

# Northern Vertex Updates Mineral Resource Estimate for Use in Moss Mine Project Feasibility Study Currently Underway

17.11.2014 | [Marketwire](#)

VANCOUVER, BRITISH COLUMBIA--(Marketwired - Nov 17, 2014) -

## Ninety five Percent of Mineralization Contained in Pit Constrained LG Pit

**435,000 ounces AuEq M&I Resources at an average grade of 0.87 g/t AuEq\***

**Northern Vertex Mining Corp. (the "Company") (TSX VENTURE:NEE)(OTCQX:NHVCF)** is pleased to announce an updated Mineral Resource Estimate for the Moss Mine deposit near Bullhead City, Arizona, USA. At a cut-off grade of 0.25 g/t gold, the updated Mineral Resource Estimate consists of a Measured resource of 4.86 million tonnes grading 0.97 g/t Au and 10.4 g/t Ag for 1.10 g/t AuEq and 172,000 ounces of contained AuEq and an Indicated resource of 10.62 million tonnes grading 0.66 g/t Au and 8.7 g/t Ag for 0.77 g/t AuEq containing 263,000 ounces AuEq, for a total M&I resource of 435,000 ounces AuEq\*. Inferred resources are 2.18 million tonnes grading 0.55 g/t Au and 5.6 g/t Ag for 0.62 g/t AuEq, containing 43,000 ounces AuEq\*\*.

This updated resource estimate will form the basis for a feasibility study, currently underway, to evaluate the potential for a low cost, openpit, heap leach, gold mine at the Moss Mine project site. The Company is fully funded to completion of the feasibility study which is expected to be released in Q2 2015.

## Highlights of The Updated Mineral Resource

- A revised geological model was created, based on a full review of field mapping information, drilling data, drillcore logs, structural analyses, vein/stockwork contacts and mineral domains, allowing geostatistical analysis techniques and ordinary kriging grade estimation methods to be used. Eleven domains were identified and used versus one in previous estimates.
- The updated resource was constrained by a pit constrained Lerchs-Grossman ("LG") pit at gold and silver prices of \$1,250/oz and \$20/oz respectively and used a cut-off grade of 0.25 g/t Au.
- Due to the configuration of the Moss vein system and structure, a large proportion (95%) of outlined mineralization, at the 0.25 g/t cut-off grade, was contained in the constrained.
- Sensitivities to different cut-off grades, at gold prices ranging from \$1,100/oz to \$1,450/oz show that the updated Moss resource is robust and is not sensitive to changes in cut-off grades or gold prices.
- Over 90% of the updated resources are in the Measured and Indicated categories, indicating a high degree of confidence in the updated resource base of the Company.
- The pit shell outlined in the Company's PEA for its Phase II - Operations phase lies within the constrained pit shell used to estimate the updated resource, indicating that the trench pit concept, used in the PEA, is an appropriate pit design concept to be used for mine planning in the Company's feasibility study.
- The revised geological model indicates that the deposit is open along strike to the west and, east as well as to depth. Additionally, thickening of the Moss vein and elevated grades seen in several flexure zones highlight the potential to add higher grade resources within the Moss vein. The Company believes that there is excellent potential to add near surface ounces adjacent to the current resource.

Images of the new geological model and the optimized pit at a 0.25 g/t gold cut-off grade can be found on the Company's website [www.northernvertex.com](http://www.northernvertex.com).

*\* See footnote to Table 1 for gold equivalency equations.*

**\*\* The quantity and grade of reported Inferred Resources in this estimation are conceptual in nature and there has been insufficient exploration to define these Inferred Resources as an Indicated or Measured Mineral Resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.**

Dick Whittington, President and CEO, states: "This updated Mineral Resource estimate represents another step forward for the Company, as we seek to make the transition from an exploration company to a development stage mining company. The new geological model has established a solid foundation to assess the potential for a low cost, openpit mine at the Moss Mine project site, as previously outlined in the Company's PEA. At the same time, the deposit is open on strike and to depth highlighting long term exploration potential.

Of particular note are the results of the cut-off grade sensitivity analyses which indicate the robustness of the deposit to changes in cut-off grades and gold prices. This bodes well for the ability of the project to sustain periods of low gold prices, as well as being able to capitalize on periods of higher prices when they occur. Coupled with the excellent results of the Company's 'proof of concept' Phase I - Pilot Plant operations just winding down, we are creating a robust platform to move forward, de-risking the project as we go."

## Updated Mineral Resource

The updated Mineral Resources for the Project were classified under the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves by application of a cut-off grade that incorporated mining and metallurgical recovery parameters, and on-site cost estimates. Additionally, the updated Mineral Resources are constrained within a pit constrained LG pit shell defined by commodity prices, metallurgical recoveries, operating costs and final pit slope angles. Long-term metal prices of \$1,250/oz and \$20/oz for gold and silver respectively were used. The updated Mineral Resources are tabulated in Table 1 below and have an effective date of October 31<sup>st</sup>, 2014. The Qualified Person for the Mineral Resource Estimate is David G. Thomas, P.Geo.

**Table 1: Moss Project Mineral Resource Estimate - David Thomas, P.Geo. (Effective Date: October 31<sup>st</sup>, 2014)**

Category	Tonnes	Au (g/t)	Ag (g/t)	Au (oz)	Ag (oz)	AuEq g/t	AuEq (oz)
Moss & Ruth Veins							
Measured	4,265,000	1.03	10.9	141,000	1,490,000	1.17	160,000
Indicated	4,910,000	0.87	11.8	137,000	1,860,000	1.02	161,000
<i>Measured &amp; Indicated</i>	<i>9,175,000</i>	<i>0.94</i>	<i>11.4</i>	<i>278,000</i>	<i>3,350,000</i>	<i>1.09</i>	<i>321,000</i>
Inferred	805,000	0.60	4.5	16,000	120,000	0.66	17,000
West Extension							
Measured	595,000	0.54	7.3	10,000	140,000	0.63	12,000
Indicated	5,710,000	0.48	6.1	88,000	1,110,000	0.55	102,000
<i>Measured &amp; Indicated</i>	<i>6,305,000</i>	<i>0.48</i>	<i>6.2</i>	<i>98,000</i>	<i>1,250,000</i>	<i>0.56</i>	<i>114,000</i>
Inferred	1,375,000	0.52	6.3	23,000	280,000	0.59	26,000
Combined Total							
Measured	4,860,000	0.97	10.4	152,000	1,630,000	1.10	172,000
Indicated	10,620,000	0.66	8.7	225,000	2,980,000	0.77	263,000
<i>Measured &amp; Indicated</i>	<i>15,480,000</i>	<i>0.76</i>	<i>9.3</i>	<i>377,000</i>	<i>4,610,000</i>	<i>0.87</i>	<i>435,000</i>
Inferred	2,180,000	0.55	5.6	38,000	390,000	0.62	43,000

### Footnotes to Mineral Resource statement:

- The Moss and Ruth veins are the major veins for which resources are estimated; however, other minor veins have also been included.
- The West Extension resources are resources west of the Canyon fault, and are generally lower grade but near surface resources.
- Northern Vertex's quality assurance and quality control programs on the Mineral Resource data were reviewed. After removing samples with data quality issues, it was concluded that the collar, survey, assay and lithology data are adequate to support Mineral Resource estimation.

- Domains were modelled in 3D to separate mineralized rock types from surrounding waste rock. The domains were modelled based on quartz veining and gold grades.
- Raw drillhole assays were composited to 1.5 m lengths, broken at domain boundaries.
- Capping of high grades was considered necessary and was completed for each domain on assays prior to compositing.
- Block grades for gold and silver were estimated from the composites using ordinary kriging interpolation into 3 m x 3 m x 3 m blocks coded by domain.
- A dry bulk density of 2.51 g/cm<sup>3</sup> was used for material with a depth less than 12 m from surface. A dry bulk density of 2.58 g/cm<sup>3</sup> was used for all other material. The dry bulk densities are based on 506 specific gravity measurements.
- Blocks were classified as Measured, Indicated and Inferred in accordance with CIM Definition Standards 2014. Inferred resources are classified on the basis of blocks falling within the mineralised domain wireframes (i.e. reasonable assumption of grade/geological continuity) with a maximum distance of 100 m to the closest composite. Indicated resources are classified based on a drillhole spacing of 50 m. Measured resources are classified based on a 25 m x 12.5 m drillhole spacing.
- The Mineral Resource estimate is constrained within a pit constrained LG pit with maximum slope angles of 65°<sup>±</sup>. Metal prices of \$1,250/oz and \$20/oz were used for gold and silver respectively. Metallurgical recoveries of 82% for gold and 65% for silver were applied.
- A 0.25 g/t gold cut-off was estimated based on a total process and G&A operating cost of \$6.97/t of ore mined.
- The gold equivalent ("AuEq") formulae, applied for purposes of estimating AuEq grades and ounces, are as follows:
  - Factor A (gold) = 1 / 31.10346 x metallurgical recovery (82%) x smelter recovery (99%) x refinery recovery (99%) x unit Au price (US\$1,250 / oz)
  - Factor B (silver) = 1 / 31.10346 x metallurgical recovery (65%) x smelter recovery (98%) x refinery recovery (99%) x unit Ag price (US\$20 / oz)
  - AuEq grade = Au grade + (Ag grade x [Factor B / Factor A])
  - AuEq ounces = (AuEq grade x material tonnes)/31.10346
- The contained gold and silver figures shown are in situ. No assurance can be given that the estimated quantities will be produced. All figures have been rounded to reflect accuracy and to comply with securities regulatory requirements. Summations within the tables may not agree due to rounding.
- Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- The quantity and grade of reported Inferred resources in this estimation are conceptual in nature and there has been insufficient exploration to define these Inferred resources as an Indicated or Measured Mineral Resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.
- No Mineral Reserves have been estimated for the Moss project; the Mineral Resource estimate includes all mineralized material above cut-off and captured within the optimized LG pit shell.

## Sensitivity of Resources to Changes in Cut-off Grade and Metal Prices

The sensitivity of the Mineral Resource to changes in gold and silver prices was assessed by reporting the Mineral Resource at a number of cut-off grades (Table 2). The results show that the Mineral Resource is not sensitive to increasing or decreasing cut-off grades. The analysis indicates that the Mineral Resource is robust with respect to the choice of long-term metal prices used for reporting. In Table 2 below, a 0.20 g/t Au cut-off grade approximately equates to a gold price of \$1,450/oz. Similarly, a 0.30 g/t cut-off approximately equates to a gold price of \$1,100/oz, highlighting the relative insensitivity of the resource to changes in gold prices as well as cut-off grades.

**Table 2: Moss Project Mineral Resource Sensitivity.**

Measured							
Cut-Off Grade (Au g/t)	Tonnes	Au (g/t)	Ag (g/t)	Au (Ozs)	Ag (Ozs)	AuEq (g/t)	AuEq (Ozs)
0.10	5,565,000	0.87	9.5	156,000	1,700,000	0.99	177,000
0.15	5,395,000	0.89	9.7	155,000	1,690,000	1.02	176,000
0.20	5,165,000	0.93	10.0	154,000	1,660,000	1.05	175,000
0.25	4,860,000	0.97	10.4	152,000	1,630,000	1.10	172,000
0.30	4,510,000	1.02	11.0	148,000	1,590,000	1.16	168,000
Inferred							

Cut-Off Grade (Au g/t)	Tonnes	Au (g/t)	Ag (g/t)	Au (Ozs)	Ag (Ozs)	AuEq (g/t)	AuEq (Ozs)
0.10	12,425,000	0.59	7.9	237,000	3,170,000	0.69	276,000
0.15	12,180,000	0.60	8.0	236,000	3,151,000	0.70	275,000
0.20	11,600,000	0.62	8.3	232,000	3,094,000	0.73	271,000
0.25	10,615,000	0.66	8.7	225,000	2,978,000	0.77	263,000
0.30	9,390,000	0.71	9.3	214,000	2,817,000	0.83	250,000
Measured and Indicated							
Cut-Off Grade (Au g/t)	Tonnes	Au (g/t)	Ag (g/t)	Au (Ozs)	Ag (Ozs)	AuEq (g/t)	AuEq (Ozs)
0.10	17,990,000	0.68	8.4	392,000	4,870,000	0.78	454,000
0.15	17,580,000	0.69	8.6	391,000	4,840,000	0.80	451,000
0.20	16,760,000	0.72	8.8	386,000	4,760,000	0.83	446,000
0.25	15,480,000	0.76	9.3	377,000	4,610,000	0.87	435,000
0.30	13,900,000	0.81	9.9	362,735	4,410,000	0.94	418,000
Inferred							
Cut-Off Grade (Au g/t)	Tonnes	Au (g/t)	Ag (g/t)	Au (Ozs)	Ag (Ozs)	AuEq (g/t)	AuEq (Ozs)
0.10	2,740,000	0.47	4.9	42,000	433,000	0.54	47,000
0.15	2,650,000	0.49	5.0	41,000	430,000	0.55	47,000
0.20	2,440,000	0.51	5.3	40,000	417,000	0.58	45,000
0.25	2,180,000	0.55	5.6	38,000	390,000	0.62	43,000
0.30	1,910,000	0.59	6.0	36,000	368,000	0.66	41,000

## Background and Methodology of the Updated Mineral Resource

The Company produced an initial Mineral Resource Estimate (effective date September 10<sup>th</sup>, 2012) and subsequently amended it in a revised Mineral Resource Estimate, with an effective date of March 5<sup>th</sup>, 2013. In preparation for the updated Mineral Resource Estimate, Northern Vertex's geological team conducted a comprehensive review of all available geologic data, both historical and new data subsequent to March 5<sup>th</sup> 2013, including field mapping, in-pit mapping from the open pit mined for Phase I - Pilot Plant, underground data from historic mine workings, drilling, drillcore logs, structural contacts, vein/stockwork contacts enabling the definition of several mineral domains. All assays were reviewed and re-checked for accuracy. In contrast to previous estimates, a wireframe geologic model was created and used to constrain the resource estimation. The model utilized 42,800 m of drill samples, channel samples and trench samples with mineralization being intercepted up to 370 m below surface.

Eleven mineralization domains were identified, within which geostatistical techniques were applied and variography was performed. The variograms were used in ordinary kriging to estimate the block grades. Grade capping was applied and search ellipse orientations in the plane of the zones were used. A clear hard boundary between the Moss vein structure and the hangingwall stockwork zone was identified and used during grade estimation. Blocks were classified as Measured with a maximum average distance between holes of 15 m or within a drill hole spacing of 12.5 m x 25 m. Blocks were classified as Indicated with a maximum average distance between holes of 38 m or a drill hole spacing of 50 m x 50 m. Inferred resources were with a maximum drill hole spacing of 100 m x 100 m.

To facilitate the use of an LG pit constrained analysis on the estimated mineralized inventory, the Company conducted an exhaustive review of all metallurgical data to assess the appropriate metallurgical recovery to be assumed for a potential heap leach operation being applied to the Moss deposit mineralization. For the purposes of heap leach metallurgical assessment, the Moss deposit can be considered an "oxide" deposit, as against a "sulphide" deposit or an "oxide/sulphide" deposit with a "transition" zone. Evidence of oxidation extends to depths well below the watertable and tests indicate no discernable differences in the metallurgical response of the mineralized material above and below the watertable. The evidence of oxidation occurs to a maximum depth of 210 m below the current water table. The presence of limonite staining has been recorded in 151 drillholes from across the Moss deposit. This data showed that, for purposes of metallurgical assessment, the mineralization may be considered to be unaffected by the present surface watertable. The nature of the gold and silver mineralization (mainly native gold and electrum, with minor acanthite [a silver sulphide]) supports this model, as did a review of the results for the 59 bottle roll tests and 14 separate column leach tests carried out on Moss vein samples from across the Moss deposit.

In contrast to many other heap leach deposits, evidence of sulphides in the Moss Mine mineralization is

extremely limited, with the gold and silver being encapsulated in quartz and calcite, requiring fine crushing to ensure effective liberation. A paragenetic model for the deposit shows that a minor pyrite mineralization phase predates, and is not directly associated with, the gold and silver mineralization. Predictive metallurgical recovery equations were developed which, along with the excellent results of the Company's Phase I - Pilot Plant Operations (see news release dated October 28<sup>th</sup>, 2014), provided the basis to assume an 82% recovery for gold and 65% for silver, for 95% minus 1/4" material.

Field observations and historical data, along with the results of mining the Phase I pit, indicate the Moss Mine footwall and hangingwall rocks to be very competent. Discontinuity mapping along and to the south of the Moss vein outcrop, in the limited historic underground workings and in the Phase I pit, allowed preliminary assessments of slope stability to be made which provided the basis for the Company's assumption, for purposes of LG pit optimization, of a maximum slope angle of 65 degrees for the final pit walls. Lastly, a "first principles" cost analysis, benchmarked to available information in the public domain, for a 5,000 tpd heap leach operation led to the cost bases for the optimized pit analysis.

The results indicate that the majority of the resource is in the Measured and Indicated categories (over 90%) and that a very high proportion (95%) of the mineral inventory, at the 0.25 g/t Au cut-off grade, is contained in the Pit constrained LG pit. Additionally, the pit shell outline used in the Company's PEA for Phase II - Operations lies within the pit constrained LG pit shell used to estimate the updated Mineral Resources, indicating that the trench pit concept used in the PEA is likely to be the pit design concept used for the feasibility study, affirming this key design parameter. The focus now is to further refine the necessary technical and cost parameters required for the feasibility study and to enable the Company to assess the prospects for a low cost, openpit, heap leach operation at the Moss Mine project site.

The Moss Mine deposit consists of two major zones of mineralization - the Moss vein zone and the hangingwall stockwork zone. There is a clear boundary between the two with the Moss vein zone being characterized by grades higher than those in the hangingwall stockwork zone. Additionally, the Moss vein system features flexure zones with elevated grades, and increased thickness, giving potential for increased tonnage and elevated grades in this system. Both major zones are open along strike and to depth indicating excellent potential to add near surface ounces to the updated resource.

Full details of the updated geologic model, modelling parameters and assumptions, metallurgical and cost assumptions used will be published in a NI 43-101 Technical Report, which will be filed at Sedar.com within 45 days. All previous reports should now be considered out-of-date.

### **Quality Assurance/Quality Control (QA/QC)**

Samples are sent off-site in sealed bags and delivered by bonded courier to Inspectorate America Corp. in Sparks, Nevada. The Inspectorate lab is an ISO 9001:2008 qualified assay lab that performs and makes available internal assaying controls. Certified blanks and commercial standards are systematically inserted in the sample stream by Golden Vertex as part of our QA/QC program for a total control sample insertion rate of approximately 15%. Duplicate pulps are made for approximately 10% of the samples and sent to a third party lab for additional check assays. Control sample results are reviewed and re-assays carried out when results fall outside established criteria.

### **About Northern Vertex**

[Northern Vertex Mining Corp.](#) is a Canadian based exploration and mining company focused on the reactivation of the Moss Mine Gold-Silver Project located in NW Arizona, USA where the Company has the right to earn-in to a 70% property interest through a Joint Venture with Patriot Gold Corp. The Moss Mine Gold-Silver Project is an epithermal, brecciated, low sulphidation quartz-calcite vein and stockwork system which extends over a strike length of 1,400 meters and has been drill tested to depths of 370 meters below surface. It is a potential heap leach, openpit project being advanced under a three-phase business plan, specifically designed to ensure that technical, economic, permitting and funding requirements are met prior to each phase proceeding. The Company's management comprises an experienced management team with a strong background in all aspects of acquisition, exploration, development, operations and financing of mining projects worldwide. The Company is focused on working effectively and respectfully with our stakeholders in the vicinity of the historical Moss Mine and enhancing the capacity of the local communities in the area.

## **Qualified Persons**

The foregoing technical information contained in this news release has been approved by Messrs. Dave Thomas, P.Geo., Dan Kilby, P.Eng., Doug Brownlee, P.Geo., and Dr. David Stone, P.Eng., all being independent Qualified Persons ("QP") for the purpose of National Instrument 43-101 (Standards of Disclosure for Mineral Projects).

ON BEHALF OF THE BOARD OF DIRECTORS

J.R.H. (Dick) Whittington, President & CEO

For further information, please visit [www.northernvertex.com](http://www.northernvertex.com).

*Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.*

**Forward-Looking Statements:** *The information in this news release has been prepared as at November 17, 2014. Certain statements in this news release, referred to herein as "forward-looking statements", constitute "forward-looking statements" under the provisions of Canadian provincial securities laws. These statements can be identified by the use of words such as "expected", "may", "will" or similar terms.*

*Forward-looking statements are necessarily based upon a number of factors and assumptions that, while considered reasonable by the Company as of the date of such statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Many factors, known and unknown, could cause actual results to be materially different from those expressed or implied by such forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date made. Except as otherwise required by law, the Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any such statements to reflect any change in the Company's expectations or any change in events, conditions or circumstances on which any such statement is based.*

**Cautionary Note to US Investors:** *This news release may contain information about adjacent properties on which we have no right to explore or mine. We advise US investors that the SEC's mining guidelines strictly prohibit information of this type in documents filed with the SEC. US investors are cautioned that mineral deposits on adjacent properties are not indicative of mineral deposits on our properties. This news release may contain forward-looking statements including but not limited to comments regarding the timing and content of upcoming work programs, geological interpretations, receipt of property titles, potential mineral recovery processes, the completion of the Private Placement, the proposed use of the proceeds of the Private Placement, etc. Forward-looking statements address future events and conditions and therefore involve inherent risks and uncertainties. Actual results may differ materially from those currently anticipated in such Statements.*

**2014 number 16**

## **Contact**

Investor Relations  
604-601-3656 or 1-855-633-8798

Dieser Artikel stammt von [Minenportal.de](#)

Die URL für diesen Artikel lautet:

<https://www.minenportal.de/artikel/142077--Northern-Vertex-Updates-Mineral-Resource-Estimate-for-Use-in-Moss-Mine-Project-Feasibility-Study-Currently-Un>

Für den Inhalt des Beitrages ist allein der Autor verantwortlich bzw. die aufgeführte Quelle. Bild- oder Filmrechte liegen beim Autor/Quelle bzw. bei der vom ihm benannten Quelle. Bei Übersetzungen können Fehler nicht ausgeschlossen werden. Der vertretene Standpunkt eines Autors spiegelt generell nicht die Meinung des Webseiten-Betreibers wieder. Mittels der Veröffentlichung will dieser lediglich ein pluralistisches Meinungsbild darstellen. Direkte oder indirekte Aussagen in einem Beitrag stellen keinerlei Aufforderung zum Kauf-/Verkauf von Wertpapieren dar. Wir wehren uns gegen jede Form von Hass, Diskriminierung und Verletzung der Menschenwürde. Beachten Sie bitte auch unsere [AGB/Disclaimer](#)!

---

Die Reproduktion, Modifikation oder Verwendung der Inhalte ganz oder teilweise ohne schriftliche Genehmigung ist untersagt!  
Alle Angaben ohne Gewähr! Copyright © by [Minenportal.de](#) 2007-2025. Es gelten unsere [AGB](#) und [Datenschutzrichtlinien](#).