



## **ASX ANNOUNCEMENT**

### **MAIDEN YTTRIUM RARE EARTH INFERRED RESOURCE**

### **AT KRUCIBLE'S KORELLA PHOSPHATE DEPOSIT**

### **MT.ISA DISTRICT, QUEENSLAND**

**5<sup>th</sup> APRIL 2011**

#### **HIGHLIGHTS**

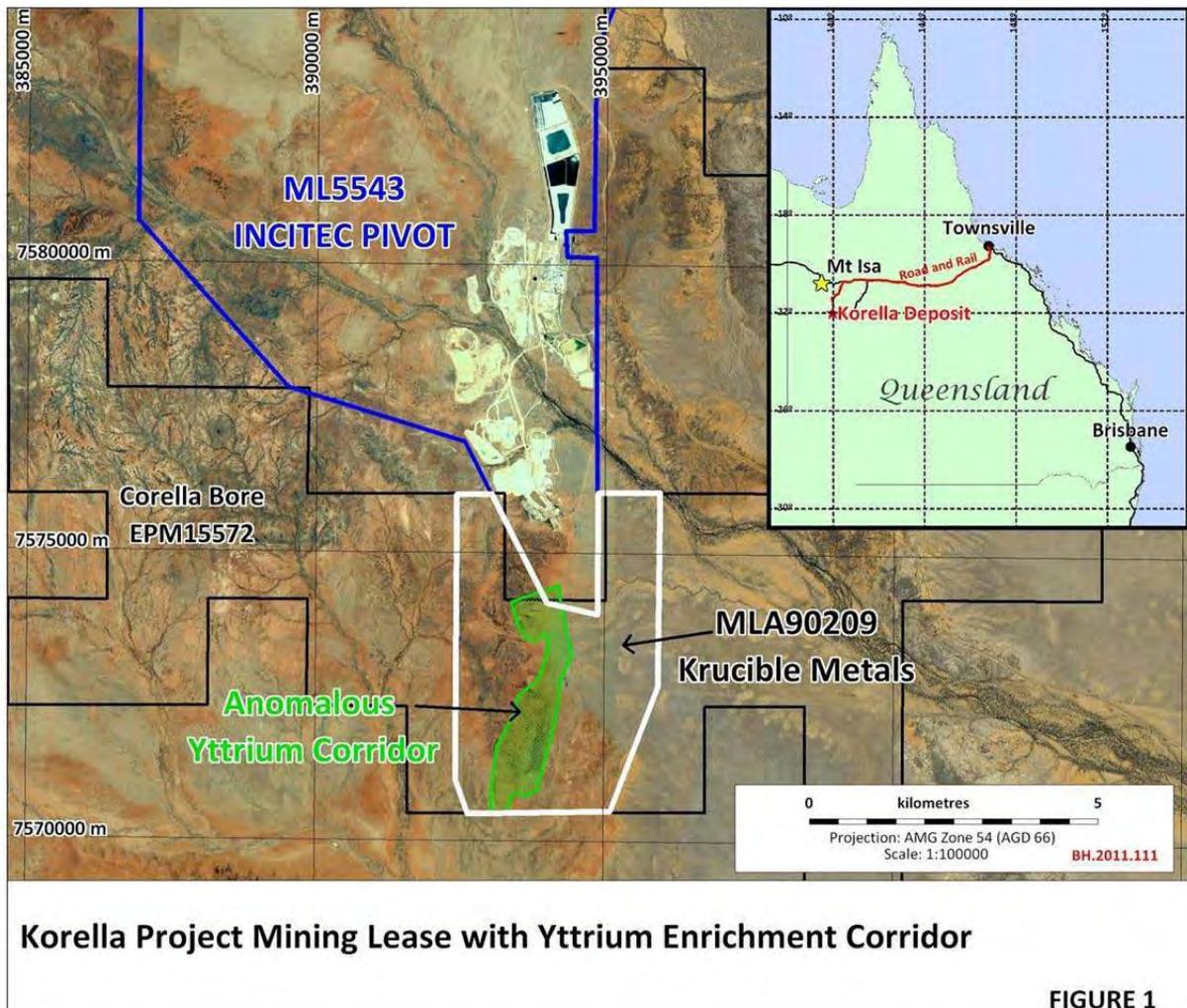
- 🔥 Krucible has now defined a **JORC Code Inferred Resource** for the valuable heavy Rare Earth Element Yttrium (Y), associated with the high grade Korella Phosphate Deposit. This resource was identified as part of the ongoing Scoping Studies & Approvals for proposed mining of phosphate at Korella
- 🔥 This Inferred Resource is **4.2 million tonnes @ 746 g/t Y (0.96 kilogram/tonne Y<sub>2</sub>O<sub>3</sub>)**. Other valuable Heavy Rare Earth Elements (REE) such as Neodymium (Nd) & Dysprosium (Dy) are associated with the Yttrium resource, but are yet to be included as resource components
- 🔥 The current price for Yttrium powder (Y<sub>2</sub>O<sub>3</sub>) is about \$US100 per kilogram. Yttrium is also consumed in its' metal form (currently about \$130 per kilo) and many different Yttrium based compounds
- 🔥 Preliminary mineralogical investigation has shown that the Yttrium is contained in the mineral **Xenotime** (YPO<sub>4</sub>) – a relatively pure phosphate / Yttrium mineral that is amenable to gravity and/or flotation separation. Xenotime identified to date at Korella does not appear to contain any impurities such as Uranium & Arsenic
- 🔥 Krucible will now conduct a Scoping Study to determine the value of this Inferred Resource – this will focus on a detailed assessment of the continuity and extension of the REE enrichment zone as well as the extractability of the Yttrium bearing Xenotime
- 🔥 However the possibility of simultaneously extracting both Yttrium & Direct Shipping Ore Phosphate economically from the Korella deposit is encouraging for the future of the Company



The directors of Krucible Metals Ltd are pleased to announce that a JORC Code Inferred Resource has recently been estimated for the Rare Earth Element (REE) Yttrium associated with the Korella phosphate deposit, located near the Phosphate Hill Mine that is owned and operated by Incitec Pivot Ltd (see **FIGURE 1** below).

**The Inferred Resource is 4.2 million tonnes @ 746 g/t Yttrium (0.96 kilogram/tonne  $Y_2O_3$ ) at a lower cut-off of 500 g/t Y**

The Yttrium occurs as Xenotime which is an Yttrium phosphate oxide rare earth ( $YPO_4$ )



The drilling sample database for the phosphate drilling carried out in 2008-2010 was utilised using the ALS-Chemex Laboratory drill pulps (one metre R.C. percussion samples) to be re-analysed by Mass Spec 81 method for REE.



The Yttrium enrichment zone occurs as a consistent shallow dipping blanket over the top of the phosphate zone (**high grade Inferred Resource of 5 million tones @ 30.8% P<sub>2</sub>O<sub>5</sub>**) as well as adjacent to the west at shallower levels (see **FIGURES 2 - 5**).

The Inferred Resource was calculated using a manual polygonal method whereby the tabular sub horizontal mineralisation was projected to the surface and projected half way between sections (approx. 200 metres apart) and halfway to adjacent drill holes (approx 100m apart along E-W sections). It is important to point out that ore blocks were **only** calculated for the 200 X 100 metre drill pattern (see **FIGURES 3 & 4**) and **not** for wider spaced holes where potential ore grade Yttrium may have been intersected – there is thus the possibility for defining further REE resources to the west at shallow depths with infill drilling.

The average **thickness** for the Y enrichment zone is 3.3 metres, the average **depth** is 25 metres and the **Specific Gravity** used was 2.2 (SG was 2.5 for the phosphate resource estimations).

A list of the +500 g/t Yttrium drill intersections is outlined on **TABLE 1**, whilst the anomalous Neodymium and Dysprosium intersections are shown on **TABLES 2 & 3** respectively.

**Yttrium** is a valuable and strategic “heavy” REE that is critical to production of many super-alloys, super-magnets and super-conductors that are being increasingly utilised in high technology industries such as mobile phones, computers, laser communications, hybrid cars, wind turbines and more (see Krucible ASX Announcement for 28 February 2011).

The **price** for Yttrium as well as other heavy REEs such as Neodymium and Dysprosium has been increasing markedly over the last 6 months due to increased demand for these heavy REE (which are virtually non-replaceable in high technology) and restrictions on exports from China, who produce over 90% of the world’s consumption.

Preliminary mineralogical test work on REE drill samples has been very encouraging in that the mineral **Xenotime** has been identified as the material that contains the Yttrium. Xenotime has a Specific Gravity of about 4.6 and is therefore likely to be separated from the surrounding material (SG approx. 2.2) by gravity technology and/or flotation processes to form a concentrate which could be sold to a plant for Yttrium extraction.

It is planned to carry out preliminary metallurgical / gravity test work on drill chips in the next 2-3 months, under the supervision of Mr. Ray Koenig a Krucible Director who is an experienced Senior Metallurgist.

**No economic parameters or preliminary financial models will be applied to the Korella Rare Earth deposit until results of the above metallurgical test work are received and analysed.**

However at this stage it seems likely that the Yttrium mineralisation (as well as Neodymium & Dysprosium) at Korella will add to the value of the phosphate deposit; especially since it occurs at shallow depths in soft rocks immediately above the high grade phosphate and would be mined as part of the pre-stripping of a possible phosphate operation.



**KRUCIBLE METALS LTD**  
*Mineral Discovery Company*  
ABN 12 118 788 846  
**ASX CODE: KRB**

**Attached: FIGURES 2 - 5  
TABLE 1 - 3**

**Tony Alston  
Managing Director  
Krucible Metals Ltd.**

**Further Information:** Mr Tony Alston  
Phone (07) 4772 5880

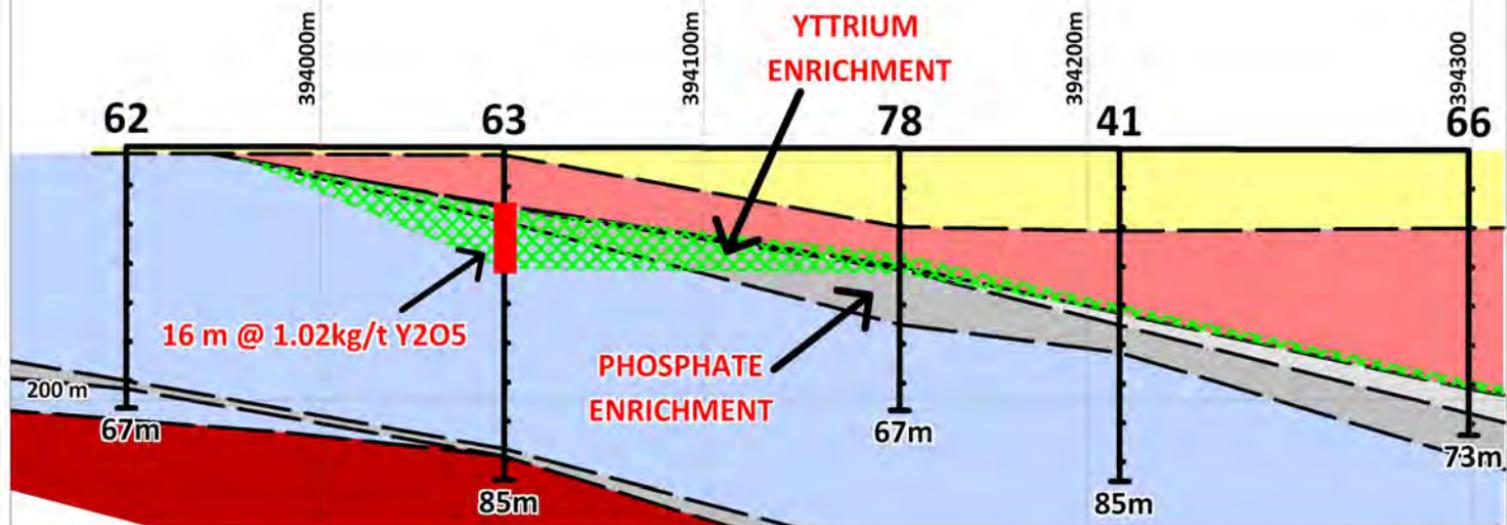
**WEB SITE: [www.kruciblemetals.com.au](http://www.kruciblemetals.com.au)**

Information of a scientific or technical nature in this report was prepared under the supervision of A.J. Tony Alston, CEO and Chief Geologist of Krucible, who is a member of the Australian Institute Geoscientists and the Australian Institute of Mining and Metallurgy. Mr Alston has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a "competent person" as defined in the 2004 edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Alston has reviewed and approved Krucible's quality assurance program, quality control measures, the geology, samples collection and testing procedures the basis for information contained in this report. For further information regarding the Korella Deposit (PHM South) discovery please refer to reports and releases to the Australian Stock Exchange over the last 18 months together with the Company's website at [www.kruciblemetals.com.au](http://www.kruciblemetals.com.au)

This report contains forward-looking statements. These forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. A number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward looking statements.

Mr Alston consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Information in this Announcement relating to the Korella Deposit Scoping Study and preliminary Rare Earth metallurgical investigations have been documented by Mr Ray Koenig, who is a Senior Project Metallurgist and Chartered Professional and Fellow of the AusIMM. Mr Koenig consents to this information being included in the ASX Announcement.



### REFERENCE

	+500ppm Yttrium		Lode B
	Cover		Lower Siltstone
	Inca Formation		Lode D
	Lode A		Mt Birnie Beds

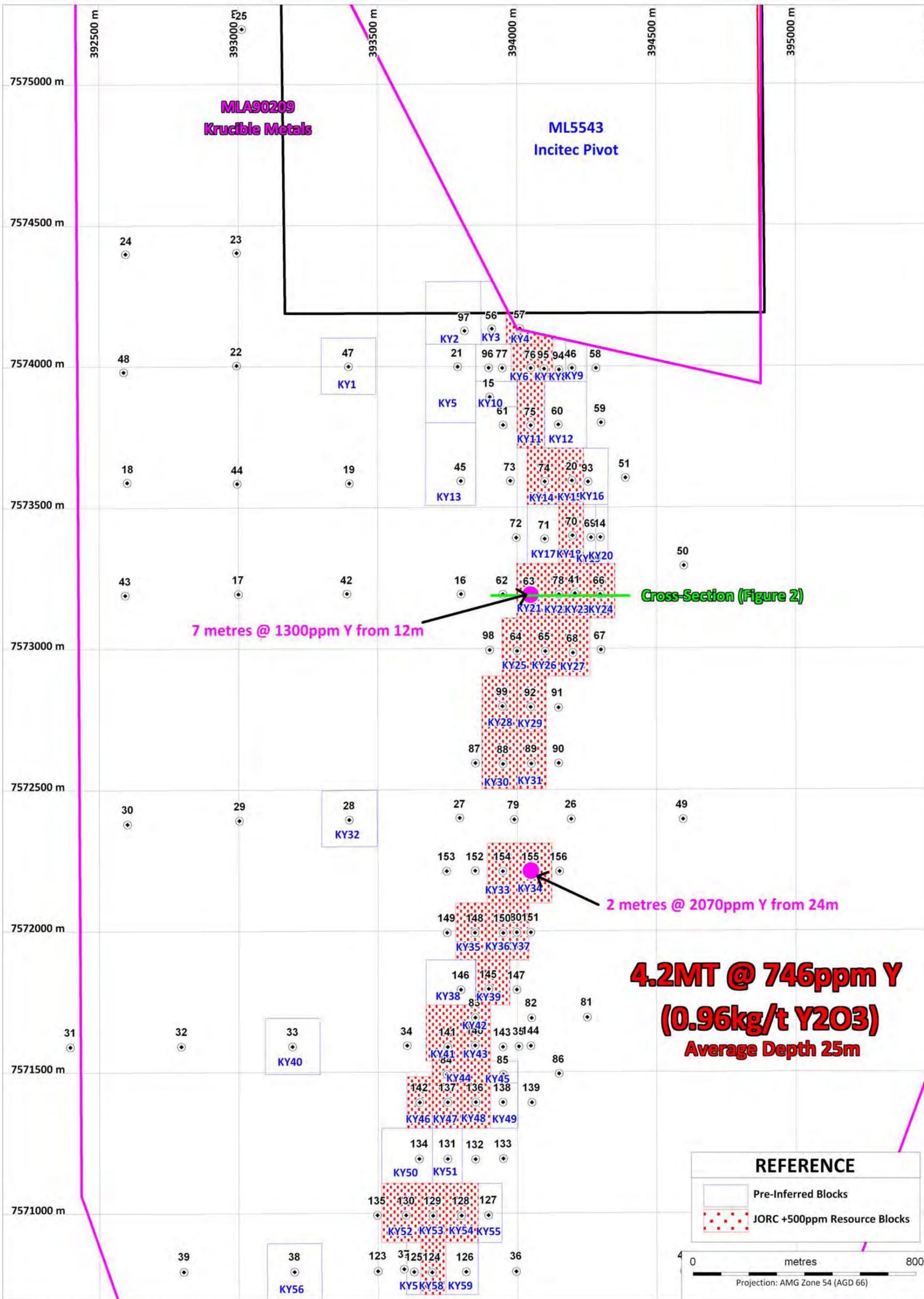
0 metres 100

Projection: Non-Earth (meters)



Section 7573200N Showing Anomalous Yttrium Values

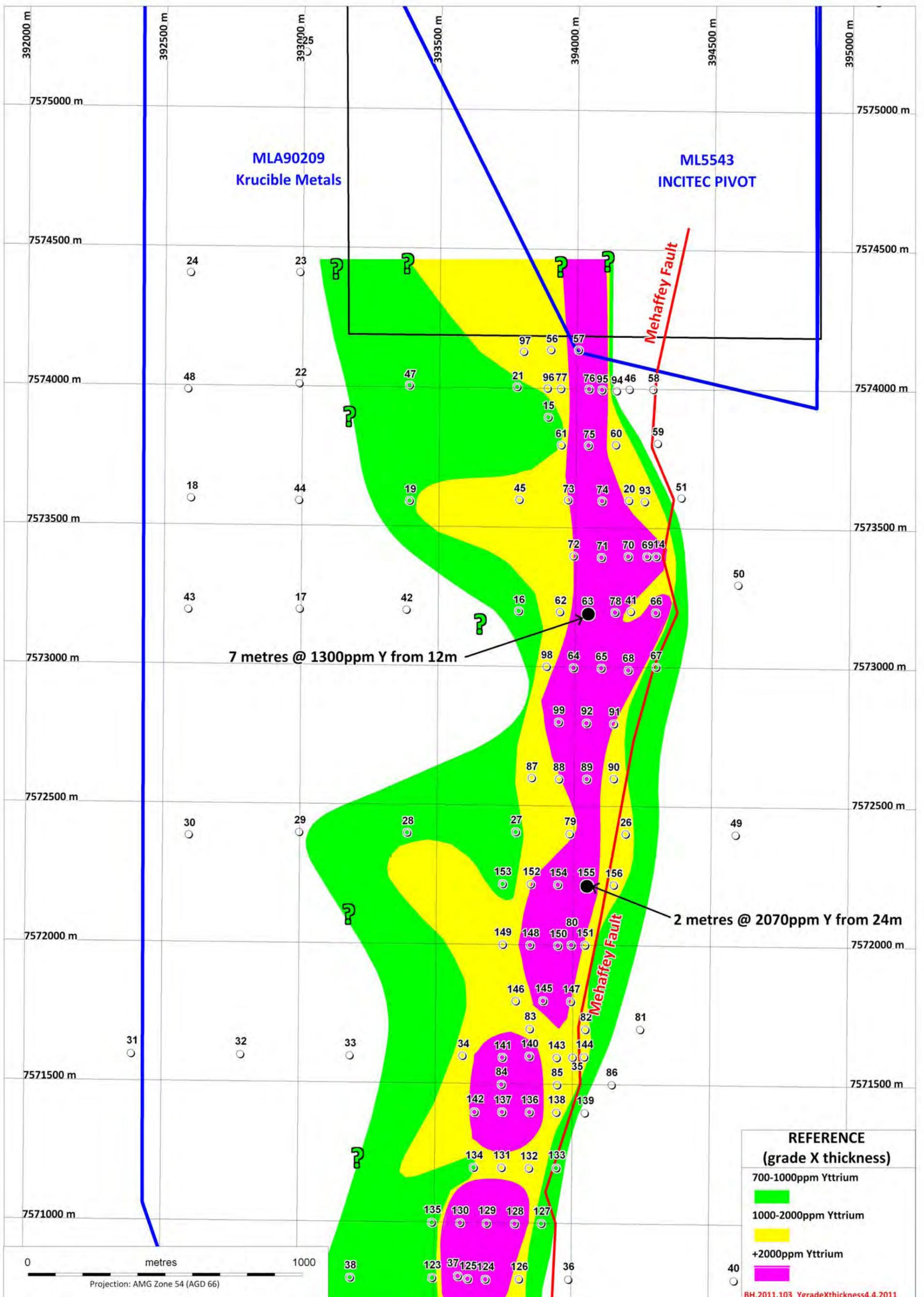
FIGURE 2



Korella Project Yttrium Resource Blocks

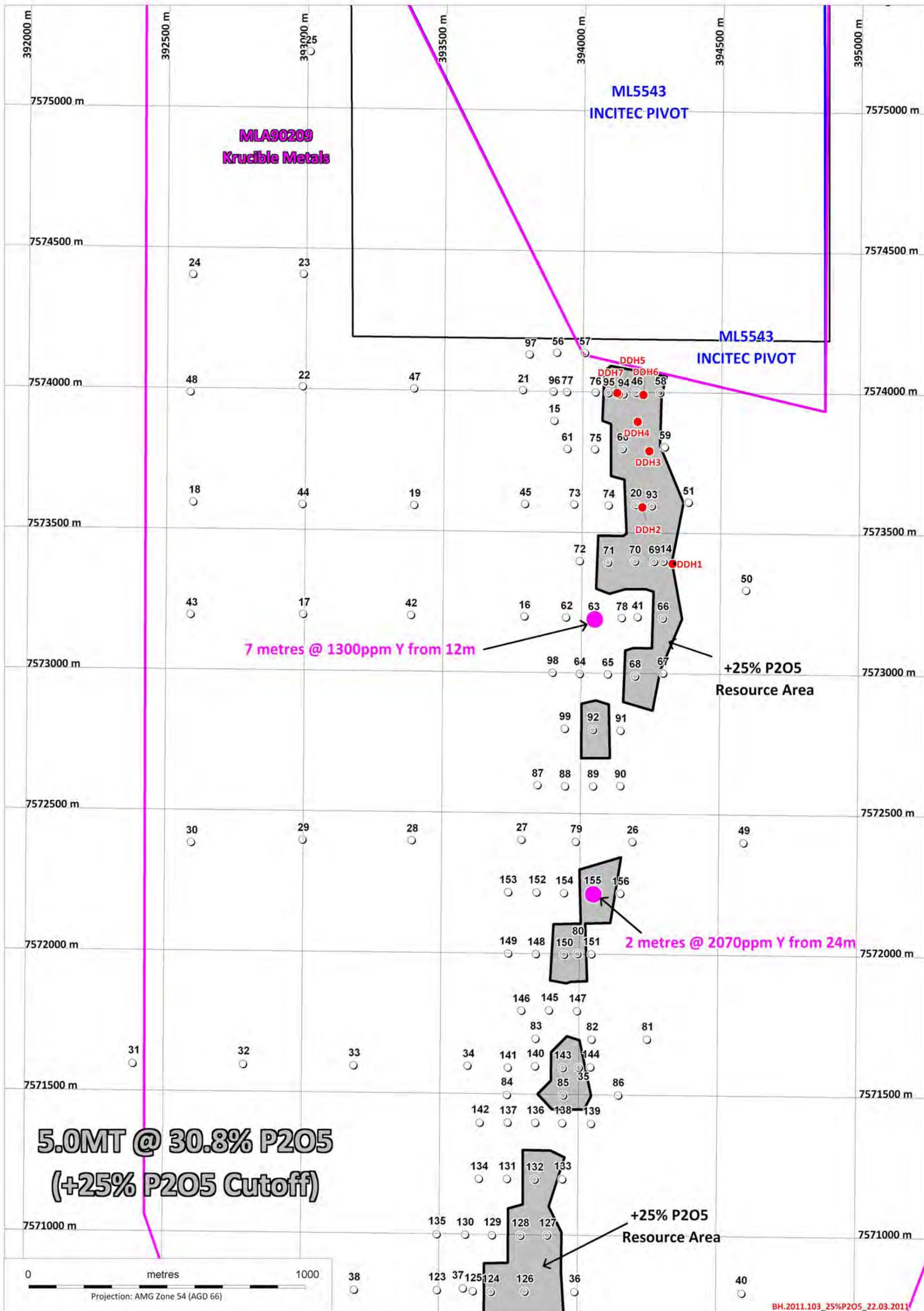
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FIGURE 3



**KORELLA PROJECT - Yttrium Grade X Thickness Contours**

**FIGURE 4**



KORELLA PROJECT - Phosphate Resource Blocks +25% cut off

FIGURE 5

TABLE 1

**KORELLA YTTRIUM DRILL INTERSECTIONS  
(+ 500ppm Y)**

Hole No.	AMG Co-Ord. (AGD66)		From	To	Inclination	Interval (thickness) metres	Yttrium Grade (ppm)	Y <sub>2</sub> O <sub>3</sub> (kg/tonne)
	Easting	Northing						
CBRC 20	394197	7573600	29	31	Vertical	2	540	0.70
CBRC 21	393786	7574007	35	41	Vertical	6	583	0.76
CBRC 28	393399	7572400	21	23	Vertical	2	462	0.60
CBRC 41	394208	7573200	44	46	Vertical	2	440	0.57
CBRC 45	393800	7573602	45	47	Vertical	2	527	0.69
CBRC 57	394011	7574142	28	31	Vertical	3	678	0.88
CBRC 63	394051	7573197	16	32	Vertical	16	784	1.02
CBRC 64	393999	7573000	29	31	Vertical	2	491	0.64
CBRC 65	394103	7572997	14	18	Vertical	4	846	1.10
CBRC 66	394298	7573200	61	63	Vertical	2	531	0.69
CBRC 68	394201	7572993	38	40	Vertical	2	633	0.82
CBRC 70	394200	7573402	51	56	Vertical	5	519	0.67
CBRC 74	394101	7573599	25	28	Vertical	3	880	1.14
CBRC 75	394052	7573796	19	22	Vertical	3	2450	3.19
CBRC 76	394052	7574001	20	24	Vertical	4	782	1.02
CBRC 78	394149	7573197	27	31	Vertical	4	841	1.09
CBRC 80	393999	7572003	17	19	Vertical	2	471	0.61
CBRC 83	393847	7571704	6	8	Vertical	2	524	0.68
CBRC 84	393747	7571498	5	7	Vertical	2	600	0.78
CBRC 88	393950	7572598	19	21	Vertical	2	568	0.74
CBRC 89	394053	7572600	14	17	Vertical	3	973	1.27
CBRC 92	394050	7572799	19	21	Vertical	2	655	0.85
CBRC 95	394097	7574000	29	31	Vertical	2	928	1.21
CBRC 97	393815	7574133	45	47	Vertical	2	675	0.88
CBRC 99	393950	7572803	32	34	Vertical	2	507	0.66
CBRC 124	393695	7570797	5	7	Vertical	2	489	0.64
CBRC 129	393698	7570998	12	14	Vertical	2	646	0.84
CBRC 130	393601	7570999	7	9	Vertical	2	546	0.71
CBRC 134	393651	7571201	4	6	Vertical	2	461	0.60
CBRC 136	393849	7571399	14	19	Vertical	5	876	1.14
CBRC 137	393752	7571401	5	8	Vertical	3	539	0.70
CBRC 140	393850	7571601	6	8	Vertical	2	641	0.83
CBRC 141	393750	7571598	10	12	Vertical	2	449	0.58
CBRC 142	393650	7571400	13	15	Vertical	2	553	0.72
CBRC 145	393900	7571799	4	8	Vertical	4	613	0.80
CBRC 148	393849	7572002	14	17	Vertical	3	545	0.71
CBRC 150	393951	7571999	15	18	Vertical	3	720	0.94
CBRC 155	394051	7572218	25	28	Vertical	3	877	1.14

TABLE 2

**KORELLA NEODYMIUM DRILL INTERSECTIONS**  
(+ 100ppm Nd)

Hole No.	AMG Co-Ord. (AGD66)		From	To	Inclination	Interval (thickness) metres	Neodymium Value (ppm)
	Easting	Northing					
CBRC 63	394051	7573197	15	19	Vertical	4	188
CBRC 65	394103	7572997	14	18	Vertical	4	174
CBRC 69	394267	7573400	68	70	Vertical	2	109
CBRC 70	394200	7573402	51	56	Vertical	5	107
CBRC 74	394101	7573599	25	28	Vertical	3	236
CBRC 75	394052	7573796	19	22	Vertical	3	235
CBRC 76	394052	7574001	21	24	Vertical	3	220
CBRC 78	394149	7573197	27	30	Vertical	3	927
CBRC 83	393847	7571704	3	6	Vertical	3	165
CBRC 84	393747	7571498	2	6	Vertical	4	164
CBRC 88	393950	7572598	6	10	Vertical	4	415
CBRC 89	394053	7572600	12	16	Vertical	4	210
CBRC 92	394050	7572799	17	21	Vertical	4	121
CBRC 95	394097	7574000	29	31	Vertical	2	145
CBRC 128	393799	7570999	19	21	Vertical	2	124
CBRC 131	393752	7571200	4	6	Vertical	2	98
CBRC 134	393651	7571201	14	19	Vertical	5	127
CBRC 140	393850	7571601	6	8	Vertical	2	133
CBRC 145	393900	7571799	4	6	Vertical	2	103
CBRC 148	393849	7572002	7	9	Vertical	2	140
CBRC 150	393951	7571999	14	16	Vertical	2	262
CBRC 154	393949	7572216	5	8	Vertical	3	173
CBRC 155	394051	7572218	25	27	Vertical	2	150

**TABLE 3****KORELLA DYSPROSIUM DRILL INTERSECTIONS  
(+ 70ppm Dy)**

Hole No.	AMG Co-Ord. (AGD66)		From	To	Interval (thickness) metres	Dysprosium Grade (ppm)
	Easting	Northing				
CBRC 63	394051	7573197	15	19	4	97
CBRC 65	394103	7572997	15	19	4	68
CBRC 68	394201	7572993	38	40	2	79
CBRC 74	394101	7573599	26	28	2	96
CBRC 75	394052	7573796	21	23	2	93
CBRC 76	394052	7574001	19	23	4	84
CBRC 78	394149	7573197	27	29	2	93
CBRC 84	393747	7571498	5	7	2	102
CBRC 88	393950	7572598	8	12	4	71
CBRC 89	394053	7572600	15	17	2	100
CBRC 128	393799	7570999	19	21	2	294
CBRC 136	393849	7571399	14	18	4	104
CBRC 150	393951	7571999	15	17	2	86