



## **VICTORY METALS INC.**

### **VICTORY METALS DEMONSTRATES OVER 90% VANADIUM RECOVERY USING A HYDROMETALLURGICAL LEACH PROCESS AT THE IRON POINT PROJECT, NEVADA**

Vancouver, British Columbia, April 17, 2019 - Victory Metals (“TSX-V:VMX”) (“Victory” or the “Company”) is pleased to announce results from initial metallurgical tests conducted by McClelland Laboratories, Inc. (“McClelland Laboratories”) of Sparks, Nevada, on drill cuttings from the Company’s Iron Point Vanadium Project. Test work using hydrometallurgical processes at atmospheric pressure has yielded vanadium recoveries in excess of 90% in leach times of less than eight hours.

#### **Highlights – Phase I Metallurgical Testwork**

- Initial bench-scale hydrometallurgical leach testing on Iron Point RC drill cuttings demonstrate up to 94.3% vanadium recovery at atmospheric pressure and 8-hour leach times
- RC drill cutting Master Composite used in testing had a median head grade of 0.38% V<sub>2</sub>O<sub>5</sub>
- 16 preliminary tests were completed utilizing the Master Composite and varying four test factors: temperature, slurry solids density, and concentrations of hydrofluoric and sulphuric acid
- Phase II testing is underway that will further define operating parameters required to develop an economic atmospheric leaching process for Iron Point vanadium mineralization

Jeff Woods, Victory’s Chief Metallurgist stated: “Preliminary testing last year by McClelland Laboratories on drill core samples indicated that a low-cost atmospheric leach may be suitable for Iron Point vanadium mineralization. A review of published work led to the first phase of experimental tests released today utilizing RC drill cuttings. Our preliminary tests confirm that an atmospheric leach process can successfully recover vanadium at levels greater than 90% with potential for relatively low acid consumption. We are in the process of augmenting the initial test work to optimize recovery and minimize operating costs, before starting variability testing and solvent extraction/precipitation testing.”

Paul Matysek, Executive Chairman, stated: “Initial metallurgical testing conducted at McClelland Laboratories is very encouraging, creating a pathway forward to a potentially economic processing route for the Iron Point Vanadium Project. Importantly, the methods explored are done at ambient pressure without the use of costly pressure oxidization or roasting. Furthermore, these hydrometallurgical methods are commonly utilized in base metal processes and show promise for applicability to vanadium recovery. Our maiden drilling campaign clearly outlined a large mineralized system. With promising initial metallurgical results returned to date, we can work towards identifying an economic process that will allow us to fast track towards resource definition and a Preliminary Economic Assessment.”

#### **Phase I Testwork**

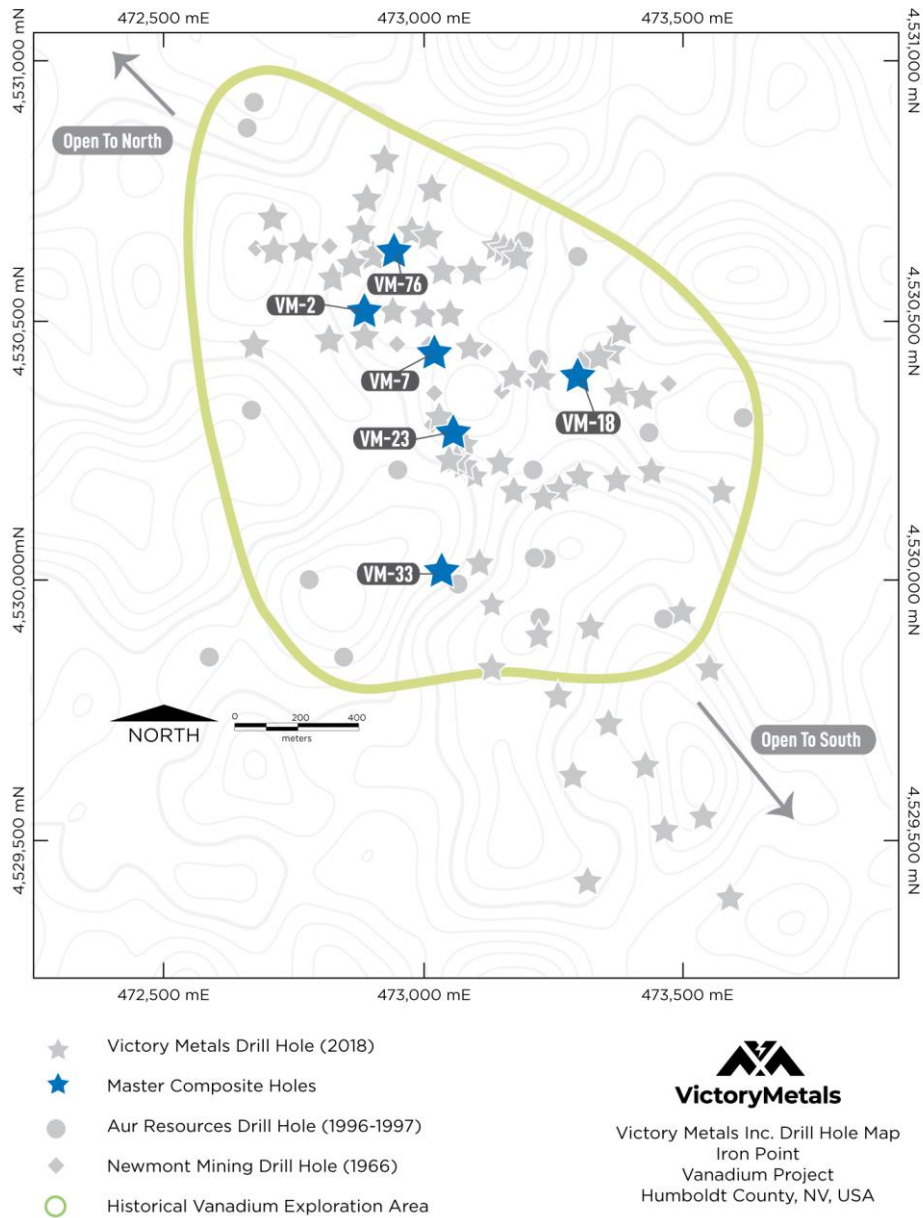
A total of 197 Reverse Circulation (“RC”) drill reject samples were delivered to McClelland Laboratories of Sparks, Nevada, for sample prep, assaying, and compositing. McClelland Laboratories, established in

1986, is recognized as a top mineral-processing laboratory with a focus on hydrometallurgical extraction of precious and base metals, as well as specific experience in vanadium metallurgy. Their experience and knowledge have accelerated the development of Victory's atmospheric hydrometallurgical process.

A Master Composite sample was constructed using 197 drill cuttings interval samples that best represented both the spatial and stratigraphic distribution of mineralized zones throughout the Iron Point Project as described in Table 1 and shown in Figure 1. Specifically, the Master Composite is made up of cuttings from drill intervals ranging between a depth of 1.5 m to 164.6 m. Intervals incorporated into the composite had a minimum grade of 0.17% V<sub>2</sub>O<sub>5</sub>, a maximum grade of 1.14% V<sub>2</sub>O<sub>5</sub>, a median grade of 0.38% V<sub>2</sub>O<sub>5</sub>, and a mean (unweighted) grade of 0.34% V<sub>2</sub>O<sub>5</sub> from triplicate analysis.

**Table 1: RC Drill Cutting Intervals used in the Master Composite**

| RC Hole ID | Number | Range of Depth m |       | V <sub>2</sub> O <sub>5</sub> % |      |      |
|------------|--------|------------------|-------|---------------------------------|------|------|
|            |        | Min              | Max   | Min                             | Max  | Mean |
| VM-2       | 36     | 9.1              | 164.6 | 0.21                            | 0.79 | 0.45 |
| VM-7       | 39     | 6.1              | 137.2 | 0.20                            | 0.79 | 0.46 |
| VM-18      | 31     | 4.6              | 65.5  | 0.21                            | 0.64 | 0.38 |
| VM-23      | 18     | 1.5              | 85.3  | 0.25                            | 0.99 | 0.61 |
| VM-33      | 44     | 42.7             | 128.0 | 0.21                            | 0.71 | 0.35 |
| VM-76      | 29     | 6.1              | 146.3 | 0.17                            | 1.14 | 0.42 |



**Figure 1: Hole Locations for RC Drill Cutting Intervals used in the Master Composite**

After a review of published work and some early test work on drill core samples, a Design of Experiments program (DOE) was initiated as a scoping level trial using four primary leaching factors, namely: leach temperature, slurry solids density, hydrofluoric acid dosage and sulfuric acid dosage. DOE methods are used to determine the effects of several factors at once and are statistically analyzed to determine the effects of each factors, i.e. acid dosage or temperature, also the interaction of two or more factors on the system, i.e. temperature and slurry solids density. Owing to the number of factors, a two-level factorial design was used for the initial runs. Sixteen tests were run using different combinations of Hi and Lo values for each of the factors. All tests were run at atmospheric pressure with a leach time of eight hours. Initial factor high and low levels were selected based on similar unit operations currently used in the industry,

i.e. slurry solids density 20 to 50 percent, which is common in flotation concentrate products and gold leach circuits, respectively. Owing to the atmospheric leaching process, maximum temperature considered was 100 degrees centigrade. Intermittent samples were taken at two, four, and six hours and each solution analyzed for pH, oxidation-reduction potential (ORP), and acid concentration. For each test make-up, water and reagents were added as required to maintain the DOE factor levels. At the termination of the test, samples were filtered with dried solids and leach solutions submitted for analyses. Statistical analysis of the data was done using Stat-Ease’s Design Expert and SAS’ JMP statistical analysis software.

**Table 2: DOE Parameter Matrix with Summary Agitation Leach Test Results, Iron Point Master Composite, for each of the 16 Tests**

| Test ID | Factor 1<br>Temp.,<br>°C | Factor 2<br>Density,<br>% solids | Factor 3<br>HF<br>g/L | Factor 4<br>H <sub>2</sub> SO <sub>4</sub> ,<br>g/L | Leach<br>Time, hr | V<br>Recovery,<br>% | H <sub>2</sub> SO <sub>4</sub><br>Consumption<br>kg/mt |
|---------|--------------------------|----------------------------------|-----------------------|---|-------------------|---------------------|--|
| DOE-1   | Lo                       | Lo                               | Hi                    | Lo  | 8                 | 47.3                | 115  |
| DOE-2   | Lo                       | Lo                               | Lo                    | Hi  | 8                 | 48.9                | 189  |
| DOE-3   | Lo                       | Hi                               | Lo                    | Lo  | 8                 | 21.3                | 103  |
| DOE-4   | Lo                       | Hi                               | Hi                    | Hi  | 8                 | 53.5                | 170  |
| DOE-5   | Lo                       | Lo                               | Lo                    | Lo  | 8                 | 33.7                | 122  |
| DOE-6   | Lo                       | Hi                               | Hi                    | Lo  | 8                 | 33.0                | 99   |
| DOE-7   | Lo                       | Hi                               | Lo                    | Hi  | 8                 | 44.0                | 102  |
| DOE-8   | Lo                       | Lo                               | Hi                    | Hi  | 8                 | 65.7                | N/A*   |
| DOE-9   | Hi                       | Hi                               | Hi                    | Hi  | 8                 | 90.6                | 142  |
| DOE-10  | Hi                       | Lo                               | Lo                    | Hi  | 8                 | 89.0                | 103  |
| DOE-11  | Hi                       | Hi                               | Lo                    | Lo  | 8                 | 41.8                | 118  |
| DOE-12  | Hi                       | Lo                               | Hi                    | Lo  | 8                 | 92.8                | 88   |
| DOE-13  | Hi                       | Hi                               | Hi                    | Lo  | 8                 | 66.9                | 127  |
| DOE-14  | Hi                       | Lo                               | Lo                    | Lo  | 8                 | 71.5                | 112  |
| DOE-15  | Hi                       | Hi                               | Lo                    | Hi  | 8                 | 75.3                | 127  |
| DOE-16  | Hi                       | Lo                               | Hi                    | Hi  | 8                 | 94.3                | 101  |

*\*Conditions for DOE-8 are being re-run owing to anomalies with the acid balance results.*

Table 2 shows the high and low level for each of the tests, as well as two of the primary responses, namely vanadium recovery percentage and sulfuric acid consumption. Highlighted areas correspond to the upper quartile of vanadium recovery, i.e. the top four tests. The highest vanadium recoveries are associated with some combination of higher sulfuric acid dosage and temperature. The best four combinations average 91.7% vanadium recovery with the highest recovery of 94.3% associated with a low percentage of solid solution, and higher temperature and acid dosage. The upper quartile vanadium tests show acid consumptions ranging between 88 kg/t and 142 kg/t with an average of 109 kg/t.

The high temperature runs consistently outperformed the low temperature runs with respect to vanadium. Acid dosages have a lower level of impact than temperature on recovery. High solids density

has a negative influence on the recovery, though not as statistically significant as temperature or sulfuric acid dosage.

### **Phase II Testing Underway**

Further testing is underway that will better define operating parameters required to develop an economic atmospheric leaching process. It should be noted that the initial DOE runs are not optimized. Supplemental testing is in progress to augment the initial DOE with additional runs to optimize the leach parameters. It is expected that improvements in recovery and acid consumption are likely.

Testing of several samples spatially distributed throughout the deposit and at different vanadium grades, will also be completed (“variability testing”) to confirm metallurgical responses throughout the deposit. Results of the variability testing will be used to develop the geometallurgical model for the Iron Point deposit and support the engineering and design process. Additionally, bulk samples will be used to generate pregnant leach solution for subsequent solvent extraction and vanadium precipitation testing. Owing to the nature of the Victory leach process, downstream processing of the vanadium rich solutions will be via a commercially proven process to produce a high grade V<sub>2</sub>O<sub>5</sub> product.

### **Qualified Person**

The scientific and technical information in this news release has been reviewed and approved by Jeffrey L. Woods, B.Sc., SME-QP, MMSA-QP, who is a Qualified Person as defined by National Instrument 43-101.

### **About Victory Metals**

Victory owns a 100% interest in the Iron Point Vanadium Project, located 22 miles east of Winnemucca, Nevada. The project is located within a few miles of Interstate 80, has high voltage electric power lines running through the project area, and a railroad line passing across the northern property boundary. The Company is well financed to advance the project through resource estimation and initial feasibility study work. Victory has a proven capital markets and mining team led by Executive Chairman Paul Matysek. Major shareholders include Casino Gold (50%), and management, directors and founders (25%). Approximately 51% of the Company’s issued and outstanding shares are subject to an escrow release over three years.

Please see the Company’s website at [www.victorymetals.ca](http://www.victorymetals.ca).

For more information, contact Collin Kettell at [ck@victorymetals.ca](mailto:ck@victorymetals.ca).

On Behalf of the Board of Directors of  
**VICTORY METALS INC.**

Paul Matysek  
Executive Chairman and Director

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**Forward-Looking Information**

*This news release contains certain forward-looking information and forward-looking statements within the meaning of applicable securities legislation (collectively "forward-looking statements"). Certain information contained herein constitutes "forward-looking information" under Canadian securities legislation. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "expects", "believes", "aims to", "plans to" or "intends to" or variations of such words and phrases or statements that certain actions, events or results "will" occur. Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed by such forward-looking statements or forward-looking information, including the business of the Company, the speculative nature of mineral exploration and development, fluctuating commodity prices, competitive risks, and delay, inability to complete a financing or failure to receive regulatory approvals. Although management of the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements or forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements and forward-looking information. The Company does not undertake to update any forward-looking statements or forward-looking information that are incorporated by reference herein, except as required by applicable securities laws.*