of Russian Karelia with emphasis on platinum-group elements. *Mineralium Deposita* (2020) 55:971–990
- Kamber, B.S., Greig, A., Collerson, K.D. (2005) A new estimate for the composition of weathered young upper continental crust from alluvial sediments, Queensland, Australia. *Geochim. Cosmochim. Acta*. 69: 1041-1058.
- Loubet, M., Bernat, M., Javoy, M., Allegre, C.J., (1972) Rare earth contents in carbonatites. *Earth Planet. Sci. Lett.* 14, 226-232.
- USGS Mineral Commodity Summaries, Rare Earths
- [www.resourcesandenergy.nsw.gov.au](http://www.resourcesandenergy.nsw.gov.au)
- Zhukova, I.A, Stepanov, A.S., Jiang S-Y, Murphy D., Mavrogenes J., Allen C, Chen W, Bottrill, R (2021) Complex REE systematics of carbonatites and weathering products from uniquely rich Mount Weld REE deposit, Western Australia. *Ore Geology Reviews*, 139: 104539.

## 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 @ Yttria 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 Yttria'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.

Another project in the Kalgoorlie region is the Zuleika project in which the Company is involved in a 75/25% JV with Zuleika Gold Ltd (ASX: ZAG). The Zuleika project is located along the world-class Zuleika Shear, which is the fourth largest gold producing region in Australia and consistently produces some of the country's highest grade and lowest cost gold mines. This project lies north and partly along strike of several major gold deposits including Northern Star's (ASX: NST) 7.0Moz East Kundana Joint Venture and Evolution's (ASX: EVN) 1.8Moz Frogs Legs and White Foil deposits.

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, 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>• REE AV samples have been submitted to LabWest for microwave digestion (MMA) and ICPMS</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 / or MMA 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>

<p><i>Sub-sampling techniques and sample preparation</i></p>	<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> <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>
	<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> </ul>

<i>Location of data points</i>	<ul style="list-style-type: none"> <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> <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</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>



<p><i>mineralisation widths and intercept lengths</i></p>	<ul style="list-style-type: none"> <li>• Down hole lengths are reported, true width not known.</li> </ul>
<p><i>Diagrams</i></p>	<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>
<p><i>Balanced reporting</i></p>	<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>
<p><i>Other substantive exploration data</i></p>	<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>
<p><i>Further work</i></p>	<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>