

12 October 2017

Project Portfolio Review Identifies Significant Vanadium Opportunity

- Portfolio review identifies significant potential to develop the Daejeon Project for Vanadium.
- Current vanadium Mineral Resource of **17.3 Milb V₂O₅ @ 3,186 ppm** at the Daejeon Project.
- Testing of historical drill core paves the way for a material vanadium resource upgrade.
- Vanadium price up 50%+ over last 2 years on surging demand and tight supply with vanadium demand forecast to double by 2025.
- Plan to test Exploration Target (refer below).

Protean Energy Ltd (**Protean** or the **Company**) advises that the Company has identified a potential opportunity to advance the existing 17.3 Milb¹ vanadium resource near Daejeon in South Korea. The Company is refining plans to analyse historical drill core to advance its understanding of the vanadium mineralisation at the Daejeon Project.

The program will focus on core from the Company's 2013 drilling campaign followed by the review of 36,000m of historical drill core held by the Korean Institute of Geoscience and Minerals (**KIGAM**).

Protean's 50% owned JV company, Stonehenge Korea Limited (**SHK**), owns 100% of the rights to a deposit at Daejeon which contains a vanadium Mineral Resource of **17.3 Milb V₂O₅ @ 3,186 ppm¹**. The Project carries a substantial vanadium Exploration Target of **385-695 Milb V₂O₅ @ 2,500-3500 ppm**. *The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the definition of a Mineral Resource. ¹These estimates were prepared and first disclosed under the JORC Code (2004). They have not been updated since to comply with the JORC Code 2012 on the basis that they have not materially changed since release.*

INCREASED DEMAND AND TIGHT SUPPLY DRIVE VANADIUM PRICE SURGE

Global Vanadium production and consumption 2003 to 2017

Figure 1. Vanadium demand outstrips supply leading to a sharp uptick in price

Source: TCC Squared Inc.

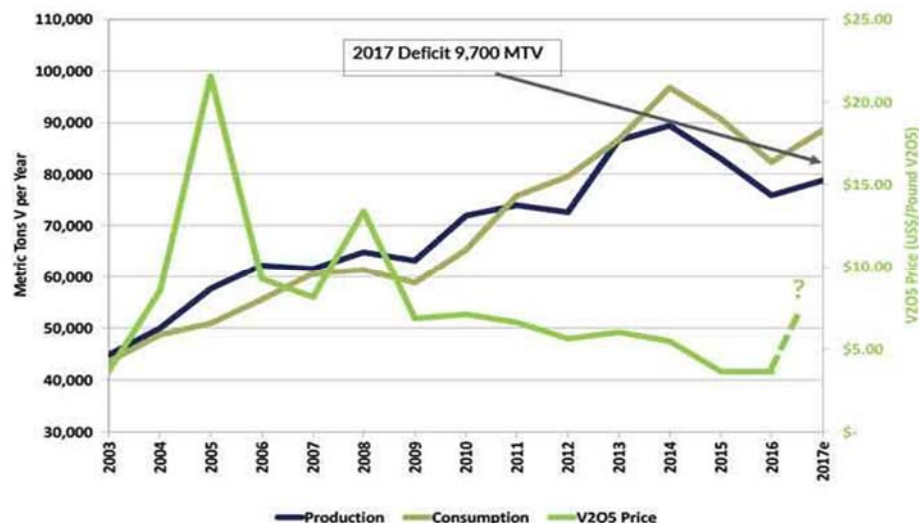
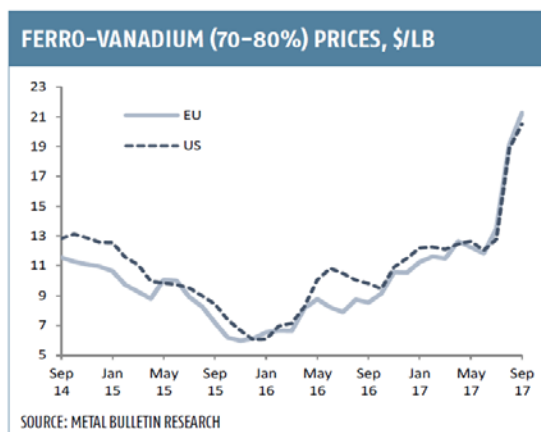
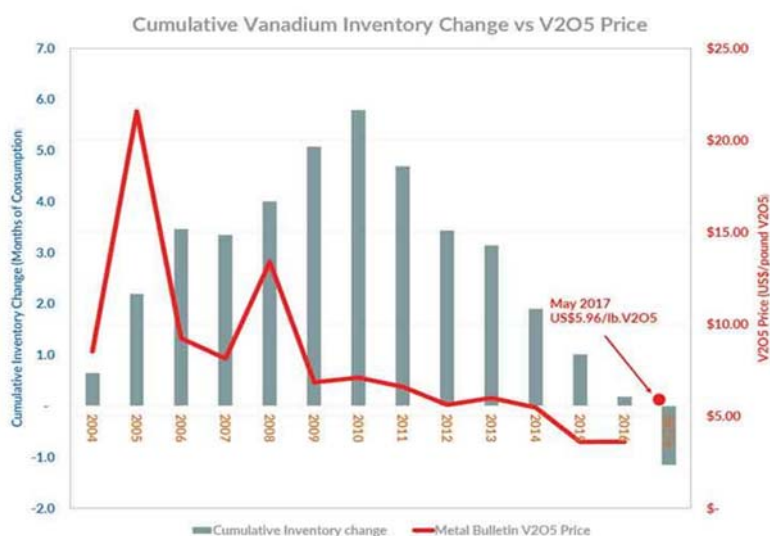


Figure 2. Ferro-Vanadium and Vanadium Pentoxide (V₂O₅) prices to September 2017



Metal Bulletin Vanadium Pricing				
Price description	Date	Price	Q3 2017 (estimate)	Q4 2017 (forecast)
Ferro-vanadium basis 78% min, free delivered duty paid, consumer plant, 1st grade Western Europe, \$ per kg V	22/09/2017	\$43 - 45.7	\$39.60	\$43.72
Ferro-vanadium US free market 70-80% V in warehouse, Pittsburgh \$ per lb.	21/09/2017	\$21.25 - 22	\$17.39	\$20.83
Ferro-vanadium, 78% min fob China \$ per kg V	21/09/2017	\$45 - 51	-	-
Vanadium pentoxide min 98%, fob China, \$/lb V2O5	21/09/2017	\$11 - 12	-	-
Vanadium pentoxide min 98%, in-warehouse Rotterdam \$ per lb V2O5	22/09/2017	\$9.7 - 9.8	-	-

Figure 3. Global vanadium inventory is materially depleted



Source: TCC Squared Inc.

FORECASTS - VANADIUM PENTOXIDE (V₂O₅)

Vanadium is an essential component in the development of high-strength steels, which are forecast to increase in volume by approximately 5% per year to 2025. China is moving towards a minimum “rebar grade” for reinforced steel used in construction: REBAR GRADE 3 - if this standard is enforced it could add 40,000t per annum to global demand (Source: Roskill).

Vanadium consumption in 2016 was dominated by steel alloys (91%), with the energy storage sector at 2%. 2016 global vanadium production was 76,000t with demand expected to increase to 131,000tpa by 2025 (source: Roskill), excluding significant growth in the energy storage (battery) sector.

The increased intensity of vanadium use in steel is driving near term demand growth. Prices are expected to continue to firm over the coming years (source: Roskill).

DAEJON PROJECT BACKGROUND

The Company previously explored the project area for both uranium and vanadium, with this work culminating in the definition of both uranium and vanadium Mineral Resources. The Company also undertook a significant body of work to understand metallurgy and processing options for the deposit during 2012 and 2013, the results of which were encouraging, as outlined in a presentation to the Australian Uranium and Rare Earths Conference released to the ASX on [16/07/2013](#).

NEXT STEPS

The Company and its external geological consultants are currently scoping a work program designed to deliver a better understanding of the vanadium potential at the project. This work program is expected to include further analysis of existing drill core. Details of the finalised work program will be provided in due course.

- ENDS -

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ABOUT STONEHENGE KOREA LIMITED

Protean Energy Limited (ASX Code: POW) is developing a multi-mineral project in South Korea through its 50% holding in Stonehenge Korea Limited (SHK). SHK is a JV company with two KOSDAQ listed industry partners being DST Co Ltd (DST) [formerly KORID] and BHI Co Ltd (BHI). SHK owns 100% of the rights to three projects in South Korea, including the Company's flagship Daejon Project. The Daejon Project contains a vanadium resource of 17.3Mlbs (largely indicated) grading 3,186ppm V₂O₅ at a cut-off of 2,000ppm V₂O₅. The vanadium resource is coincident with a larger uranium resource advised to ASX on 29/08/2013 and 31/10/2013 (This information was prepared and 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 announcement on 29/08/2013).

V₂O₅ Mineral Resource Estimate at a 2,000 ppm V₂O₅ cut-off²

Classification	Tonnage	Grade	Metal
	Mt	ppm	Mlbs
Indicated	2.3	3,208	16.5
Inferred	0.1	2,788	0.8
Total	2.5	3,186	17.3

Vanadium Exploration Target¹

Tonnes (Mt)	Grade V ₂ O ₅ (ppm)	Contained V ₂ O ₅ (Mlbs)
70 - 90	2,500 - 3,500	385 - 695

¹ The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the definition of a Mineral Resource. The vanadium exploration targets are based on exploration results from the 2013 drilling at Chubu and Gwesan (refer announcements 15 July and 13 November 2013) that demonstrated vanadium mineralisation through the black shales. The geology in the Okcheon belt consists of a meta-sedimentary sequence that comprises three formations, Wunkyori, Hwajeonri and Guryongsan. The stratigraphic sequence within the belt at the Gwesan project comprises dark grey phyllite, overlain by the black shale (ore zone) and a fine-grained sandstone.

The historical drilling at the Gwesan project has demonstrated black shale deposits along 10km of strike. KORES completed three drill holes targeting the mineralised black shale at Gwesan in order to verify the mineralisation zone throughout the area. All three holes were drilled to a total depth of 100m and several ore zones between 3m and 11m have been intercepted in each drill hole.

The best intercept of 3500 ppm V₂O₅ and <10 ppm U₃O₈ in the first hole provides encouraging results (refer ASX announcement 13 Nov 2013). More drilling will be required to define the high-grade mineralisation zone in the area. The mineralisation remains open at depth and along the 10km strike. The project is in its exploration stage and the additional drilling is expected to increase the potential to discover high class vanadium Mineral Resources at Gwesan. Stonehenge Korea expects to test the validity of the exploration target once access to historical drill core is obtained and the Company is able to analyse the core for vanadium mineralisation.

The Company is continuing its efforts to access the core and further updates on this progress will be advised as soon as it becomes available.

² These estimates were prepared and first disclosed under the JORC Code (2004). They have not been updated since to comply with the JORC Code 2012 on the basis that they have not materially changed since release

COMPETENT PERSON'S STATEMENT

The information contained in this ASX release relating to exploration results and Mineral Resources has been compiled by Mr Ian Glacken of Optiro Ltd. Mr Glacken is a Fellow of The Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 and 2012 editions of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Glacken consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

