



## ASX RELEASE

25 June 2018

# POTENTIAL TO RECOVER VANADIUM, TITANIUM & CHROMIUM BI-PRODUCTS WITH GOLD CONCENTRATE

### HIGHLIGHTS:

- ✓ Analyses of black sand concentrates from gold-bearing sediments in the creek systems at Crown Ridge suggest potential for vanadium, titanium and chrome bi-products of gold recovery
- ✓ QEMSCAN analysis planned to determine mineral species and relative quantities in the black sand concentrates
- ✓ Metallurgical testwork planned to separate minerals into individual concentrates

Papua New Guinea-focused precious metals exploration company Gold Mountain Limited (ASX: GMN) ("Gold Mountain" or "the Company") is pleased to advise that analyses of black sand pan concentrates from the gold-bearing sediments in the creek systems at Crown Ridge indicates potential bi-products during gold recovery, including:

- Vanadium: up to 0.35% V<sub>2</sub>O<sub>5</sub> average 0.19%<sup>1</sup>
- Titanium: up to 44.9% TiO<sub>2</sub> average 35.4%<sup>2</sup>
- Chrome: up to 14.9% Cr<sub>2</sub>O<sub>3</sub> average 7.7%<sup>3</sup>

Twenty-three black sand pan concentrate (PC) samples were collected from Kiangap, Uman and Timun Creeks (Crown Ridge prospect within ELs 1968 and 2306) and were analysed by ALS Townsville (Certificate of Analysis TV18095683). Each of the PC samples came from 3-5 pan loads (approximately 6-10kg) of active sediment, with the resultant concentrates weighing between 120 grams and 190 grams. Assay results for the 23 PC samples are presented in Table 1. Sample locations are shown in Figure 3.

### Mineralogy

Gold Mountain will have the black sand concentrates analysed by CSIRO's QEMSCAN method to identify the relative percentages of the minerals that host the vanadium, titanium and chromium. Determination of the mineral suite by CSIRO will assist metallurgical studies and offtake buyer evaluation.

<sup>1</sup> Conversion factor: V<sub>2</sub>O<sub>5</sub> = V x 1.785

<sup>2</sup> Conversion factor: TiO<sub>2</sub> = Ti x 1.668

<sup>3</sup> Conversion factor: Cr<sub>2</sub>O<sub>3</sub> = Cr x 1.462



SAMPLE	East	North	Type	Weight (grams)	Au_ppm	Cr_%	Fe_%	Ti_%	V_%
135715	816919	9407494	PC	120	10.1	3.12	33.9	24.9	0.14
135716	816653	9407480	PC	170	30.1	7.49	34.5	26.8	0.12
135717	816699	9407894	PC	130	28.7	4.85	32.3	25.3	0.13
135718	816800	9408066	PC	140	1.1	4.58	30.8	24.9	0.12
135719	816920	9408142	PC	150	4.9	5.77	28.4	26.6	0.11
135720	816699	9408163	PC	140	52.2	6.74	28.5	26.9	0.11
135721	816674	9407453	PC	150	12.3	6.49	25.6	24.6	0.10
135722	817206	9407293	PC	150	44.1	10.16	19.7	17.2	0.08
135723	817412	9407634	PC	190	4.6	5.25	28.0	19.7	0.12
135724	817344	9407496	PC	140	1.2	3.50	34.0	14.3	0.20
135725	817134	9407503	PC	130	18.7	6.63	26.7	22.4	0.10
135726	816908	9407499	PC	150	5.0	6.74	26.7	24.7	0.10
135727	816623	9407514	PC	130	3.2	4.16	24.8	19.5	0.10
135728	816660	9407238	PC	120	3.8	2.14	13.8	8.1	0.06
135729	815639	9407911	PC	160	18.2	4.01	28.1	19.5	0.09
135730	815809	9408051	PC	150	6.3	5.48	27.1	21.9	0.11
135731	816065	9408108	PC	160	0.5	3.76	24.2	19.6	0.10
135732	816322	9408161	PC	140	3.1	3.68	24.7	19.5	0.11
135733	816811	9408162	PC	150	1.4	4.96	26.5	22.3	0.11
135734	816766	9407925	PC	160	2.3	5.17	25.0	21.5	0.10
135735	816498	9407867	PC	150	16.3	6.34	21.6	17.0	0.08
135736	816243	9407768	PC	150	6.6	5.31	26.8	21.6	0.11
135737	816115	9407629	PC	160	5.9	4.91	27.9	19.1	0.11

**Table 1: 23 stream sediment pan concentrates samples from Crown Ridge prospect**

Note: Location co-ordinates in WGS84, Zone 54S datum; Assay results reported in ALS Certificate of Analysis TV18095683

## Metallurgy

The Company has engaged an experienced mineral processing consultant (Tony King, Tableland Analytical Services) to conduct trials to separate the black sand into specific individual mineral concentrates using magnetic separators and gravity tables. The objective is to produce higher grade concentrates for appraisal by offtake buyers.

Managing Director Tony Teng stated:

*“Crown Ridge is exceptional. We undertook grassroots exploration for gold and we found it, but we also discovered significant platinum credits. Now we have found the highly sought after battery metal vanadium in the black sand concentrates and abundant titanium and chromium. Just in time, as the mobile bulk sampling plant will be on site at the end of the month to process 125m<sup>3</sup> bulk samples. We are excited about the quantities of vanadium, titanium and chromium in the concentrate, which could provide valuable additions to the free gold and platinum that has been recovered in previous testwork on the host conglomerate. The scout diamond drilling program conducted over the past year has confirmed that the gold-platinum hosting conglomerate is continuous over hundreds of metres laterally and is 70 to 90 metres thick.”*



### About Gold Mountain

Gold Mountain Limited is an Australian-based minerals exploration and development company that is listed on the Australian Securities Exchange (ASX:GMN).

Gold Mountain's principal exploration project is in Papua New Guinea, where the Company is exploring and developing a number of highly promising mineralised zones (Figure 1, Figure 2). The majority of the areas within the exploration licences have never been explored using modern technology. Multiple targets have been identified over the project area of nearly 2,000 km<sup>2</sup>. Early success indicates significant potential for further discoveries within the ELs:

- the Flagship Crown Ridge project, where ongoing programs are assessing the potential for free gold and platinum in conglomerate;
- discovery of large porphyry system at Mongae Creek; and
- newly discovered mineralised floaters from a low-sulphidation epithermal gold system at Lialam (refer to ASX announcement 5 March 2018).

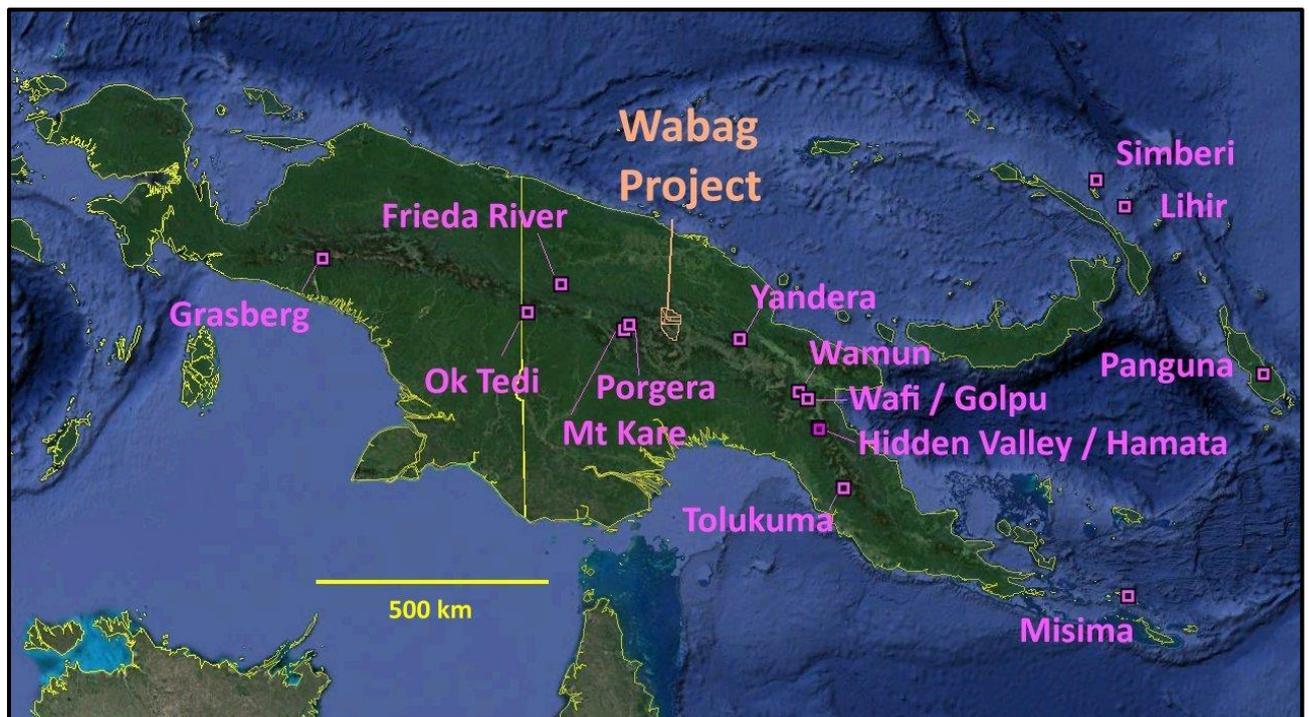


Figure 1: Location of Wabag Project relative to major World Class gold mines in Papua New Guinea

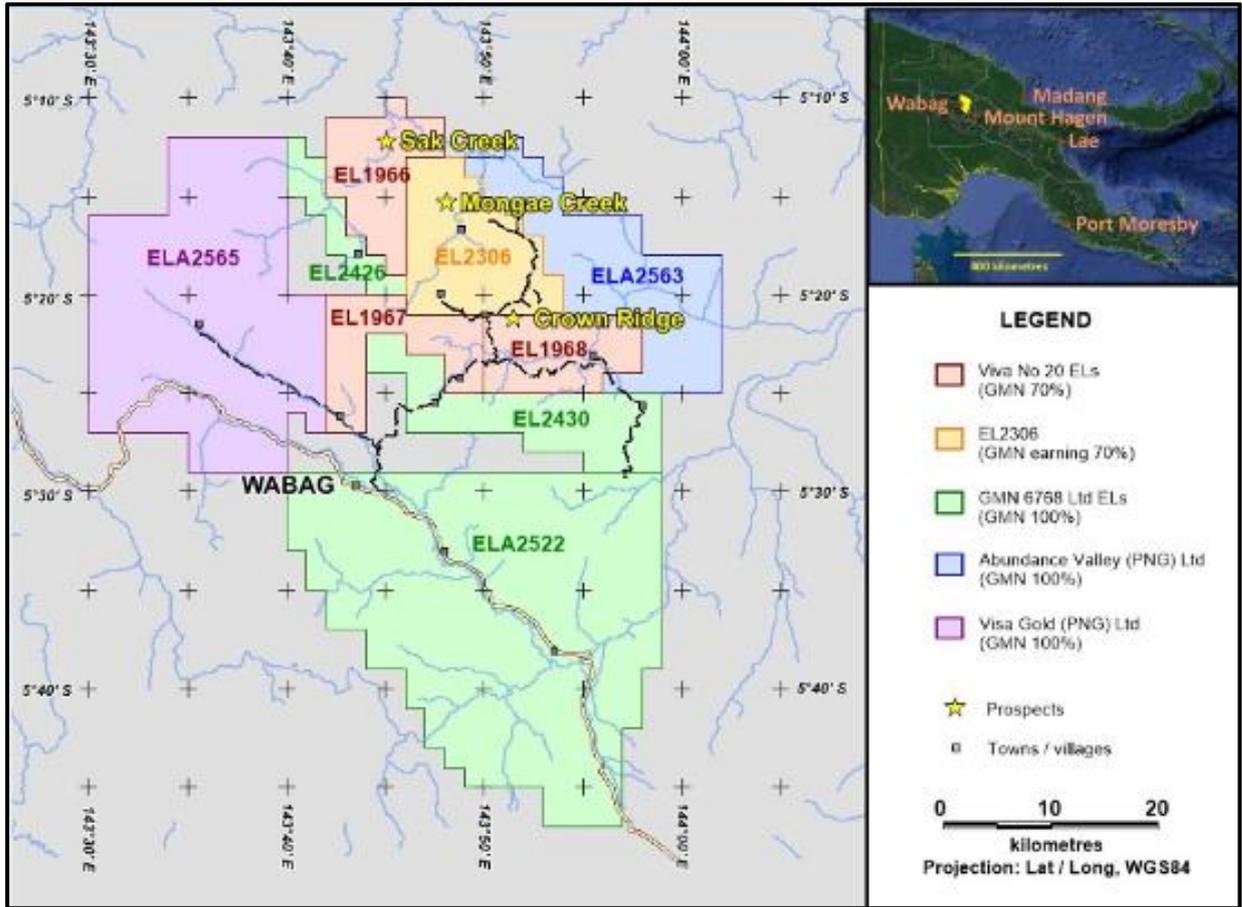


Figure 2: Exploration Licences controlled by GMN in Enga Province

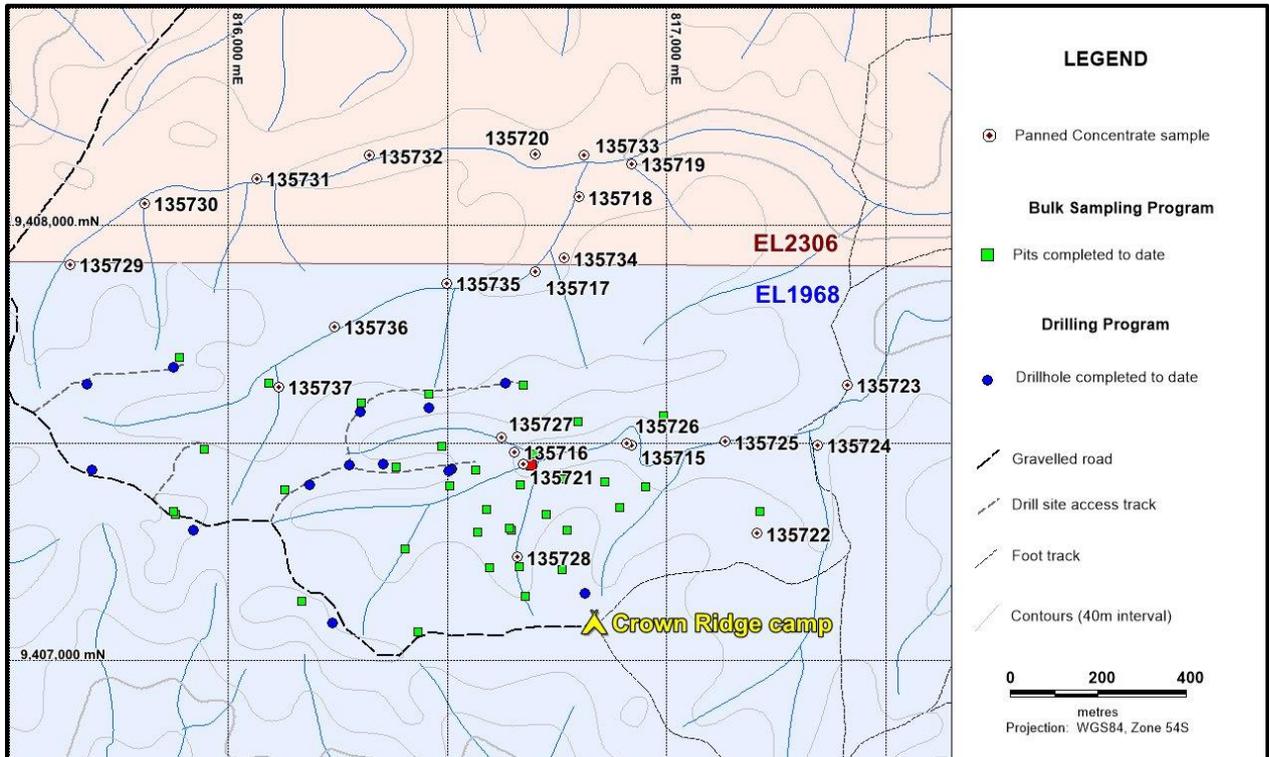


Figure 3: Location of PC samples at Crown Ridge prospect



To view the latest photographs showing progress of exploration programs on the Wabag project here:  
<https://www.goldmountainltd.com.au/gallery>

**For further information please see our website [www.goldmountainltd.com.au](http://www.goldmountainltd.com.au) or contact:**

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#### **About Gold Mountain**

Gold Mountain Limited (ASX:GMN) is a junior mining explorer focused on delivering shareholder returns by developing its gold projects in Papua New Guinea (PNG). The company's experienced management team has assembled a portfolio of tenements prospective for gold, covering a total area of 2010km<sup>2</sup> within the Highlands of PNG. Gold Mountain is now focused on advancing its flagship Crown Ridge Gold project to assess the viability of and, results permitting, develop a relatively short term start up bulk gold mining operation.

The Company is fully funded for the current drilling and bulk sampling program aim at defining a maiden Mineral Resource Estimate (MRE) under JORC 2012 guidelines and additional exploration as required.

*Statements contained in this report relating to exploration results and potential are based on information compiled by Doug Smith, who is a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Doug is a consultant geologist and has sufficient relevant experience in relation to the mineralisation styles being reported on to qualify as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral resources and Ore reserves (JORC Code 2012). Doug Smith consents to the use of this information in this report in the form and context in which it appears.*



## JORC Code, 2012 Edition – Table 1 report

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
<b>Sampling techniques</b>	Black sand concentrate was produced by hand panning using standard gold pan method to collect between 120 and 190 grams of black sand per sample location
<b>Drilling techniques</b>	No drilling results reported in this announcement.
<b>Drill sample recovery</b>	No drilling results reported in this announcement.
<b>Logging</b>	Samples were logged as black sand after panning
<b>Sub-sampling techniques and sample preparation</b>	No sub-sampling of the panned concentrate samples was undertaken prior to submission to Australian Laboratory Services in Townsville.
<b>Quality of assay data and laboratory tests</b>	Black sand concentrates analysed by Australian Laboratory Services (ALS) and reported in Certificate of Analyses TV18095683. Gold analyses by method Au-AA25; multi-element analyses by method ME-MS61; over-range assays for all samples that returned Cr values >10,000ppm and/or Ti >10% using method ME-XRF26s – fusion
<b>Verification of sampling and assaying</b>	No quality control sampling has been undertaken to date.
<b>Location of data points</b>	Sample collection locations were determined by hand-held GPS readings (accuracy +/- 5m) and recorded in WGS84, Zone 54S datum.
<b>Data spacing and distribution</b>	Data spacing and distribution will not be sufficient for Mineral Resource estimation. No sample compositing has been applied.
<b>Orientation of data in relation to geological structure</b>	The orientation of samples is not likely to bias the assay results.
<b>Sample security</b>	All samples were stored securely at the Crown Ridge camp prior to transport by company personnel to TNT freight depot in Mt Hagen for airfreight to ALS in Townsville.
<b>Audits or reviews</b>	No audits of the data have been undertaken to date.



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
<b><i>Mineral tenement and land tenure status</i></b>	<p>EL1968 was granted to Viva No 20 Limited on 28 Nov 2013 and expires on 27 Nov 2017. The current tenement area is 164 km<sup>2</sup>. GMN has earned 70% interest. Application for renewal of the tenement has been lodged with MRA in Port Moresby.</p> <p>EL2306 was granted to Khor Eng Hock &amp; Sons (PNG) Limited on 14 Dec 2015 and expires on 13 Dec 2017. The current tenement area is 328 km<sup>2</sup>. GMN has earned 70% interest. Application for renewal of the tenement has been lodged with MRA in Port Moresby.</p>
<b><i>Exploration done by other parties</i></b>	All exploration programs conducted by Gold Mountain Limited.
<b><i>Geology</i></b>	EL1968 & EL2306 contain potential for intrusive-related gold-copper deposits, epithermal-style gold deposits, alluvial gold-platinum deposits and Alaskan-style platinum deposits.
<b><i>Drill hole Information</i></b>	No drilling results reported in this announcement.
<b><i>Data aggregation methods</i></b>	No drilling results reported in this announcement.
<b><i>Relationship between mineralisation widths and intercept lengths</i></b>	No drilling results reported in this announcement.
<b><i>Locations</i></b>	Table 1 lists pan concentrate black sand sample collection positions determined by hand-held GPS readings (accuracy +/- 5m)
<b><i>Balanced reporting</i></b>	Announcement reports all V, Ti and Cr results of all the stream sediment panned concentrate samples analysed to date.
<b><i>Other substantive exploration data</i></b>	<p>Geochemical surveys have been previously reported. These included soil sampling, stream sediment sampling, rock chip sampling, trench and pit sampling.</p> <p>A Helimag survey involving flying lines at 100-metre line spacing, was completed in 2016 and processing and reporting of the data were previously announced.</p>
<b><i>Further work</i></b>	<p>Continued bulk sampling Crown Ridge, leading up to the estimation of Mineral Resources.</p> <p>Regional geochemical sampling and geological mapping to detect other areas of potential gold mineralisation.</p>