



ACN 080 911 445

## ARAFURA RESOURCES LIMITED (ASX : ARU)

### MAJOR NEW VANADIUM DISCOVERY

### FOLLOW UP PROGRAM IN PROGRESS

### JERVOIS VANADIUM PROJECT, NORTHERN TERRITORY

(ARU 100%) 19 JUNE, 2007

#### Highlights

- Assays of drill samples average 0.47% V<sub>2</sub>O<sub>5</sub>, 29% Fe and 6.5% TiO<sub>2</sub>
- Significant drill intervals include:
  - 44 metres at 0.76% V<sub>2</sub>O<sub>5</sub> in UNRC001
  - 22 metres at 0.77% V<sub>2</sub>O<sub>5</sub> in UNRC002
  - 21 metres at 0.62% V<sub>2</sub>O<sub>5</sub> in UNRC005
- The recovery of vanadium-bearing magnetite averages 28% with a maximum of 49%
- The concentrate grades from drill samples average 1.34% V<sub>2</sub>O<sub>5</sub>, 64.5% Fe and 5.2% TiO<sub>2</sub>. Highest value of 1.98% V<sub>2</sub>O<sub>5</sub> achieved over a 44 metre thickness.
- The average recovery of V<sub>2</sub>O<sub>5</sub> in concentrate is 76% with some in the range 80-90%

## **Background**

In October 2006, Arafura Resources Limited undertook a program of reverse circulation (RC) percussion drilling at its Jervois Vanadium Project, 290 kilometres NE of Alice Springs in the Northern Territory (Figure 1). The prospect area is secured by EL 10215 over which Arafura holds a 100% right to all minerals excluding uranium.

Outcrops of magnetite are present over an area of 6x3 kilometres. Arafura previously reported that some of the magnetite outcrops contained up to 1.45% V<sub>2</sub>O<sub>5</sub> (ARU: ASX 28/07/05).

In late 2005, Arafura conducted a high resolution airborne magnetic survey over an area of approximately 60 square kilometres to assess the potential for magnetite and to identify targets for the initial drill testing.

The initial drilling program in 2006 comprised 937 metres of RC drilling in 15 vertical holes (maximum 82 metres deep) spread over 10-12 separate targets. Most holes intersected broad mineralised zones (20-60 metres thick) with magnetite content over 10%, while some drill holes intersected strongly mineralised magnetite over intervals 5-47 metres in length. The locations of the holes are shown in Figure 2.

## **Chemical Assay Methodology**

Drill samples were selected on the basis of geology and magnetic properties. The 285 x 1m samples were submitted for analysis in Alice Springs for sample preparation. After drying and crushing, consecutive drill sample composites were selected so that assay samples represented continuous mineralised intervals of 4 or 5 metres. A total of 66 composite samples were prepared and submitted for assay.

These sample composites were analysed using standard techniques to determine the magnetite recovery and for chemical analysis. The "Davis Tube Recovery" (DTR) method was used to measure magnetite recovery after the samples were ground to 100% passing 75 micron grind size.

Drill composite samples and magnetite concentrates were then analysed by XRF (X-ray fluorescence spectrometry) and for LOI (loss-on-ignition). The DTR magnetite recovery and the chemical analyses determined the recovery of iron (Fe), vanadium (V<sub>2</sub>O<sub>5</sub>) and titanium (TiO<sub>2</sub>) in the concentrates.

The complete preparation and testing protocol is illustrated in a simplified process diagram at [http://www.arafuraresources.com.au/documents/Jervoisgeochemprocess\\_090607\\_001.pdf](http://www.arafuraresources.com.au/documents/Jervoisgeochemprocess_090607_001.pdf).

Recovery data and analytical results have been submitted to an independent consulting metallurgist to assess the amenability of the mineralisation to the recovery of commercial products. This report will be released to the market when available.

## Assay Results (Drill composite samples & Magnetite concentrates)

The DTR concentrate recovery and the Fe, V<sub>2</sub>O<sub>5</sub> and TiO<sub>2</sub> assays of drill composite samples and corresponding concentrates for all analysed intervals are appended in Table 1. No samples were submitted for analysis from drill hole UNRC012 which did not intersect any significant magnetite mineralisation.

The assay grades of 66 analysed drill composite samples average 0.47% V<sub>2</sub>O<sub>5</sub>, 29% Fe and 6.5% TiO<sub>2</sub>. Significant intervals of primary mineralisation include:

- UNRC 001 44 metres at 0.76% V<sub>2</sub>O<sub>5</sub> (from surface)
- UNRC 002 22 metres at 0.77% V<sub>2</sub>O<sub>5</sub> and 5 metres at 0.83% V<sub>2</sub>O<sub>5</sub>
- UNRC 004 10 metres at 0.52% V<sub>2</sub>O<sub>5</sub>
- UNRC 005 21 metres at 0.62% V<sub>2</sub>O<sub>5</sub> and 20 metres at 0.27% V<sub>2</sub>O<sub>5</sub>
- UNRC 008 47 metres at 0.37% V<sub>2</sub>O<sub>5</sub> and 6 metres at 0.30% V<sub>2</sub>O<sub>5</sub>
- UNRC 015 18 metres at 0.38% V<sub>2</sub>O<sub>5</sub>

The recovery of magnetite to concentrate (DTR) averages 28% with selected intervals of 49%. The length-weighted average concentrate grade for all samples submitted for analysis is as follows:

DTR Recovery %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %
27.9	64.5	1.34	5.22

Significant results include a concentrate grade of 1.98% V<sub>2</sub>O<sub>5</sub> recovered from UNRC 001 over a substantial thickness (44 metres) of strong magnetite mineralization, whilst recovery test work on drill composites from UNRC 002 and UNRC 005 yielded concentrates grading 1.89% V<sub>2</sub>O<sub>5</sub> and 1.61% V<sub>2</sub>O<sub>5</sub> respectively.

These concentrate grades are at least equivalent or better than other Australian vanadium deposits, and are comparable with concentrate grades of other vanadium deposits internationally (mainly in South Africa).

Complete analytical results for all concentrates are appended in Table 2.

### Vanadium Recovery

The recovery of vanadium to concentrate averages 76% with most of the significant drill intervals reporting recoveries in the range of 80-90%.

The concentrate results can be categorised into four groups on the basis of the Fe, V<sub>2</sub>O<sub>5</sub> and TiO<sub>2</sub> content, as shown in Table 2. The four groups are:

<b>GROUP</b>	<b>Fe %</b>	<b>V<sub>2</sub>O<sub>5</sub> %</b>	<b>TiO<sub>2</sub> %</b>
<b>1</b>	<b>&lt;64</b>	<b>&gt;1.4</b>	<b>&gt;6</b>
<b>2</b>	<b>&lt;64</b>	<b>&lt;1.4</b>	<b>&gt;6</b>
<b>3</b>	<b>&gt;64</b>	<b>&gt;1</b>	<b>&lt;5</b>
<b>4</b>	<b>&gt;64</b>	<b>&lt;1</b>	<b>&lt;5</b>

The length-weighted average for the concentrate grades for each group is as follows:

<b>GROUP</b>	<b>Fe %</b>	<b>V<sub>2</sub>O<sub>5</sub> %</b>	<b>TiO<sub>2</sub> %</b>
<b>1</b>	<b>62.2</b>	<b>1.89</b>	<b>8.0</b>
<b>2</b>	<b>63.0</b>	<b>1.00</b>	<b>6.9</b>
<b>3</b>	<b>66.4</b>	<b>1.46</b>	<b>3.0</b>
<b>4</b>	<b>66.7</b>	<b>0.57</b>	<b>2.7</b>

As these drill results are very encouraging and due to their significance, Arafura will undertake a follow-up drilling program in 2007 (subject to availability of a suitable drilling rig).

All further enquiries should be directed to:

Alistair Stephens – Managing Director  
Arafura Resources Limited  
Telephone: (08) 9221 7666

The information in this release that relates to exploration results and geological interpretation has been compiled by Mr John Goulevitch BSc(Hons), MSc, of Exploremin Pty Ltd, and senior Arafura staff, Mr Kelvin Hussey BSc(Hons), and Mr Richard Brescianini, BSc(Hons).

Mr Goulevitch is a Fellow of the Australian Institute of Geoscientists and he has sufficient experience with the style of mineralisation being reported to qualify as a Competent Person as defined in the *Australasian Code for Reporting of Mineral Resources and Ore Reserves* (JORC Code) for reporting these exploration results. Mr Goulevitch acts as Consulting Geologist to Arafura Resources Limited. He consents to the inclusion in this report of the contained technical information in the form and context in which it appears. An entity associated with Mr Goulevitch is a shareholder in Arafura Resources.

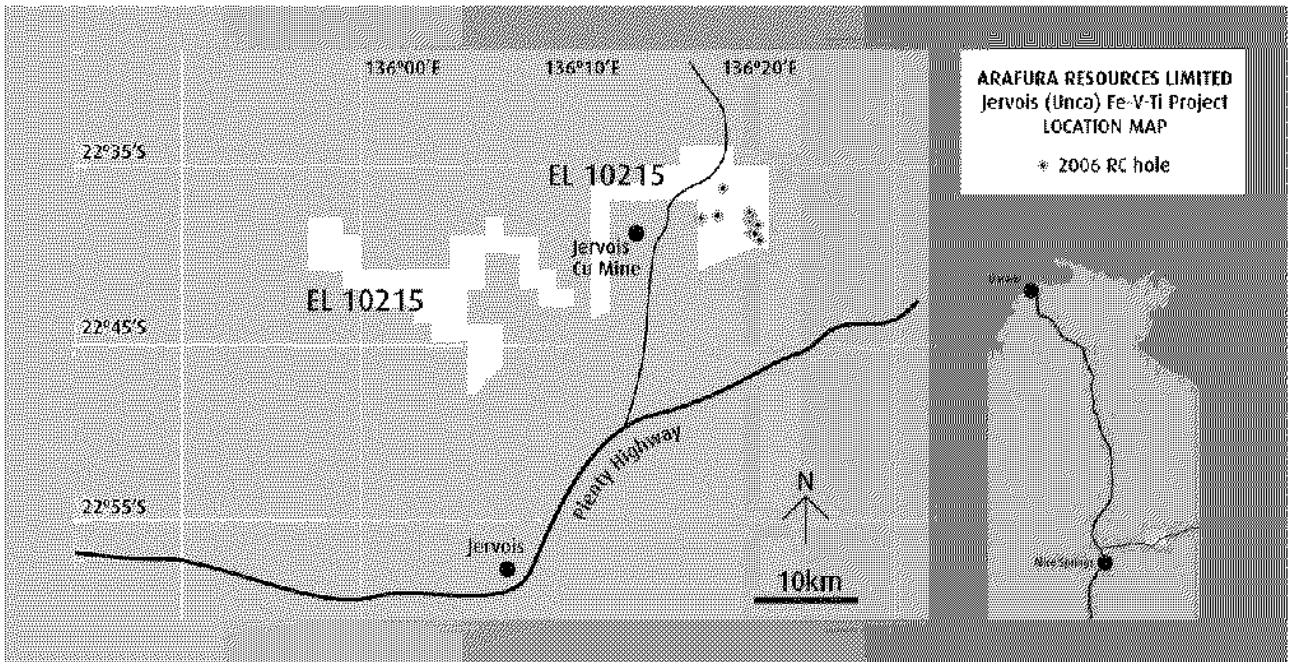


Figure 1: Location of Jervois Project in EL 10215.

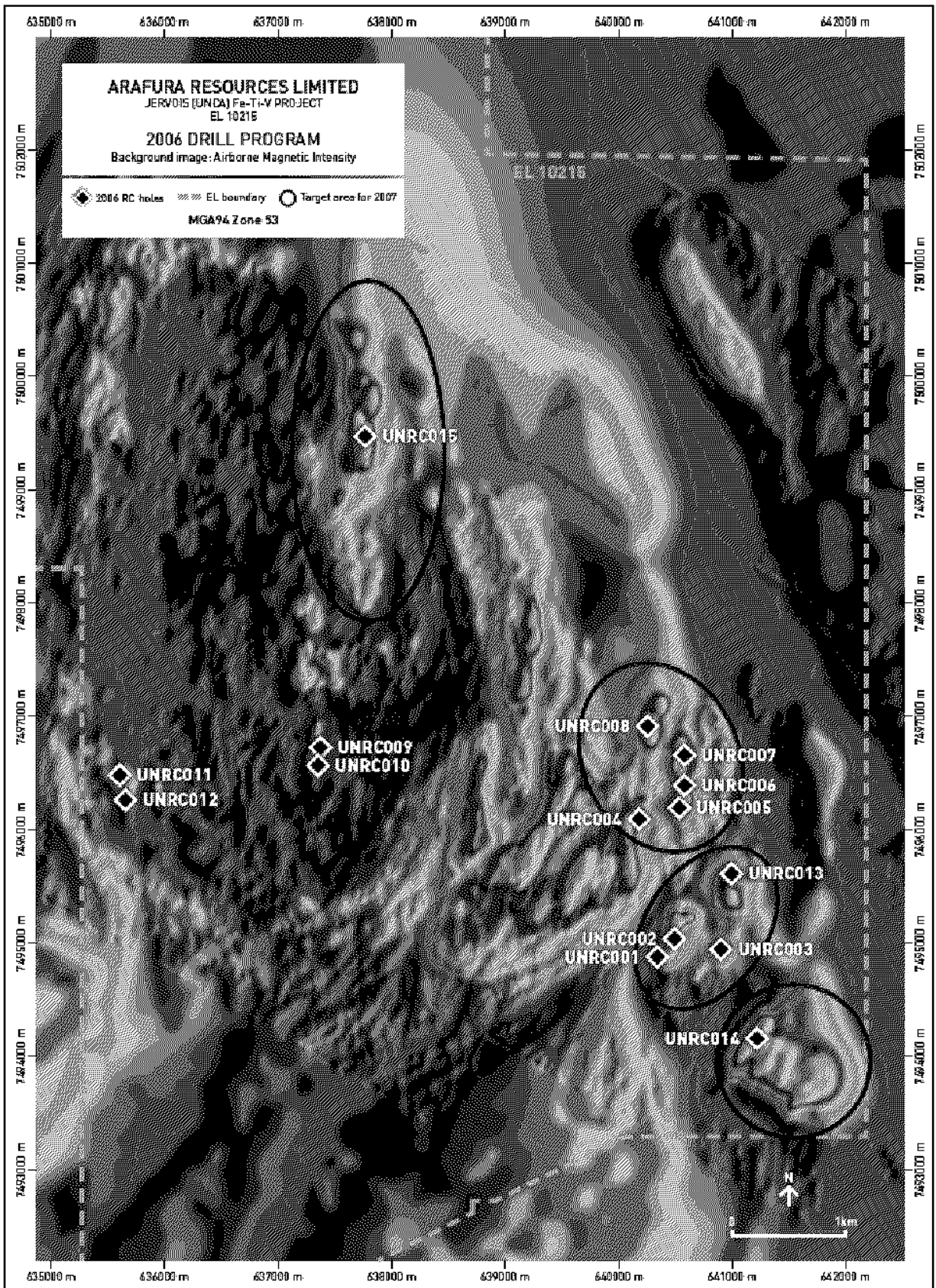


Figure 2: 2006 drill hole locations, Jervois Project, NT.

**Table 1: RC Drill Results, Jervois Vanadium Project, NT**

Hole No.	HOLE LOCATION			DRILL INTERVALS			DRILL COMPOSITE SAMPLE ASSAYS			DTR (100p75µm)	CONCENTRATE ASSAYS			METAL RECOVERY IN CONCENTRATE		
	MGA E	MGA N	Depth m	From m	To m	Intvl m	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Rec %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %
UNRC001	640345	7494900	60	0	44	44	31.5	0.76	8.30	<b>33.1</b>	61.6	<b>1.98</b>	8.55	62.9	<b>82.6</b>	32.8
UNRC001				50	52	2	22.5	0.42	5.27	<b>21.2</b>	65.3	<b>1.39</b>	4.76	61.5	<b>70.8</b>	19.2
UNRC002	640475	7495000	66	28	50	22	32.4	0.77	8.13	<b>36.2</b>	63.4	<b>1.89</b>	6.66	69.4	<b>87.2</b>	29.4
UNRC002				58	63	5	34.2	0.83	9.04	<b>39.2</b>	63.6	<b>1.90</b>	6.92	72.9	<b>89.7</b>	30.0
UNRC003	640860	7494950	82	67	73	6	20.5	0.38	4.77	<b>17.0</b>	61.5	<b>1.58</b>	8.95	51.0	<b>71.5</b>	31.9
UNRC003				76	79	3	21.9	0.40	5.23	<b>17.0</b>	61.5	<b>1.65</b>	9.22	47.7	<b>70.7</b>	30.0
UNRC004	640180	7496120	50	3	13	10	31.0	0.52	8.45	<b>20.2</b>	66.9	<b>1.41</b>	3.58	42.7	<b>53.4</b>	8.6
UNRC005	640500	7496200	67	0	21	21	29.7	0.62	7.56	<b>23.0</b>	65.3	<b>1.61</b>	4.61	50.3	<b>63.5</b>	14.4
UNRC005				39	59	20	14.3	0.27	3.28	<b>13.7</b>	66.6	<b>1.53</b>	1.54	63.7	<b>76.4</b>	6.7
UNRC006	640540	7496350	70	21	23	2	24.0	0.46	6.02	<b>24.2</b>	61.3	<b>1.41</b>	9.56	61.8	<b>73.7</b>	38.5
UNRC007	640540	7496650	74	53	59	6	21.3	0.26	4.12	<b>19.4</b>	61.9	<b>0.85</b>	6.47	56.3	<b>63.4</b>	30.4
UNRC007				69	72	3	25.6	0.37	6.02	<b>22.9</b>	61.0	<b>0.93</b>	7.99	54.5	<b>57.9</b>	30.3
UNRC008	640240	7496950	73	3	9	6	23.7	0.30	5.46	<b>11.8</b>	65.9	<b>1.33</b>	3.90	30.9	<b>49.9</b>	8.4
UNRC008				26	73	47	29.2	0.37	7.52	<b>29.4</b>	63.2	<b>1.03</b>	6.93	61.0	<b>80.8</b>	27.0
UNRC009	637300	7496700	25	0	15	15	36.6	0.25	4.65	<b>41.9</b>	66.4	<b>0.51</b>	3.42	75.1	<b>84.0</b>	30.5
UNRC009				24	25	1	31.8	0.30	3.79	<b>33.0</b>	65.0	<b>0.71</b>	3.77	67.5	<b>77.8</b>	32.8
UNRC010	637315	7496620	65	0	5	5	42.3	0.39	6.17	<b>49.0</b>	65.9	<b>0.39</b>	3.28	76.3	<b>49.7</b>	26.0
UNRC010				32	37	5	35.2	0.28	5.15	<b>15.2</b>	65.8	<b>0.70</b>	2.00	49.4	<b>60.2</b>	10.3
UNRC010				39	54	15	45.0	0.41	7.26	<b>42.2</b>	67.4	<b>0.64</b>	2.33	79.0	<b>95.5</b>	19.3

Hole No.	HOLE LOCATION			DRILL INTERVALS			DRILL COMPOSITE SAMPLE ASSAYS			DTR (100p75µm)	CONCENTRATE ASSAYS			METAL RECOVERY IN CONCENTRATE		
	MGA E	MGA N	Depth m	From m	To m	Intvl m	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Rec %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %
UNRC010				59	61	2	24.8	0.17	5.15	22.2	66.4	0.61	3.24	59.5	80.3	14.0
UNRC011	635590	7496500	55	3	6	3	33.7	0.13	2.43	4.8	67.3	1.12	2.05	20.7	37.6	4.3
UNRC011				15	20	5	45.9	0.12	2.53	39.9	67.9	0.56	1.14	64.9	73.2	9.8
UNRC013	640950	7495650	70	27	31	4	16.9	0.21	3.56	18.6	63.4	0.98	6.64	69.8	85.1	34.7
UNRC013				49	54	5	26.4	0.48	5.63	33.1	65.6	1.50	4.55	82.2	>95	26.8
UNRC014	641200	7494200	70	45	48	3	18.2	0.37	4.30	19.0	65.6	1.60	2.68	68.3	82.6	11.8
UNRC014				64	68	4	18.9	0.42	4.18	17.9	65.6	1.60	2.89	62.3	69.2	12.4
UNRC015	637750	7499500	70	30	33	3	22.5	0.32	4.90	17.8	66.9	1.15	1.34	52.8	64.5	4.9
UNRC015				47	65	18	23.4	0.38	5.46	20.0	67.7	1.34	2.03	57.4	71.3	7.4
				WT AVG		285	29.2	0.47	6.48	27.9	64.5	1.34	5.22	61.5	76.4	22.2



**Table 2: Holes Grouped By Fe-V-Ti Contents in Concentrate Assays, Jervois Vanadium Project, NT**

HOLE DETAILS				DRILL COMPOSITE SAMPLE ASSAYS			CONCENTRATE ASSAYS										DTR (100p 75µm)	METAL RECOVERY IN CONCENTRATE		
Hole No.	From m	To m	Intvl m	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	CaO %	MnO %	P %	S %	Rec %	Fe Rec %	V <sub>2</sub> O <sub>5</sub> Rec %	TiO <sub>2</sub> Rec %	
<b>GROUP 1 - Fe&lt;64% V2O5 &gt;1.4% TiO2 &gt;6%</b>																				
UNRC001	0	44	44	31.5	0.76	8.30	61.6	1.98	8.5	1.43	1.46	0.24	0.12	0.00	0.01	33.1	62.9	82.6	32.8	
UNRC002	28	50	22	32.4	0.77	8.13	63.4	1.89	6.7	0.89	1.64	0.31	0.01	0.00	0.01	36.2	69.4	87.2	29.4	
UNRC002	58	63	5	34.2	0.83	9.04	63.6	1.90	6.9	0.69	1.20	0.19	0.02	0.00	0.00	39.2	72.9	89.7	30.0	
UNRC003	67	73	6	20.5	0.38	4.77	61.5	1.58	9.0	0.76	2.30	0.45	0.12	0.00	0.01	17.0	51.0	71.5	31.9	
UNRC003	76	79	3	21.9	0.40	5.23	61.5	1.65	9.2	0.74	1.88	0.42	0.14	0.00	0.01	17.0	47.7	70.7	30.0	
UNRC006	21	23	2	24.0	0.46	6.02	61.3	1.41	9.6	0.81	1.95	0.35	0.05	0.00	0.01	24.2	61.8	73.7	38.5	
<b>Wt Avg</b>				<b>30.6</b>	<b>0.72</b>	<b>7.9</b>	<b>62.2</b>	<b>1.89</b>	<b>8.0</b>	<b>1.15</b>	<b>1.58</b>	<b>0.28</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>32.3</b>	<b>63.8</b>	<b>82.8</b>	<b>31.7</b>	
<b>GROUP 2 - Fe&lt;64% V2O5 &lt;1.4% TiO2 &gt;6%</b>																				
UNRC007	53	59	6	21.3	0.26	4.12	61.9	0.85	6.5	1.22	3.20	0.89	0.04	0.00	0.01	19.4	56.3	63.4	30.4	
UNRC007	69	72	3	25.6	0.37	6.02	61.0	0.93	8.0	0.89	3.12	0.73	0.09	0.00	0.01	22.9	54.5	57.9	30.3	
UNRC008	26	73	47	29.2	0.37	7.52	63.2	1.03	6.9	0.82	1.88	0.41	0.13	0.00	0.02	29.4	61.0	80.8	27.0	
UNRC013	27	31	4	16.9	0.21	3.56	63.4	0.98	6.6	0.82	2.29	0.52	0.10	0.00	0.02	18.6	69.8	85.1	34.7	
<b>Wt Avg</b>				<b>27.4</b>	<b>0.35</b>	<b>6.8</b>	<b>63.0</b>	<b>1.00</b>	<b>6.9</b>	<b>0.87</b>	<b>2.10</b>	<b>0.48</b>	<b>0.12</b>	<b>0.00</b>	<b>0.02</b>	<b>27.3</b>	<b>60.8</b>	<b>78.2</b>	<b>28.1</b>	
<b>GROUP 3 - Fe &gt;64% V2O5 &gt;1% TiO2 &lt;5%</b>																				
UNRC001	50	52	2	22.5	0.42	5.27	65.3	1.39	4.8	0.51	1.87	0.21	0.16	0.00	0.01	61.5	70.8	19.2	61.5	
UNRC004	3	13	10	31.0	0.52	8.45	66.9	1.41	3.6	0.40	1.14	0.06	0.02	0.00	0.01	42.7	53.4	8.6	42.7	
UNRC005	0	21	21	29.7	0.62	7.56	65.3	1.61	4.6	0.83	1.58	0.28	0.05	0.00	0.00	50.3	63.5	14.4	50.3	
UNRC005	39	59	20	14.3	0.27	3.28	66.6	1.53	1.5	1.13	1.97	0.38	0.01	0.00	0.00	63.7	76.4	6.7	63.7	
UNRC008	3	9	6	23.7	0.30	5.46	65.9	1.33	3.9	0.63	1.76	0.26	0.01	0.00	0.01	30.9	49.9	8.4	30.9	
UNRC011	3	6	3	33.7	0.13	2.43	67.3	1.12	2.1	1.13	1.30	0.18	0.02	0.00	0.02	20.7	37.6	4.3	20.7	
UNRC013	49	54	5	26.4	0.48	5.63	65.6	1.50	4.6	0.47	1.20	0.21	0.05	0.00	0.02	82.2	>95	26.8	82.2	
UNRC014	45	48	3	18.2	0.37	4.30	65.6	1.60	2.7	1.14	2.35	0.34	<0.008	0.00	0.01	68.3	82.6	11.8	68.3	
UNRC014	64	68	4	18.9	0.42	4.18	65.6	1.60	2.9	1.03	2.18	0.43	<0.008	0.00	0.01	62.3	69.2	12.4	62.3	
UNRC015	30	33	3	22.5	0.32	4.90	66.9	1.15	1.3	1.50	1.94	0.19	<0.008	0.00	0.01	52.8	64.5	4.9	52.8	
UNRC015	47	65	18	23.4	0.38	5.46	67.7	1.34	2.0	0.65	1.16	0.12	0.01	0.00	0.04	57.4	71.3	7.4	57.4	
<b>Wt Avg</b>				<b>23.8</b>	<b>0.42</b>	<b>5.6</b>	<b>66.4</b>	<b>1.46</b>	<b>3.0</b>	<b>0.83</b>	<b>1.58</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>	<b>0.01</b>	<b>54.6</b>	<b>68.0</b>	<b>10.4</b>	<b>54.6</b>	

HOLE DETAILS				DRILL COMPOSITE SAMPLE ASSAYS			CONCENTRATE ASSAYS										DTR (100p 75µm)	METAL RECOVERY IN CONCENTRATE		
Hole No.	From m	To m	Intvl m	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	CaO %	MnO %	P %	S %	Rec %	Fe Rec %	V <sub>2</sub> O <sub>5</sub> Rec %	TiO <sub>2</sub> Rec %	
<b>GROUP 4 - Fe &gt;64% V2O5 &lt;1% TiO2 &lt;5%</b>																				
UNRC009	0	15	15	36.6	0.25	4.65	66.4	0.51	3.4	2.17	0.63	0.10	0.00	0.00	0.01	41.9	75.1	84.0	30.5	
UNRC009	24	25	1	31.8	0.30	3.79	65.0	0.71	3.8	1.85	1.23	0.27	0.72	<0.001	0.06	33.0	67.5	77.8	32.8	
UNRC010	0	5	5	42.3	0.39	6.17	65.9	0.39	3.3	2.36	0.86	0.12	<0.008	0.00	0.01	49.0	76.3	49.7	26.0	
UNRC010	32	37	5	35.2	0.28	5.15	65.8	0.70	2.0	1.88	2.62	0.45	<0.008	0.00	0.01	15.2	49.4	60.2	10.3	
UNRC010	39	54	15	45.0	0.41	7.26	67.4	0.64	2.3	1.44	1.09	0.09	0.00	0.00	0.01	42.2	79.0	95.5	19.3	
UNRC010	59	61	2	24.8	0.17	5.15	66.4	0.61	3.2	0.95	1.62	0.27	<0.008	0.00	0.03	22.2	59.5	80.3	14.0	
UNRC011	15	20	5	45.9	0.12	2.53	67.9	0.56	1.1	1.58	0.95	0.14	0.01	0.00	0.01	39.9	64.9	73.2	9.8	
	<b>Wt Avg</b>			<b>40.0</b>	<b>0.3</b>	<b>5.5</b>	<b>66.7</b>	<b>0.57</b>	<b>2.7</b>	<b>1.81</b>	<b>1.09</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.01</b>	<b>38.8</b>	<b>71.9</b>	<b>80.1</b>	<b>21.6</b>	