

ASX ANNOUNCEMENT 03 July 2018

## HARDEY TO ACQUIRE HIGH-QUALITY VANADIUM MINE IN ARGENTINA

#### **HIGHLIGHTS**

- Proposed acquisition of Nelly Vanadium Mine (NVM) in San Luis Province, Argentina, which has historically produced vanadium pentoxide (V₂O₅)¹
- > An application to re-open the mine will soon be lodged with the regulator in San Luis
- NVM comprises several vanadium-rich polymetallic sheeted vein systems, aligned North-East to South-West, that are 0.9-1.0km long, up to 5.5m wide
- Notably, when NVM was operating between 1949-57, only one vein was partiallyexploited, leaving most of the deposit intact
- ➤ Historical sampling and assay results throughout the historical workings produced grades from the partially mined vein that ranged up to 1.9% V<sub>2</sub>O<sub>5</sub> with a length weighted sample average of 0.82% V<sub>2</sub>O<sub>5</sub>
- Utilising modern exploration techniques, focused on workings and surrounding areas, coupled with undertaking a desktop review, the geology team plans to implement a drilling program that will generate geological and assay information with the aim of modelling a JORC (2012) compliant resource
- NVM has access to reliable power / water and a skilled labour pool, while there is a transport infrastructure connecting the mine to key ports
- Supply shortages, due to China shutting polluting mines, coupled with accelerating demand from the renewable battery sector, has underpinned a substantial increase in the vanadium price over the past 2-3 years<sup>2</sup>
- In turn, the higher vanadium price has stimulated the search for new vanadium supply chains globally, and improved the financial case for re-opening NVM

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Hardey Resources Executive Chairman, Terence Clee commented: "Upon finalising the acquisition, the Board's focus will be undertaking exploration activities with the aim of proving up a JORC compliant resource and moving to re-open the Nelly Vanadium Mine. Furthermore, the Board is optimistic demand for vanadium will remain robust over the next few years, as structural changes augur favourably for the continued expansion of the renewable battery sector."

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Hardey Resources Limited (ASX: HDY) ("HDY" or "the Company") is pleased to announce that it has entered into a share sale agreement with the shareholders of Nelly Vanadium Pty Ltd (NVPL). Under the terms of this agreement, HDY has been granted a 40-day option to acquire 100% of the issued capital of NVPL which is a mineral explorer that owns the Nelly Vanadium Mine (NVM) in San Luis Province in Argentina ("NVPL acquisition"). NVPL will soon lodge an application with the San Luis mines department to re-open the NVM, with the aim of fast-tracking the recommencement of production.

The key terms of the NVPL acquisition are detailed in Appendix A to this announcement.

#### **OVERVIEW**

NVPL was established with the principal objective of acquiring the NVM and reactivating the mining license so operations can re-commence. Argentina's mining laws enable mining licences to be reactivated relatively quickly and an application to re-open the NVM will soon be lodged with the regulator.

Currently, NVPL has six shareholders holding 22,100 fully paid ordinary shares on issue. The Company has paid NVPL \$75,000 in consideration for the grant of an option to acquire 100% of the issued capital in NVPL, exercisable at any time with 40 days following the date of the agreement, during which time the Company will undertake due diligence in relation to NVPL and the NVM. If the option is exercised, at settlement of the acquisition the Company will issue 737,500,000 fully paid ordinary shares in the capital of the Company and 737,500,000 listed options to acquire Shares (exercisable at \$0.02 on or before 30 April 2020) (ASX: HDYOC).

The Shares to be issued to the NVPL shareholders as consideration for the NVPL acquisition will account for circa 35% of HDY's expanded issued capital at settlement of the NVPL acquisition.

In addition, HDY will pay a 3% net smelter return royalty to NPVL's founding shareholders for all minerals produced from the NVM.

The Board notes that none of the vendors are related parties.

### **Nelly Vanadium Mine**

NVM is a 53-hectare tenement that is located 170km from the capital of San Luis Province in Argentina (Figure 1). The mine has ready access to mains power and water supplies, while nearby towns can provide supporting services and a skilled labour pool. Further, the transportation infrastructure from the mine to key ports is more than adequate with well-formed gravel tracks, sealed highway and rail network in place.

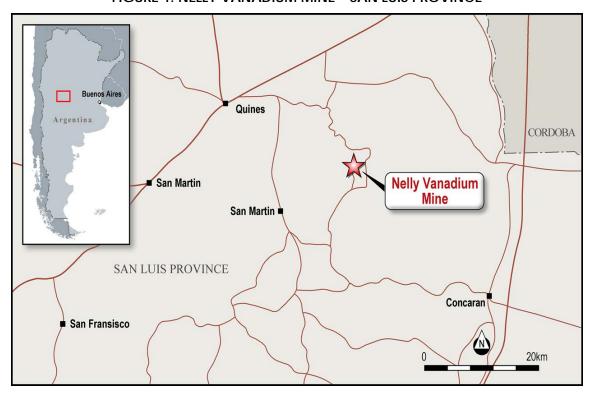


FIGURE 1: NELLY VANADIUM MINE - SAN LUIS PROVINCE

Source: NVPL geology team

According to legacy records  $^1$ , the mine was active between 1949 to 1957, with gravimetric separation and a processing plant on-site that produced  $V_2O_5$  and  $VO_3NH_4$ .

The on-site concentration processes, which were partly experimental advanced technology for the time, prevented the operation reaching a critical scale. The primary customers during the 1950s in Argentina were national alloy and acid manufacturers.

For the 1950s in Argentina, NVM was one of the few operating mines that had an on-site processing plant and accommodation for employees (refer Figure 2 and Figure 3 – satellite pictures), reflecting the significance of the deposit. The mine was initially developed as an open pit and subsequently underground galleries were progressed.

FIGURE 2: SATELLITE PICTURE OF NELLY VANADIUM MINE



FIGURE 3: SATELLITE PICTURE OF NELLY VANADIUM MINE - CLOSE UP



Source: NVPL geology team

## **Upside potential**

Since the mine closed in 1957, there have been several studies undertaken by local geology teams (1959<sup>1</sup>, 1973<sup>5</sup>, 1974<sup>5</sup>, & 1999<sup>5</sup>) which have repeatedly argued that NVM and surrounding areas are significantly underexplored.

These same studies took samples and assayed them, resulting in confirmation of polymetallic mineralisation for  $V_2O_5$ , Pb, Zn, Cu, Au, Ag, Mo and Bi . The historical assay results for  $V_2O_5$  ranged up to 1.9%  $V_2O_5$ , with a length weighted sample average of 0.82%  $V_2O_5$  (refer to Table 1).

NVM is located in the Las Aguadas district (San Luis), where the regional geology is dominated by Precambrian to Cambrian metamorphic rocks, with granitic intrusions of variable dimensions. This is a lead-vanadium mining district with many historic mines that documented their Pb-V production. The regional target mineral is vanadinite, a lead chloro-vanadate, that is by weight 73.1% Pb and 10.8% V. At NVM, vanadinite occurs within quartz mineralised veins.

### **Unexploited mineralised veins**

When NVM was operating during the 1950s, only part of the known deposit was exploited, leaving most the untapped mineralisation intact. The extent of the deposit is a key feature the geology team will be working on in coming months, given NVM delivers considerable exploration upside.

To date, detailed work by the geology team has determined there are several mineralised veins at surface which are emplaced in a structural trend aligned North-East to South-West. More specifically, most of these comprise parallel veins creating a sheeted system. Some of these mineralised veins have been mapped outcropping within alteration halos at surface, but the ones trending underground are completely unexplored.

To provide context, the schematic model (Figure 4) shows potential underground extensions within a vanadium-rich polymetallic vein system. As the exploration program ramps up, this model will be tested systematically with modern exploration techniques and equipment.

Historic production plant

Access road

Underground sheeted veins system

FIGURE 4: MINERALISATION MODEL HIGHLIGHTS VEIN SYSTEM

Note: Further exploration techniques would be required to determine the extent and structure of the underground vein system

Source: NVPL geology team, not to scale, a stylistic representation of the local geology

#### Mineralised trend

In reviewing legacy reference reports<sup>5</sup>, the geology team were able to confirm a 0.9-1.0km mineralised trend running through the tenement, the original miners mapped up to four vein outcrops, significantly only one of these was partially mined (Figure 5).

Mapped veins by previous company Nelly Mine application boundary Mineralised trend Historical Nelly Vanadium Mine (HNVM) Historical production plant for HNVM ore

FIGURE 5: MINERALISED TREND RUNNING THROUGH NVM TENEMENT

Source: NVPL geology team

The maximum width of four mapped main mineralised veins ranged up to 5.5m wide, with historic workings verifying the mineralisation extends to a 40m depth. However, geophysical survey techniques and exploration drilling is anticipated to extend the mineralisation in the dip direction of the mineralised veins.

Typical for the period, only basic exploration methods were used. Hence, the geology team is optimistic there is significant upside potential to verify extensive mineralisation at NVM using modern exploration techniques. Once the necessary geological and assay data has been compiled, the team will progress modelling a mineral resource estimate in accordance with the JORC (2012) code.

#### Global demand drivers

Over the past 2-3 years, the twin effects of global supply bottlenecks and rising demand have underpinned a significant increase in the vanadium price.<sup>2</sup>

On the supply side, China, which supplies around 50% of global vanadium<sup>3</sup>, is using more of its output internally following new rules to double rebar requirements in concrete structures (post-recent earthquakes).<sup>4</sup> Concurrently, it has shuttered polluting mines, reducing its output by circa 10% and propelling a search for new vanadium supply chains that includes Australia and Argentina.

Traditionally the steel industry consumes around 90% of global vanadium, but at the margin demand from the renewable battery sector is starting to take-off.<sup>4</sup>

Specifically, demand for scalable energy storage is accelerating, reflecting wider renewable energy adaption. Within this product group, Vanadium Redox Batteries (VRBs) are an emerging solution end-users are starting to accept.

Some key positive attributes for VRBs4 include:

- Scalability and suitable for grid connection;
- 20-yr lifespan and instant energy release;
- Excellent charge retention / discharge; and
- ➤ Using only one element in electrolyte form: V<sub>2</sub>O<sub>5</sub>

Arguably, if this transformation progresses then it will propel vanadium towards energy commodity status.

#### **Extraordinary General Meeting**

The Company will shortly commence preparation of a notice of meeting to convene a general meeting of shareholders to seek shareholder approvals required to give effect to the acquisition, including for the issue of the consideration shares and consideration options.

#### Pro-forma capital structure

A pro forma capital structure for the Company upon completion of the NVPL acquisition is set out below:

	Shares	Options
Current	1,361,815,830	861,810,924 <sup>1</sup>
Consideration	737,500,000	737,500,0002
Total	2,099,315,830	1,599,310,924

#### Notes:

- 1. The terms of the current options on issue are as follows:
  - a. 812,884,346 listed options exercisable at \$0.02 on or before 30 April 2020 (ASX: HDYOC);
  - b. 45,525,000 options exercisable at \$0.06 on or before 19 August 2020; and
  - c. 3,401,578 options exercisable at \$0.044 on or before 1 October 2020.

2. Consideration options are listed options exercisable at \$0.02 on or before 30 April 2020 (ASX: HDYOC).

#### Indicative timetable\*

An indicative timetable for the VPL acquisition is set out below:

Event	Date
Execution of acquisition agreement	03 July 2018
Dispatch of notice of meeting seeking shareholder approvals for the NVPL acquisition	16 July 2018
General meeting to approve the NVPL acquisition	20 August 2018
Settlement of the acquisition	27 August 2018

<sup>\*</sup> The above dates are indicative only and may change without notice.

For and on behalf of the Board

Terence Clee Executive Chairman

#### **COMPETENT PERSON'S STATEMENT:**

The information in this report that relates to Geological Interpretation, Historical Exploration Results, or Historical Mineral Resources is based on information compiled by Nicholas Ryan, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Ryan has been a Member of the Australian Institute of Mining and Metallurgy for 12 years and is a Chartered Professional (Geology). Mr Ryan is employed by Xplore Resources Pty Ltd. Mr Ryan has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Ryan consents to the inclusion in the report of the matters based on his information and the form and context in which it appears.

#### References

- 1) Geological study of the Nelly Mine, Alessi 1959
- 2) Burton, M. "Best-Performing Battery Metal of the Past Year Isn't Cobalt" 26 January 2018 Bloomberg Business Week <www.bloomberg.com>
- 3) Vanadium Statistics and Information, USGS <a href="https://minerals.usgs.gov/minerals/pubs/commodity/vanadium/">https://minerals.usgs.gov/minerals/pubs/commodity/vanadium/</a>>
- 4) AVL ASX Release 5 April 2018 and <a href="http://www.australianvanadium.com.au/vanadium-batteries/">http://www.australianvanadium.com.au/vanadium-batteries/</a>>
- 5) Table 1 Information, refer to Appendix B

#### APPENDIX A: SUMMARISED KEY TERMS OF PROPOSED ACQUISITION

HDY and NVPL have entered into a binding Heads of Agreement (HOA), with the key terms as follows:

#### **Grant of option**

- ➤ HDY has an exclusive 40-day option to acquire 100% of the fully paid ordinary shares in the capital of NVPL which comes into effect from the date the HOA is executed;
- > In consideration for the Option, HDY will pay NVPL an option fee of \$75,000; and
- > The option can be exercised any time up to expiry.

#### Due Diligence and exclusivity

During the option period, HDY will undertake thorough due diligence across all key legal, financial, technical and geological issues relating to NVPL and the NVM.

#### Conditions precedent

Completion of the acquisition is conditional upon the satisfaction (or waiver by HDY) of the following:

- Finalising due diligence by HDY on NVPL's business, assets and operations;
- > Securing all necessary regulatory approvals to complete the acquisition; and
- > Obtaining shareholder approval for all key aspects of the transaction.

The parties will use their best efforts to ensure the conditions precedent are satisfied.

#### Consideration

Upon the exercise of the option and the satisfaction (or waiver) of the conditions precedent, HDY will, as consideration for the acquisition:

- ➤ issue 737,500,000 fully paid ordinary shares in the capital of the HDY at a deemed issue price of \$0.004;
- issue 737,500,000 listed options to acquire shares in HDY, exercisable at \$0.02 on or before 30 April 2020; and
- pay an aggregate 3% net smelter royalty for all minerals produced from the NVM,

to NVPL's founding shareholders.

#### Settlement

> Settlement of the acquisition will occur five business days after the option is exercised and all conditions precedent have been satisfied.

#### Warranties

> The parties have both provided warranties that are customary to a transaction of this nature.

#### **Exclusivity**

During the term of the HOA, NVPL will be prohibited from entering into negotiations or taking any action to enter into any transactions with alternative potential purchasers.

#### Maintaining the status quo

During the exclusivity period, NVPL agrees not to enter into any material contract or incur any material liability; declare any dividends; or vary its capital structure without the prior written consent of the Company.

Otherwise, the Heads of Agreement contains clauses typical for binding agreements of this nature.

# Appendix B: JORC Code, 2012 Edition - Table 1 report template

Formally the historical vanadium mine is referred to in Spanish as the 'La Nelly', the Table 1 will substitute 'Nelly Vanadium Mine' for 'La Nelly'

# Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Historical Rock Channel samples obtained across the mineralized vein or perpendicular to the strike of the mineralized vein. The dip of the mineralized vein is approximately 80 degrees from the horizontal. The width of the central vein the vein ranged from 0.80 to 3.40m in the sampled Nelly Vanadium Mine Central vein historical workings. The Nelly Vanadium Mine open pit and underground historical workings were sampled.</li> <li>In most instances the Historical Rock Channels were sampled material from either the open pit or sublevel floor workings. Due care was taken to reduce any sampling bias from oxidation or detrital material.</li> <li>The workings floor channel samples were obtained perpendicular to strike of the mineralized vein, consisting of a standard width of 0.15m, with 0.15m of immediate floor material removed and discarded to reduce any potential effects of oxidization mineralisation producing a basis in the sampled assay results.</li> <li>Historical Rock Channel samples removed the next 0.03m of material, producing a channel sample of the dimensions: 'vein length (m)' x '0.15 (m)' x '0.03 (m)'</li> <li>In instances where the sample preparation technique documentation was not located, to identify crushing and pulversing of the sample, it is assumed that the industry standard sample preparation techniques of the region were followed at the time of the historical sample preparation — as the assay results from the historical prepared samples are not being used in the estimation of exploration targets or a mineral resource, it is considered immaterial that the documentation had not been located.</li> <li>In addition, the Competent Person notes the sampling techniques and assay results are obtained from published technical papers (refer to sub-section</li> </ul>

'Exploration done by other parties', Section 2, Table 1), it is assumed rigor

Criteria	JORC Code explanation	Commentary
		and due care would have occurred in processing and assaying of the samples.
Drilling techniques	<ul> <li>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).</li> </ul>	No Drilling results are reported in this announcement.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>No Drilling results are reported in this announcement.</li> <li>No formal sample Historical Channel sample recovery is reported in the thesis of Alessi, it is anticipated that greater than 99% of the sample had been recovered, with the potential loss occurring for some of the finer rock fragments produced by the sampling method.</li> <li>Due care had been taken to reduce oxidized mineralisation potentially biasing the assay results of the Historical Rock Channel samples.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Historical Rock Channel samples had mineralisation/lithology descriptively recorded for the mineralized vein, producing a qualitative description of the sample taken at a location within the historical workings of the Nelly Mine.</li> <li>The width of the central vein the vein ranged from 0.80 to 3.40m in the Historical Rock Channel sampled Nelly Vanadium Mine Central vein historical workings.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	done by other parties', Section 2, Table 1), it is assumed rigor and due care would have occurred in processing and assaying of the samples.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The Competent Person notes the assay results are obtained from published technical papers (refer to sub-section 'Exploration done by other parties', Section 2, Table 1), it is assumed rigor and due care would have occurred in processing and assaying of the samples, including the quality control procedures and processing of the samples at technical laboratories and/or professional institutions.</li> <li>The assay results from the historical sampled and assayed material are not being used in the estimation of exploration targets or a mineral resource.</li> <li>The assay results Historical Rock Channel samples, are indicative of the potential grades and near surface mineralised vein thickness. Exploration drilling, with other exploration methods will be required to establish exploration targets and/or mineral resources under the JORC (2012) Code.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No independent verification of the sampled material is yet to be completed.</li> <li>The Competent Person notes the assay results are obtained from published technical papers (refer to sub-section 'Exploration done by other parties', Section 2, Table 1), it is assumed rigor and due care would have occurred in processing and assaying of the samples, including the quality control procedures and processing of the samples at technical laboratories and/or professional institutions.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>No Drilling results are reported in this announcement.</li> <li>Historical Rock Channel samples appear to have been located by tape measure, detailed location notes recorded and drawn onto plans and sections of the historical workings of the Nelly Mine.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>No sample compositing had occurred, due to the fact that these were Historical Rock Channel samples.</li> <li>Historical Rock Channel samples are biased to accessible portions of the historical workings of the Nelly Vanadium Mine, the sample distribution, assay results, mineralisation type, and structural interpretation are indicative of elevated vanadium in a polymetallic setting. Exploration drilling is required to establish mineral resources.</li> <li>The lowest level of the historical workings of the Nelly Mine were not Historical Rock Channel sampled due to the workings having been flooded.</li> </ul>

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Historical Rock Channel samples are biased to accessible portions of the historical workings of the Nelly Vanadium Mine, the sample distribution, assay results, mineralisation type, and structural interpretation are indicative of elevated vanadium in a polymetallic setting. Therefore, samples are distributed along the strike of the exposed mineralized veins and geological structures, sampled sub-perpendicular to the width / thickness of the mineralized vein.</li> <li>The assay results Historical Rock Channel samples, are indicative of the potential grades and near surface mineralised vein thickness. Exploration drilling, with other exploration methods will be required to establish exploration targets and/or mineral resources under the JORC (2012) Code.</li> <li>The lowest level of the historical workings of the Nelly Mine were not Historical Rock Channel sampled due to the workings having been flooded.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The historical sample security measures undertaken are assumed to have been sufficient to ensure that collected Historical Rock Channel samples are representative of the geological setting associated with the historical Nelly Vanadium Mine.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>No formal audits of the sample results have been undertaken.</li> <li>The historical sampling program and assay results targeted insitu-material associated with the Historical workings of the Nelly Vanadium Mine, providing confidence in the occurrence of elevated vanadium with the insitu geology of the Nelly Vanadium Mine.</li> </ul>

# • Section 2 Reporting of Exploration Results

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

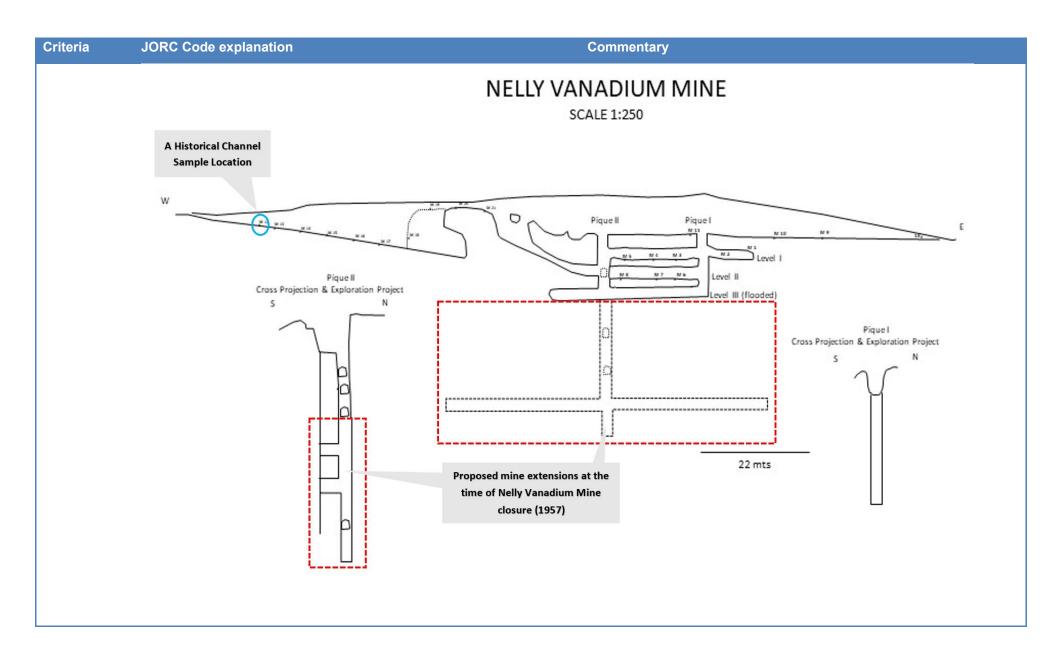
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any</li> </ul>	<ul> <li>The Nelly Vanadium Mine is a site that holds historical workings and a smattering of ruins related to the mine workings.</li> <li>The mining tenure identifier applied for reactivation is 953-L-2003.</li> <li>A material agreement exists, that once all conditions are met, will result in the transfer 100% of the holding company for the mining tenure to Hardy Resources Limited (ASX: HDY). The holding company has rights to 95% of the</li> </ul>

Criteria	JORC Code explanation	Commentary
	known impediments to obtaining a licence to operate in the area.	Nelly Vanadium Mine, with an in-country shareholder holding 5% of the rights, in line with how many foreign entities operate in Argentina.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Exploration completed by other parties referred to in the current announcement includes:         <ul> <li>Alessi Víctor D.R., 1956. History and characteristics of production of the "Nelly" Vanadium mine.</li> <li>Alessi Víctor D.R., 1957. History of production of a Vanadium mine called La Sala in San Luis Province, Argentina</li> <li>Alessi Víctor D.R., 1959. A detailed description of the Vanadium deposit Nelly.</li> <li>Angeleli Victorio., 1942. A review of cerro Blanco vanadium deposit.</li> <li>Ortiz Suarez A. E., 1988. Geological description of basement present in Las Aguadas complex.</li> <li>Ortiz Suarez A. E., 1996. Geological and petrographic description of the intrusives from Las Aguadas complex</li> <li>Ulacco J.H., 1999. History of production of various deposits of Pb-Zn (Cu-Ag) in San Luis Province, Argentina (source for Fixman, et al.,1974; Mallimacci et al., 1973)</li> <li>Ulacco J.H., 2005. A geological evaluation of La Sala and Piedras Bayas Mines (Pb, Zn and V)</li> </ul> </li> <li>The V2O5 assay results reported are solely from Alessi (1959), from Historical Rock Channel samples, are indicative of the potential grades and near surface mineralised vein thickness. Exploration drilling, with other exploration methods will be required to establish exploration targets and/or mineral resources under the JORC (2012) Code.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The historical Nelly Vanadium Mine is located in the San Luis province of Argentina, in the Las Aguadas district, in the San Luis province, Argentina. The historical Nelly Vanadium Mine is located approximately 170 km from San Luis' capital city, the city shares the same name as the province it resides in.</li> <li>The Regional Geology is dominated by precambrian-cambrian high to low grade metamorphic rocks with pre, syn and post-orogenic granitic intrusions</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>of variable dimensions.</li> <li>The historical Nelly Vanadium Mine is located in las Aguadas Pb - V mining district. Is part of many historical mines with Pb and V historical production.</li> <li>The regional target mineral is Vanadinite, a lead chlorovanadate, Pb5(VO4)3Cl, that is by weight 73.15% Pb and 10.79% V. At the historical Nelly Vanadium Mine, Vanadinite occurs as yellow staining on the Quartz Mineralised veins.</li> <li>The Nelly Vanadium Mine reactivation tenure holds four mineralized veins that can be mapped with consistently. Thickening and thinning of the mineralized veins does occur, with the central vein ranging up to 5.5m in maximum thickness.</li> <li>The central mineralized vein had been mined from 1949 to 1957, with channel sampling indicating that in the mined areas of the open pit and the underground workings the mineralized vein ranged from 0.8 to 3.4m.</li> <li>Other vanadium oxide minerals have been identified, have yet to undergo consideration for potential economic mineralization at the Nelly Vanadium Mine.</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	No Drilling results are reported in this announcement.
Data aggregation methods	<ul> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used</li> </ul>	No Drilling results are reported in this announcement.

Criteria	JORC Code explanation	Commentary			
	<ul> <li>for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>				
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	historical working assay results, indicative of electorical structs of the desired peological structs of the desired potential grades drilling, with one exploration target.	Channel samples are ngs of the Nelly Van mineralisation type, vated vanadium in a palong the strike of tures, yet the sample e mineralized vein. Its Historical Rock Chand near surface mather exploration meters and/or mineral real of the historical we channel sampled due	adium Mine, the sal, and structural ir olymetallic setting. The exposed mine divere sub-perpendinannel samples, are nineralised vein thickethods will be requisources under the Jourshings of the Nell	mple distribution, atterpretation are herefore, samples ralized veins and cular to the width indicative of the kness. Exploration fired to establish DRC (2012) Code. y Mine were not
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Alessi (1959) e</li> <li>Historical working</li> <li>and the undergree</li> <li>Historical Rock (</li> </ul>	extracted 21 Historic ngs of the Nelly Vana ound workings. Channel sample width Channel assay values % V <sub>2</sub> O <sub>5</sub> Channel Sample	cal Rock Channel soldium Mine, in both to 3.40m, ave	amples from the the open pit areas
		M1	Length (m) 1.05	1.10	
		M2	1.05	0.70	
		M3	1.35	1.10	
		M4	2.45	1.00	
		M5	1.50	1.00	
		M6	0.85	0.70	
		M7	1.25	1.40	
		M8	0.90	0.50	

Criteria	JORC Code explanation	Commentary			
		Sample Identifier	Channel Sample Length (m)	V2O5 (%)	
		M9	2.35	0.20	
		M10	3.40	0.60	
		M11	3.00	0.50	
		M12	1.30	0.30	
		M13	1.43	0.40	
		M14	0.80	0.60	
		M15	1.40	0.40	
		M16	1.65	0.60	
		M17	1.75	1.40	
		M18	2.25	0.40	
		M19	2.10	1.80	
		M20	2.40	1.90	
		M21	1.80	0.50	
		Minimum value	0.80	0.20	
		Maximum value	3.40	1.90	
		Arithmetic Average value	1.73	0.81	
		Length Weighted V	205 (%)	0.82	
		Historical Rock C     the same as any	hannel length weight channel sample volu not obtained for th	ed assay value of 0.8 me weighted value,	as specific gravity



Criteria	JORC Code explanation	Commentary
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.   Solution  1. **Exploration Results**  1. **Exploration Re	<ul> <li>Historical Rock Channel samples are biased to accessible portions of the historical workings of the Nelly Vanadium Mine, the sample distribution, assay results, mineralisation type, and structural interpretation are indicative of elevated vanadium in a polymetallic setting. Therefore, samples are distributed along the strike of the exposed mineralized veins and geological structures, yet the sampled were sub-perpendicular to the width / thickness of the mineralized vein.</li> <li>The assay results Historical Rock Channel samples, are indicative of the potential grades and near surface mineralised vein thickness. Exploration drilling, with other exploration methods will be required to establish exploration targets and/or mineral resources under the JORC (2012) Code.</li> <li>The lowest level of the historical workings of the Nelly Mine were not Historical Rock Channel sampled due to the workings having been flooded.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	· · · · · · · · · · · · · · · · · · ·
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Sourcing of the historical technical information, production and/or royalty information is a priority for the NVM Geological Team, this includes paper source information from technical hard copy archives and translation of documents (from Spanish to English).</li> <li>The Exploration Strategy is to execute upon grant of the mining tenure the following stages:         <ul> <li>Desktop Study;</li> <li>Field Reconnaissance;</li> <li>Implement an appropriate to be selected Geophysical Survey;</li> <li>Plan and implement a staged drilling program; and</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Geological modelling and/or Resource Estimation</li> <li>The Desktop Study will compile the existing information for the project areas from a range of sources into a tenement data package and a report that summarizes the dataset.</li> </ul>