

# ASX/ Media Announcement 13 October 2014

# Vital Metals Limited

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## **Capital Structure**

261.3 million shares

70 million unlisted options

## **Board & Management**

David Macoboy Chairman

Mark Strizek CEO and Managing Director

Peter Cordin Non-Executive Director

Andrew Simpson Non-Executive Director

lan Hobson Company Secretary

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# VITAL METALS DELIVERS NEW TUNGSTEN PROSPECT BUILDS EXPLORATION PIPELINE TO SUPPORT DEVELOPMENT OF WATERSHED PROJECT

# **Key Points**

- Substantial tungsten (W) and tin (Sn) anomaly identified from a review of historical stream sediment geochemical data on 100%-owned EPM25102.
- Anomalous tungsten and tin values extend for over 7km, with peak values of up to 132ppm W and 3,910ppm (0.39%) Sn.
- Highest tungsten values occur in a poorly sampled area of Slaty Range.
- Comparison with regional tungsten geochemistry of Watershed:
  - Anomaly larger than that of Watershed;
  - Peak W values of a similar tenor; and
  - Sn values significantly higher than at Watershed.

Vital Metals Limited (ASX: VML) is pleased to announce that it has identified a significant tin and tungsten anomaly on its 100%-owned exploration tenement EPM25102, located 55km south of its flagship **Watershed Tungsten Project** in North Queensland.

Vital recognised the potential of **Slaty Range** following a review of the regional geology around Watershed. An application for the ground was made in 2012 and the tenement was granted in November 2013.

Recent work by Vital's geologists in compiling historical stream sediment geochemical sampling has identified the true extent of the **Slaty Range** prospect. In these data, a **7km long zone of elevated tungsten and tin values** was observed with peak values of **132ppm W** and **3,910ppm Sn**.

BHP held the ground in 1981 and its main focus at that time was exploring for alluvial tin, with the regional exploration focus eventually turning toward gold in 1983. As a result, it appears that the stream sediment targets were missed and not followed up on in any detail.

BHP geologists at the time noted mineralisation that was related to the Northedge granite intrusive located in the centre of the range. Tungsten and tin was attributed to porphyritic intrusions, quartz veining and areas of greisen alteration. Vital's geologists have used a lower cut-off grade of 20ppm W and 25ppm Sn during their interrogation of the historical sampling data to identify a tungsten and tin anomaly that is approximately 7km long. By comparison, the Watershed regional stream sediment geochemical anomaly was approximately 4km long at a 20ppm W cut-off with tungsten values of a similar tenor; however, the maximum tin value was 15ppm.

The exploration target for Slaty Range is conceptual in nature as there has been insufficient exploration to define a Mineral Resource, and it is uncertain if further exploration will result in the determination of a Mineral Resource.

The exploration target which is based on stream sediment sampling and preliminary mapping undertaken by previous explorers ranges between 35-60Mt of tungsten mineralisation at grades of between 0.10-0.18%WO3 and 0.60-15Mt of tin mineralisation at grades of between 0.2 to 1.5% Sn. The basis for this exploration target is;

- The overall size and tenor of the stream sediment geochemical anomaly when compared to stream sediment geochemical anomalies of known tungsten and tin deposits in the Hodgkinson Province (larger expression than Watershed);
- Tungsten mineralisation at the prospect is indicated to be similar to that of other large tungsten deposits in the region;
- Tin mineralisation is reported to be similar to that of known deposits in the Herberton and Rossfall mineral fields; and
  - The geological setting of the prospect in close proximity to the Northedge S-type Whypalla Supersuite granite is extremely favourable for tungsten and tin mineralisation.

Slaty	Slaty Range Exploration Target		
Commodity	Tonnes (Mt)	Grade	
Tungsten	35-60	0.10-0.18% WO <sub>3</sub>	
Tin	0.6-15	0.2-1.5% Sn	

The prospect is located 61km north west of Cairns, 33km from the regional centre of Mareeba and is accessed by gazetted roads from the dual lane Mulligan Highway.

It is anticipated that work will commence on the prospect prior to the 2014 wet season. Initial activities will focus on confirming historical data and will also consist of stream sediment and soil geochemical sampling over high priority areas.

Vital's Managing Director Mark Strizek said the discovery of this underexplored target demonstrated the substantial exploration potential of the Company's broader tenement holding in North Queensland, and the opportunity to discover additional tungsten resources within close proximity of its planned development at Watershed.

"The Slaty Range anomaly is a significant discovery. The size of the anomaly is larger than that of the Company's flagship Watershed tungsten deposit and the tenor of tungsten and tin values in samples is extremely exciting.

"We are delighted to have secured this target at a time when the Watershed Project is at a pivotal point following the recent release of key findings from the DFS. Our strategy is focused on the development of Watershed and supporting that development with a pipeline of prospects that will add value to a future operation."

"While it is clear that it is still early days for the Slaty Range prospect, it appears to have tremendous potential to either expand the Watershed Project or to become a standalone operation in its own right, underpinning the Company's longer term objective to become a globally significant strategic metals company."

#### ENDS

For further details, refer to the Company's website, www.vitalmetals.com.au:

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#### **Competent Person's Statement**

The information that refers to Mineral Resources in this announcement was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since last reported.

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Mark Strizek, a Competent Person who is a Member or The Australasian Institute of Mining and Metallurgy. Mr Strizek is a full time employee of the Company. Mr Strizek has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Strizek consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources for the Watershed Deposit is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who 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 "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Tear is a Director of H&S Consultants Pty Ltd and he consents to the inclusion of the estimates in the report of the Mineral Resource in the form and context in which they appear.

This Ore Reserves statement has been compiled in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code – 2012 Edition). The Ore Reserves have been compiled by Mr Steve Craig of Orelogy Group Pty Ltd, who is a Fellow of Australasian Institute of Mining and Metallurgy. Mr Craig has had sufficient experience in Ore Reserve estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Craig consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

### **ABOUT VITAL METALS**

Vital Metals Ltd (**ASX: VML**) is a developer and explorer, focused on progressing two highly prospective mineral projects: the advanced Watershed Tungsten Project in far north Queensland, Australia and the Doulnia Gold Project in southern Burkina Faso, West Africa.

#### Watershed Tungsten Project – Queensland

The Watershed scheelite (calcium tungstate) Project, in far North Queensland, 150 kilometres northwest of Cairns, is the Company's flagship venture. Vital has entered into a formal Earn-In Agreement with JOGMEC (Japan Oil, Gas and Metals National Corporation) where JOGMEC has earnt 30% of the Project for \$5.4M (valuing the Project at the time of the farm-in at \$18M). The funds have been used to finance a Definitive Feasibility Study (DFS).

#### Doulnia Gold Project – Burkina Faso

The Doulnia Gold Project (100% Vital) is located in southern Burkina Faso, West Africa. The Project is made up of three contiguous tenements; The Doulnia and Kampala exploration tenements which were recently secured following a deal with Ampella Mining Ltd and the Zeko exploration tenement. The Project is located in highly prospective Birimian Greenstone terrain with over 400 sq. km of contiguous tenements lying on the trend of the Markoye Fault Corridor and the Bole shear zone and hosting the Kollo Gold Project and Boungou South Gold Prospect.

#### About JOGMEC

Japan Oil, Gas and Metals National Corporation (JOGMEC) were established in 2004. JOGMEC is Government owned and integrates the functions of the former Japan National Oil Corporation, which was in charge of securing a stable supply of oil and natural gas and the former Metal Mining Agency of Japan, which was in charge of ensuring a stable supply of nonferrous metal and mineral resources and implementing mine pollution control measures. It has an annual budget of around 1,564 billion yen (\$18B) and provides financial assistance, technology development and technical support to Japanese companies and their foreign subsidiaries.



**Figure 1: Vital Metals Project Locations** 







Figure 3: Slaty Range Prospect

Watershed Mineral Resources	Tonnage Mt	WO₃%
Measured	9.5	0.16
Indicated	28.4	0.14
Sub Total: Measured and Indicated	37.8	0.15
Inferred	11.5	0.15
Total: Measured, Indicated and Inferred	49.3	0.14

Table 1: Watershed Mineral Resources<sup>1</sup>

Watershed Ore Reserves	Tonnage Mt	WO₃%
Proved	6.4	0.16
Probable	15	0.14
Total: Proved and Probable	21.3	0.15

Table 2: Watershed Ore Reserves<sup>1</sup>

Name	Tenement	Elements of Interest	Tonnage Range (kt)	Grade Range	Comments
Watershed Deeps*	ML20536	W	10,500 – 14,000	0.14 - 0.25%	These Exploration Targets are conceptual in nature, and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource
Watershed South*	MDL127	W	830 - 1,000	0.06 - 0.15%	
Desailly North*	MDL127	W	830 - 1,000	0.06 - 0.15%	
Desailly*	MDL127	W	1,150 – 1,500	0.06 - 0.15%	
Mt Elephant*	EPM 14735	W, Sn	1,000 - 3,000	0.06 - 0.15%	
Slaty Range*	EPM 25102	W, Sn	35,000 – 60,000	0.10-0.18%	
Exploration Poten of current Minera	tial exclusive al Resource	W	49,000 – 80,000	0.10-0.19%	

Table 3: Watershed Project Exploration Targets<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Watershed Mineral Resources first reported in ASX release 30 July 2012.

Watershed Ore Reserves first reported in ASX release 17 September 2014.

Watershed Mineral Resources are inclusive of Ore Reserves.

Watershed Mineral Resources and Ore Reserves reported at a cut-off grade of 0.05% WO<sub>3</sub>.

Exploration Targets reported 25 November 2013, AGM Presentation. Please refer to Competent Persons statement accompanying this release.

# Assessment of historic exploration data used in this announcement

The exploration data available to Vital for the new tenement consists primarily of open file exploration data. It is considered that the historical data was collected by reputable exploration companies using best practice at the time. However it is clear that further exploration work including drilling will be required before there is sufficient information to establish geological and grade continuity with any degree of certainty.

Section 1: Sampling Techniques and Data			
Criteria	JORC Code Explanation	Commentary	
Sampling Technique	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Stream sediment sampling was completed by BHP geologists in 1981. Samples were obtained from heavy mineral traps within streams and sieved to -1mm in the field before being submitted to the laboratory. It is reported that every attempt was made to ensure that the samples were taken from a similar sedimentary environment. Analysis for tin and tungsten was completed by XRF, gold, copper, lead, zinc, silver, iron and arsenic were all analysed by AAS following various digestion methods.	
Drilling	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc.).	No drilling has been completed on the prospect to date	
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No drilling completed	
Logging	Whether core and chip samples have been geologically and geotechnical logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean/Trench, channel, etc.) photography. The total length and percentage of the relevant intersections logged.	No drilling completed	

Sub-Sampling Technique and Sample Preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	Samples were first dried then sieved to <500 micron in the laboratory prior to being further sieved to <200 micron. A 200g sample was then spilt from the mass and pulverised to a nominal <75 micron size prior to analysis. The sample preparation technique is in accordance with current standard industry practices. The pulverising to <75 micron ensures greater homogenisation and digestion rates. Field duplicates and pan concentrates were taken in the field as a quality control measure, the results of the analysis is unknown.
Quality of Assay Data and Laboratory Tests Verification of Sampling and Assaying	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes The verification of significant intersections by either independent or alternative company personnel. Discuss any adjustment to assay data	Analysis for tin and tungsten was completed by XRF, gold, copper, lead, zinc, silver, iron and arsenic were all analysed by AAS following various digestion methods. The sample preparation techniques used are in accordance with current practices. All techniques are assumed to be total for the element of interest. It is believed that the assaying techniques are appropriate for the elements of interest. Due to the historical nature of the data the results will be validated by additional exploration. Quality control procedures adopted by the laboratory are unknown.
Location of Data points	Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used Quality and adequacy of topographic control	Sample location indicated on historical maps.
Data Spacing and Distribution	Data spacing for reporting of Exploration Results Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied	Samples taken on a intended density of 1 sample per km <sup>2</sup> No resources estimated.

Orientation of Data in Relation to Geological Structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The Slaty Range Ridge is orientated NNW, streams drain this ridge to the east and west. Major structures in the region strike to the NNW and NE. Stream sediment sampling is a regional sampling technique and will be followed up with detailed sampling
Sample Security	The measures taken to ensure sample security	Sampling is of a historical nature the sample security practices are unknown.
Audits or reviews	The results of any audits or reviews of sampling techniques and data	No reviews or audits completed.
	Section	2 Reporting of Exploration Results
Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The exploration permit EPM 25102 was granted by the Mines Minister of Queensland on November 22 2013. The Exploration Permit is held by North Queensland Tungsten Pty Ltd a wholly owned subsidiary of Vital Metals Ltd, this EPM is not subject to any agreements and is wholly owned by Vital Metals Ltd.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	Previous exploration by other parties is detailed in historical annual reports submitted to the Department of Mines. Previous holders of the area who completed the greatest amount of work were BHP and CRA. The standard of work completed by both of the companies appears to be of a high standard. Preliminary exploration techniques and quality control practices reported appear to be in line with inductor bott practice precedures and practices
Geology	Deposit type, geological setting and style of mineralisation.	Mapping by BHP geologists identified mineralisation that is related to a granite intrusive located in the centre of the range and is within porphyritic intrusions, quartz veining and areas of greisen alteration.
Drill Hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No holes drilled to date. Primary tungsten and tin mineralisation in the Hodgkinson Province is related to granitic intrusives, the Whypalla supersuite granites are closely associated to all tungsten and tin mineral deposits in the region. The Northedge Granite at Slaty Rage is a Whypalla Supersuite granite which appears to have high fractionation and as a result high fertility for mineralisation.

	Data Aggregation Methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No data aggregation completed.
	Relationship	These relationships are particularly	No holes drilled to date, mineralisation is anticipated to be
	Between	important in the reporting of Exploration	orientated with NNW strike.
	Widths and	mineralisation with respect to the drill hole	
	Intercept	angle is known, its nature should be	
)	Lengths	reported. If it is not known and only the	
·		should be a clear statement to this effect	
		(eg 'down hole length, true width not	
		known').	
	Diagrams	Appropriate maps and sections (with	The appropriate location plans have been included in the text of
/	2.08.0000	scales) and tabulations of intercepts	this document
		should be included for any significant	this document.
)		include, but not be limited to a plan view	
/		of drill hole collar locations and	
		appropriate sectional views.	
)	Reporting	Exploration Results is not practicable.	Reporting is on stream sediment samples and as such may be
		representative reporting of both low and	biased to some extent. Drilling and further sampling is required
		high grades and/or widths should be	on the prospect.
		Exploration Results.	
1	Other	Other exploration data, if meaningful and	Geophysical exploration is limited to EM surveys for massive
	Substantive	material, should be reported including (but	sulphides: this technique is not applicable to the mineralisation
)	Exploration	not limited to): geological observations; geophysical survey results: geochemical	styles being explored for.
	2444	survey results; bulk samples – size and	Geochemical sampling results have been reported no additional
		method of treatment; metallurgical test	detailed exploration has been completed on the exploration
		results; bulk density, groundwater,	target
-		potential deleterious or contaminating	
		substances.	
/	Further Work	The nature and scale of planned further	Further exploration work is planned this will include follow up
		work (eg tests for lateral extensions or large	stream sediment sampling and mapping to validate historical
		scale step out drilling.	sampling Once the results of this work have been received Vital
		Diagrams clearly highlighting the areas	will be able to better identify the extents of minoralisation and
		of possible extensions, including the	win be able to better identity the extents of mineralisation dilu
		main geological interpretations and	prepare for utiling.
		tuture drilling areas, provided this	
/		sensitive.	