

## REPORT FOR THE QUARTER ENDED 30 JUNE 2008

### Highlights

- Resource evaluation, pit optimisation studies and evaluation of both operating and capital costs have led to a decision to reduce the scale of the initial proposed mining operation at Watershed to 1000 tpa of WO<sub>3</sub> in concentrates with much lower up-front costs, with planned expansion at a later date.
  - New resource estimate for the Watershed scheelite deposit by Coffey Mining confirms a 50 percent increase in resource tonnage with a 16.5 per cent increase in contained WO<sub>3</sub> using Ordinary Kriging (OK).
  - A second new resource estimate for the Watershed scheelite deposit by Hellman & Schofield provides sound basis for future conversion to reserves. This resource was estimated using Multiple Indicator Kriging (MIK).
  - Final Ore Sorting trials on eleven metallurgical “variability samples” from diamond drill cores from the Watershed scheelite project have confirmed the favourable results obtained with previous bulk sample tests.
  - Encouraging results were received from the first round of drill samples from the Reverse Circulation (RC) drilling program completed in February 2008 at the Mt Mulgine Project.
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### Corporate

#### Financial

Vital Metals Ltd now has on issue 109.54m shares, 5.75m listed options, exercisable at \$0.80 and 4.38m unlisted options exercisable at various prices. Cash at bank as at 30 June 2008 was \$4.8m.

#### Board Structure

Dr Colin Hunter resigned from the Board of Vital Metals Ltd on 8 July 2008 due to family commitments in the United Kingdom.

### Watershed Project

#### Feasibility Study – Change in Proposed Scale of Operation

As a major part of the Watershed Feasibility Study, Vital Metals has just completed an optimisation study of the open pit mining plan and scheduling based on the new (Hellman and Schofield) resource estimate reported during the quarter (detailed later in this report).

This has led to a decision to substantially change plans for the proposed operation.

The additional work required to upgrade substantial portions of the resource from the 'Inferred' JORC Classification to the 'Measured and Indicated' Category required for Feasibility purposes, in combination with other factors detailed below, have led directors to focus the Study on an initial smaller-scale mining operation, which would be expanded at a later time.

The extremely complex distribution of the scheelite mineralisation at the Watershed deposit and the logistical problems in upgrading the substantial deeper sections of the resource by drilling from surface alone have presented difficulties in compiling a truly satisfactory Feasibility Study for an operation at the planned 1.5 to 2 mtpa ore mining and throughput rate.

The pressure of rising costs, the major appreciation of the Australian dollar (the Australian dollar equivalent price of tungsten concentrates has effectively fallen by some A\$70 per metric tonne unit over the past 30 months when the Study began, solely on the rise in the AUD/USD exchange rate) have also taken their toll.

Consequently directors have elected to shelve plans to move immediately to a major operation targeting a production level of 4,000 tonnes per year of tungstate ( $WO_3$ ) in concentrates in favour of an initial smaller-scale venture designed to yield around 1,000 tpa of  $WO_3$  in concentrates – still a large tungsten producer by world standards.

The proposed operation will be based on the current 'Measured and Indicated' resource numbers, with all essential drilling already completed, will use the same metallurgical flow sheet, utilise the same elements of the already submitted Environmental Impact Study (but at a smaller scale) but will involve a major reduction in required capital – currently estimated to be almost directly proportional to the reduced throughput.

The expenditure on major infrastructure items such as the 24 kilometre, high-voltage feeder line to provide grid-sourced, electric power to the mine (currently costed at \$16 million) will be temporarily replaced by diesel power and the like.

There also remains a question over the likely grade of the run-of-mine ore - compared with the lower resource grade predicted by the kriged mathematical models - although the Feasibility Study will obviously be based on the modelled forecasts.

The company believes that a more modest operation will allow a practical assessment of the ability to effectively control the ROM grade utilising the obvious characteristics of scheelite fluorescence under ultra-violet light, to prove the effectiveness of the ore sorting pre-concentration process and to establish a solid market presence for Watershed quality concentrates.

The smaller operation would also provide cash flow and time to confirm the full extent of the as-yet 'unproven' mineralisation at depth and thus justify, as soon as practical, the funding of the originally planned, 4,000 tpa operation – with a track record in operating experience.

The directors believe this route to be a prudent and more effective use of shareholders funds and, in the current climate of uncertainty, to provide more certainty and security for the future of Vital Metals Ltd.

Watershed is a major tungsten resource, but a complex one. Development of its full, long-term potential will require a staged approach. The company retains its enthusiasm for the Project and believes the methodology now adopted will give the shareholders the best opportunity to profit from its exploitation.

## **Resource Estimates**

### **1. Ordinary Kriging (OK)**

Modern day resource estimation generally uses a statistically-based mathematical method known as 'kriging'. There are at least two types of kriging, ordinary kriging (OK) and multiple indicator kriging (MIK). Vital has used both methodologies for the Watershed deposit.

In the first instance, Vital received an updated resource estimate for the Watershed tungsten project from Coffey Mining.

The new estimate increased the global resource tonnage to 32.75 million tonnes at an average grade of 0.20 %  $WO_3$ , using a lower cut-off grade of 0.10%  $WO_3$ . The contained tungstate ( $WO_3$ ) content has increased to 65,600 tonnes, of which forty per cent were in the Measured and Indicated Category.

Using a 0.15%  $WO_3$  lower cut-off grade, a tonnage of 18.68 million tonnes at 0.26%  $WO_3$  for a contained 48,300 tonnes of tungstate, of which forty-two per cent were classified as Measured and Indicated.

At a still lower cut-off grade of 0.20%  $WO_3$ , the estimate was 11.51 million tonnes at 0.31%  $WO_3$  for 35,900 tonnes of contained tungstate (of which forty-four percent Measured and Indicated). The continuity of mineralisation at this higher (0.20%  $WO_3$ ) cut-off is lower, with the consequence that this estimate has a lower reliability than the others and will require some additional verification.

At a lower cut-off of 0.05%  $WO_3$ , the contained tungstate increases to 82,900 tonnes and an average grade of 0.15%  $WO_3$ .

The estimate used mineralised 'block' sizes of 20 metres by 20 metres by 5 metres (vertical). There was considered to be insufficient drill density to utilise smaller mineralised block sizes in this estimate which would have the potential to enhance the grade distribution.

The mineralisation remains open in all directions and at depth.

## 2. Multiple Indicator Kriging (MIK)

Consultants, Hellman & Schofield Pty Ltd (H&S) used Multiple Indicator Kriging (MIK) with a block support correction to produce a new mine recoverable resource estimate.

The new resource estimate (Table 1) is classified as Measured, Indicated and Inferred at various cut-off grades.

At a cut-off grade of 0.15% tungsten oxide (WO<sub>3</sub>), the new estimate is 15.2 million tonnes at 0.29% WO<sub>3</sub> for 44,100 tonnes of contained WO<sub>3</sub>. This includes 9.5 million tonnes (63 per cent of the total) at 0.28% WO<sub>3</sub>, for 26,600 tonnes of contained WO<sub>3</sub>, in the Measured and Indicated categories.

At a higher cut-off grade of 0.20% WO<sub>3</sub> the total resource is 9.9 million tonnes at 0.35% WO<sub>3</sub> for 34,700 tonnes of contained WO<sub>3</sub>. This includes 6.0 million tonnes (61 per cent of the total) at 0.34% WO<sub>3</sub>, for 20,400 tonnes of contained WO<sub>3</sub>, in the Measured and Indicated categories.

Hellman & Schofield consider MIK to be the appropriate geostatistical estimation method for the Watershed deposit. MIK is a non-linear estimation technique and incorporates the observation that continuity of grade diminishes as grade increases. It is an appropriate technique to use where the estimate of average grade above a commercial cut-off grade typically relies upon less than twenty per cent of the available sample data and is dramatically affected by the highest one or two per cent of sample grades as is the case at Watershed.

The MIK method with block support correction estimates the proportion and grade of mineralised material for a number of specified cut-off grades within a large panel. An assumed Selective Mining Unit (SMU) size of 2m by 2m by 2.5m was used in determining the recoverable proportions. The grades predicted using this methodology have been found by H&S, in numerous projects, to be realistic predictors of those achieved during actual mining operations and do not require additional allowances for dilution assuming efficient mining practices are employed.

The database supplied to H&S for the MIK resource estimate was identical to that used for the OK resource estimate, previously announced on 26 May 2008.

**Table 1: Watershed Deposit Resource Estimate  
(Hellman & Schofield July 2008, MIK resource estimate)**

<b>%WO<sub>3</sub> cutoff</b>	<b>Category</b>	<b>Tonnes (millions)</b>	<b>Grade WO<sub>3</sub>%</b>	<b>Contained WO<sub>3</sub> (tonnes)</b>
<b>0.05</b>	Measured	4.7	0.17	
	Indicated	24.3	0.15	
	<b>Measured + Indicated</b>	29.0	0.15	43,500
	Inferred	15.9	0.16	
	<b>Total</b>	<b>44.9</b>	<b>0.16</b>	<b>71,800</b>

<b>0.10</b>	Measured	2.8	0.23	
	Indicated	12.9	0.21	
	<b>Measured + Indicated</b>	15.7	0.21	33,000
	Inferred	9.0	0.23	
	<b>Total</b>	<b>24.7</b>	<b>0.22</b>	<b>54,300</b>

<b>0.15</b>	Measured	1.8	0.29	
	Indicated	7.7	0.28	
	<b>Measured + Indicated</b>	9.5	0.28	26,600
	Inferred	5.7	0.30	
	<b>Total</b>	<b>15.2</b>	<b>0.29</b>	<b>44,100</b>

<b>0.20</b>	Measured	1.2	0.35	
	Indicated	4.8	0.34	
	<b>Measured + Indicated</b>	6.0	0.34	20,400
	Inferred	3.9	0.36	
	<b>Total</b>	<b>9.9</b>	<b>0.35</b>	<b>34,700</b>

## Ore Sorting Trials

Final X-Ray ore-sorting test work on samples from eleven large diameter diamond drill holes has been completed. The diamond drill holes were dedicated as metallurgical 'variability' holes, representative over the range of ore types at Watershed.

The eleven holes, spread throughout the known area of the deposit, are considered to cover the full variability of the resource, as classified by alteration type, oxidation levels and lithological variations and to be truly representative of the variability of the Watershed resource.

These variability results are remarkably consistent with those achieved previously from the bulk samples from the two adits.

The average grade of the eleven variability cores (aggregating 2 tonnes of sample) was 0.43% WO<sub>3</sub> which compares most favourably with the grade of the modelled resource.

The sorting process achieved scheelite recoveries in excess of 93% thereby facilitating a 49.5% reduction in tonnes of mined material proceeding to down-stream secondary processing. The average overall grade of the 49.5% reject material was 0.056% WO<sub>3</sub> which makes for a most satisfactory, 'throw-away' tail.

These latest results are consistent with bulk sample trials completed in March, in which Vital Metals achieved a 49.7% rejection rate, with a 'throw-away' tailings grade of 0.035% WO<sub>3</sub> and further highlights the opportunity for substantial reductions in overall processing costs as well as a quantum reduction in the required capacity of both the beneficiation plant and the tailings storage dam.

Lycopodium Engineering Pty Ltd has completed a first-pass design of the proposed process plant, which is currently being refined.

Vital Metals is now completing large-scale metallurgical test work on the gravity recovery (spirals) section of the plant, along with final evaluation of tabling of concentrate samples.

## **Mt Mulgine WA (Vital 70%)**

Assay results from the twelve-hole RC drilling program completed in February 2008 at the Mt Mulgine Project were received. The results revealed potentially economic levels of tungsten and molybdenum mineralisation in all but one of the holes.

Best results are:

- **VMRC006 – 149 metres at 0.13% WO<sub>3</sub> from 0 metres**
  - including 10 metres at 0.23% WO<sub>3</sub> from 68 metres with 8 metres at 0.21% WO<sub>3</sub> from 92 metres and 4 metres at 0.55% WO<sub>3</sub> from 112 metres
  - including 105 metres of 0.030% Mo from 44 metres
  - including 4 metres at 0.53 g/t Au from 12 metres and 14 metres of 1.5 g/t Au from 68 metres
  
- **VMRC007 – 52 metres at 0.10% WO<sub>3</sub> from 12 metres**
  - and 54 metres of 0.050% Mo from 0 metres
  - and 8 metres at 0.034% Mo from 64 metres
  - and 73 metres of 0.026% Mo from 106 metres
  
- **VMRC004 – 4 metres at 0.10% WO<sub>3</sub> from 108 metres**
  - and 4 metres of 0.16% WO<sub>3</sub> from 120 metres
  
- **VMRC012 – 16 metres at 0.05% WO<sub>3</sub> from 60 metres**
  - and 8 metres at 0.034% Mo from 96 metres

The results in VMRC006 confirm the tenor of mineralisation at the Trench deposit as indicated by historic drilling and indicate mineralisation extends to the south-east towards the Hill deposit (VMRC007). The results also indicate gold could be a significant by-product, in places within the Trench deposit, to any tungsten/molybdenum production. Furthermore, the mineralisation at Trench may extend further to the south-west. The results also indicate there are at least six new tungsten and/or molybdenum prospects within the project area that warrant further exploration. One metre re-samples of significant intercepts were submitted for analysis and confirmed the tenor of mineralisation.



An RC drilling program is currently being devised to follow up and test other targets and is planned for completion during the next quarter.

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*Note: "The information in this report that relates to exploration results is based on information compiled by Mr Bruce Arthur Pertzel, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Pertzel is an employee of Vital Metals Ltd and has sufficient experience which is 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 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Pertzel consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

For further details, refer to the company's website, [www.vitalmetals.com.au](http://www.vitalmetals.com.au) or contact:

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