



NEWS RELEASE – 24/2020

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FOR IMMEDIATE RELEASE

MONETA REPORTS 2,144,200 OZ GOLD INDICATED AND 3,335,300 OZ GOLD INFERRED RESOURCES IN NI 43-101 GOLDEN HIGHWAY RESOURCE UPDATE

Toronto, Ontario – December 10, 2020 - Moneta Porcupine Mines Inc. (TSX:ME) (OTC:MPUCF) (XETRA:MOP) (“Moneta” or the “Company”) is pleased to provide an updated mineral resource estimate for the 100% owned Golden Highway Project, located 100 km east of Timmins, Ontario. The update is based on the latest drill program completed during the first half of 2020 (see Figure 1 and Table 1).

Highlights of Updated Golden Highway Mineral Resource Estimate:

- **217% increase in total contained gold (Au) to 2,144,200 ounces (oz) (combined underground and open pit) in the indicated category on the Golden Highway Project**
- **141% increase in total contained Au to 3,335,300 oz (combined underground and open pit) in the inferred category at Golden Highway**
- **A maiden inferred underground resource of 661,900 oz at a grade of 4.71 grams per tonne (g/t) Au at the new Westaway/West Block discovery at a 3.00 g/t Au cut-off**
- **Total indicated underground resource of 632,300 oz at a grade of 4.05 g/t Au on the Golden Highway Project**
- **Total inferred underground resource of 2,128,100 oz at a grade of 4.21 g/t Au on the Golden Highway Project**
- **Includes a new open pit resource of 1,511,900 oz indicated at 0.93 g/t Au and 1,207,200 oz inferred at 1.10 g/t Au at Windjammer South and 55 at a 0.30 g/t Au cut-off**

The updated mineral resource was independently prepared by Micon International Limited in accordance with National Instrument 43-101 (“**NI43-101**”), with an effective date of December 08, 2020 and using a database current as of October 06, 2020. The Golden Highway project has shown a significant improvement in size over the September 2020 resource estimate and remains open. The majority of the new resources are attributed to the new Westaway high grade discovery and the definition of near surface gold mineralization in open pits. Moneta has identified several adjacent targets displaying the same style and tenor of gold mineralization within the Golden Highway Project which were not included in this mineral resource update and are the focus of the current drill program. Moneta will also be drill testing the extensions of the current gold deposits within the Golden Highway Project in the winter 2020/2021 drill program.

Gary O’Connor, CEO, commented; “We are extremely pleased with the significant increase in the size of the updated Golden Highway mineral resource estimate increasing our indicated resource base by 217% to 2,144,200 oz and our inferred resources by 141% to 3,335,300 oz, adding a maiden resource at Westaway and open pit resources at Windjammer South and 55. Based on the latest drill program completed in Q2, 2020 on the newly discovered Westaway/West Block deposit, we have developed a new maiden underground resource of 661,900 oz inferred at a grade of 4.71 g/t Au. We have also identified and confirmed near surface mineralized structures at Windjammer South and 55 based on the re-logging

of historical core and confirmed in step out drill holes completed in the 2019/2020 winter drill program resulting in new open pit resources of 1,099,300 oz indicated and 1,027,700 oz inferred at Windjammer South and 412,600 oz indicated and 179,500 oz inferred at 55. We also increased the size of the Discovery and Windjammer North underground deposits to 39,100 oz indicated and 191,200 oz inferred combined. We are confident of the ability to continue to increase the size of the deposits and targets located within the project. We have mobilized drill rigs to test regional targets as well as test the extensions of the current resources in our winter 2020/2021 drill program”.

Table 1: NI 43-101 Mineral Resource Estimate by Deposit- Golden Highway Project

Deposit	Open Pit			Underground		
	Tonnes (t)	Grade (g/t)	Ounces (oz)	Tonnes (t)	Grade (g/t)	Ounces (oz)
South West						
Indicated				4,530,000	4.07	592,400
Inferred				9,607,000	4.01	1,237,900
Windjammer South						
Indicated	40,582,000	0.84	1,099,300	6,000	3.90	800
Inferred	28,956,000	1.10	1,027,700	143,000	4.06	18,700
Westaway¹²						
Indicated						
Inferred				4,367,000	4.71	661,900
55						
Indicated	9,896,000	1.30	412,600			
Inferred	5,079,000	1.10	179,500	123,000	4.65	18,400
Discovery						
Indicated				141,000	3.49	15,800
Inferred				658,000	4.00	84,700
Windjammer North						
Indicated				182,000	3.98	23,300
Inferred				813,000	4.08	106,500
Total Indicated						
	50,478,000	0.93	1,511,900	4,859,000	4.05	632,300
Total Inferred						
	34,035,000	1.10	1,207,200	15,711,000	4.21	2,128,100

Notes:

1. Mineral Resource Estimates are reported at three different cut-off grades; 0.3 g/t Au for the surface mining scenario, 2.6 g/t Au for the South West PEA underground mine plan portion of the resources and 3.00 g/t Au for the underground mining scenario. The cut-off grade was determined at a gold price of US\$1,500 per ounce and an exchange rate of USD\$/CDN\$ of 0.77.
2. The resource estimate is supported by statistical analysis with different high-grade capping applied to each of the deposits ranging from 6.0 g/t Au to 37.0 g/t Au applied on raw assays and then composited into one (1) metre composites.
3. The mineral resources presented here were estimated with a block size of 10mx5mx10m utilizing sub-blocks as required and constrained within geological wire-frames with a minimum width of 1.50m. The cells are estimated by Ordinary Kriging using the appropriate variogram model of each structure with individual search ellipsoids generally varying from 60x50x20m to 150x100x20m within each structure. The search ellipse was constrained to selecting composites flagged to each vein.

4. The mineral resources presented here were estimated by Micon International using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves definitions and guidelines.
5. 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, market or other relevant issues.
6. Indicated Mineral resources were determined using a 60 to 90 m search ellipse and a minimum of four drill holes, in addition to digitized clipping polygons outlining areas of contiguous drill spacing along strike and down dip.
7. The quantity and grade of reported Inferred Resources are uncertain in nature and there has not been sufficient work to define these Inferred Resources as Indicated or Measured Resources.
8. There are no historical underground voids from mining including shafts, ramps or drifts in any of the deposit areas.
9. Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas, averaging 2.77 tonnes per cubic metre for the total resource. Resources are presented as undiluted and in situ.
10. This mineral resource estimate is dated December 8, 2020. The effective date for the drill-hole database used to produce this updated mineral resource estimate is October 6, 2020. Tonnages and ounces in the tables are rounded to the nearest thousand and hundred, respectively. Numbers may not total due to rounding.
11. A new NI 43-101 report is to be produced as the category of resource has changed by more than 100%.
12. Westaway includes the West Block deposit

Table 2: NI43-101 Mineral Resource Estimate Comparison – December 2020 vs September 2020

Resource Date	Indicated			Inferred		
	Tonnes (t)	Grade (g/t)	Ounces Au (oz)	Tonnes (t)	Grade (g/t)	Ounces Au (oz)
September 2020	5,110,000	4.12	676,900	10,781,000	4.00	1,386,600
December 2020	55,337,000	1.21	2,144,200	49,746,000	2.09	3,335,300
Difference	50,227,000		1,467,300	38,965,000		1,948,700
Percentage	983%		217%	361%		141%

Resource Development

The mineral resources are constrained within geological wire frames developed as the result of the winter 2019/2020 drill program combined with re-logging and resampling of historical drill core. Two stacked vein sets have been recognized and modelled within the Timiskaming age clastic sediment host rocks, an earlier wide (up to 50m) shallow dipping white quartz vein set associated with specular hematite-chlorite alteration and a steeper higher grade and generally narrower (up to 30 m) set of typically grey quartz associated with ankerite-albite-sericite-silica-pyrite alteration.

A total of 26 extensional vein structures have been modelled on the new Westaway/West Block deposit which remains open to the south and at depth. The vein structures dip steeply to the south-west and are hosted within Timiskaming age clastic sediments. No well developed flat lying veins sets were identified at Westaway/West Block resulting in an underground resource only.

At Windjammer South and 55 geological wireframes were developed for the high-grade steep vein set and the wider shallow dipping veins. For the resource estimate steep veins have been modelled with a minimum true thickness of 1.50 m and the flat veins with a minimum true thickness of 5.00 m. Underground resources at Windjammer South and 55 include the resources which occur outside the open pits and above 3.0 g/t Au constrained within modelled geological wire frames. The strip ratio for the updated open pit resources at Windjammer South and 55 was 6.3:1 and 8.5:1 respectively. There was no resource update performed at South West where shallow dipping gold mineralization occurs but have not been modelled and where the Gap series of veins remain open to the south. The cut-off calculations are based on the parameters listed in Table 3 and Table 4 below:

Table 3: Golden Highway Project, Parameters Used for Underground Mineral Resource Estimate

Parameters	Unit	Value
Gold Price	US\$/oz	1,500
Exchange Rate	US\$/C\$	0.77
Mill Recovery	%	92.00
Sell Cost	C\$/oz	5.00
Royalties	%	0.00
Mining Cost	C\$/t milled	75.00
G&A Cost	C\$/t milled	15.00
Processing Cost	C\$/t milled	45.00
Transportation	C\$/t milled	10.00
Environment	C\$/t milled	5.00
Preferred Cut-Off Grade	Au g/t	3.00

The calculated cut-off was below 3.00 g/t Au but this number was selected for conservatism in reporting the underground mineral resources except at South West where a preliminary economic assessment has established the cut-off grade at 2.60 g/t Au.

Table 4: Golden Highway Project, Parameters Used for Open Pit Mineral Resource Estimate

Parameters	Unit	Value
Gold Price	US\$/oz	1,500
Exchange Rate	US\$/C\$	0.77
Mill Recovery	%	92.00
Sell Cost	C\$/oz	5.00
Royalties	%	0.00
Mining Cost	C\$/t milled	2.75
G&A Cost	C\$/t milled	2.00
Processing Cost	C\$/t milled	12.00
Preferred Cut-Off Grade	Au g/t	0.30

The calculated cut-off of 0.30 g/t Au was selected in reporting the open pit mineral resources.

Moneta Exploration Plans

Moneta has commenced its winter 2020/2021 program, comprised of an initial 20,000 m of drilling, to test new exploration targets for gold mineralization potential, including the Halfway, Twin Creeks and South Basin targets, and to drill the resource expansion potential of the new updated resource where it remains open, including the Westaway/West Block deposit to the south and at depth, the Gap area of the South West deposit to the south, and the down plunge extensions of the Discovery deposit to the west.

Figure 1: Golden Highway Project; Mineral Resource Location Map

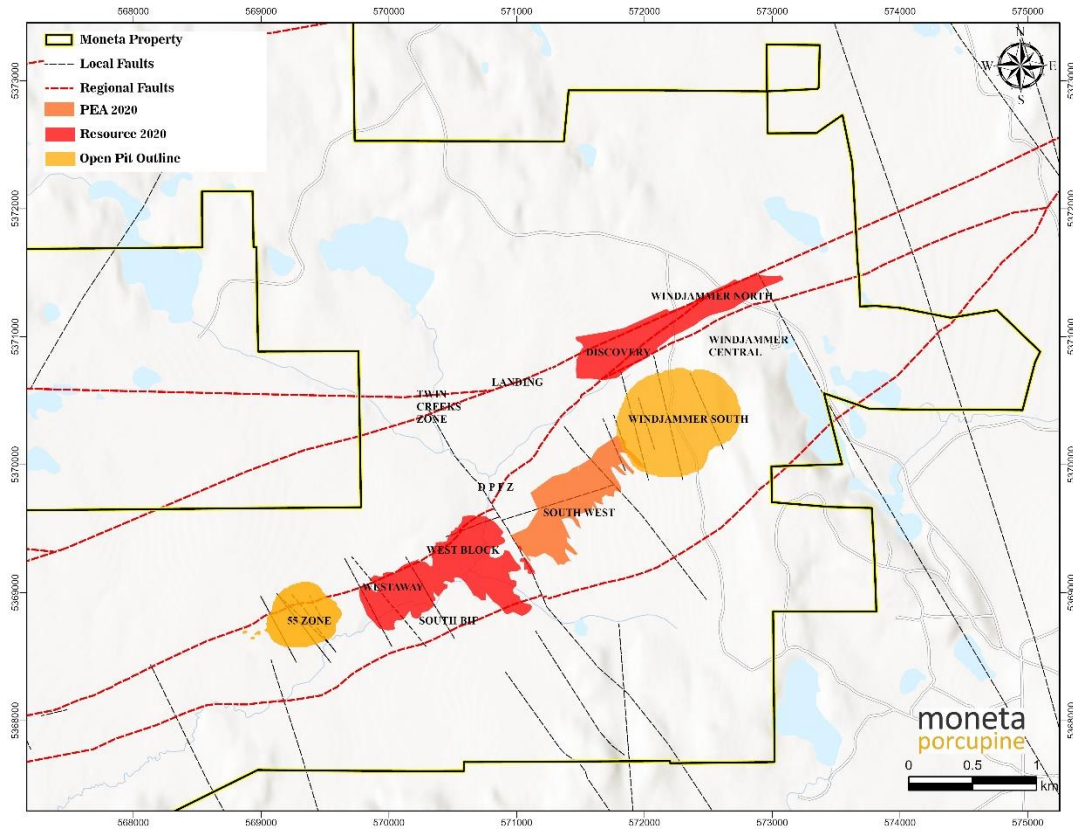


Figure 2: Golden Highway Project; Windjammer South Open Pit

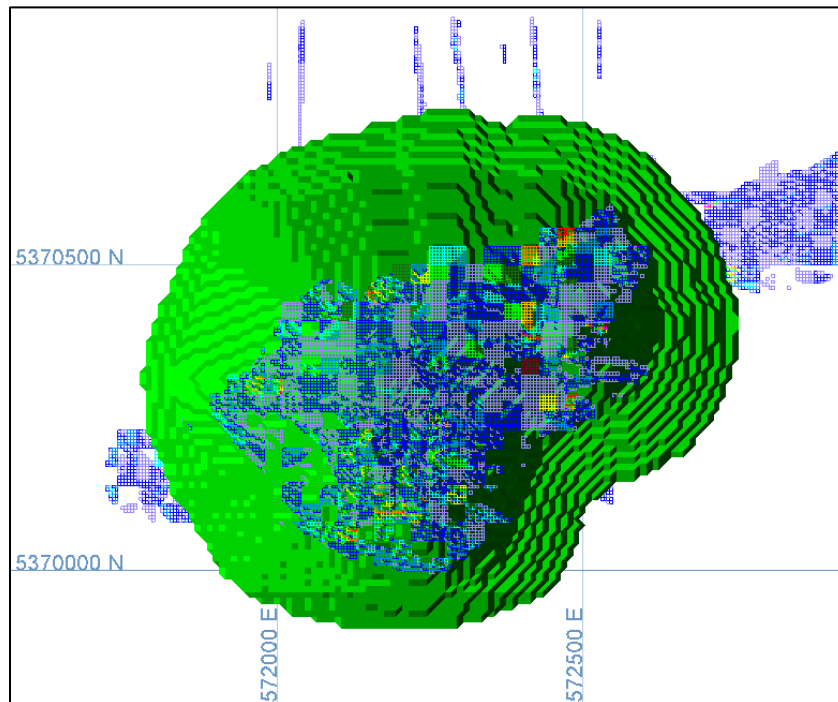
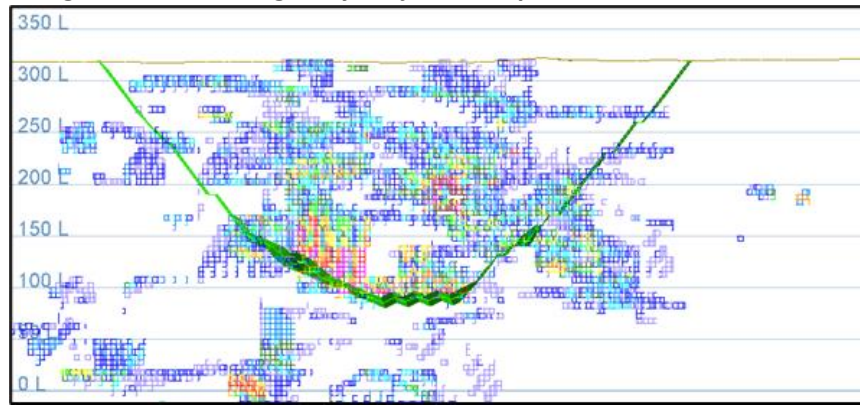


Figure 3: Golden Highway Project; 55 Open Pit Cross Section View



Webcast Details

Management will host a webcast and conference call to discuss the results of the resource update on Friday December 11, 2020 at 11:00 am ET.

Conference call number

Toll Free Dial-In Number: (833) 772-0367

International Dial-In Number: (343) 761-2596

Webcast Link

<https://onlinexperiences.com/Launch/QReg/ShowUUID=E9EEA06B-3A4E-4267-AD01-89510F9F2E2C>

A replay of the conference call will be available at 2:00 pm on the Company's website and by calling (800) 585-8367 or (416) 621-4642

Further details on the mineral resource update and the complete resource update study document will be found on the Company's website at www.monetaporcupine.com/investors within 45 days and on sedar.com.

Qualified Persons

The technical content of this press release has been reviewed and approved by B. Terrence Hennessey, P.Geo. of Micon International Limited and Kevin Montgomery, P.Geo. of Moneta, who are deemed qualified persons as defined by National Instrument 43-101. Mr. Hennessey, P.Geo. of Micon is responsible for the completion of the updated mineral resource estimation.

QA/QC Procedures

All core drilling conducted by Moneta is oriented. Drill core is cut with half sent to AGAT Laboratories Inc. (AGAT) for drying and crushing to -2 mm, with a 1.00 kg split pulverized to -75 µm (200#). AGAT is an ISO 17025 accredited laboratory. A 50 g charge is Fire Assayed and analyzed using an AAS finish for Gold. Samples above 10.00 g/t Au are analyzed by Fire Assay with a gravimetric finish and selected samples with visible gold or high-grade mineralization are assayed by Metallic Screen Fire Assay on a 1.00 kg sample. Moneta inserts independent certified reference material and blanks with the samples and assays routine pulp repeats and coarse reject sample duplicates, as well as completing routine third-party check assays at Activation Laboratories Ltd.

About Moneta

The Company holds a 100% interest in 6 core gold projects strategically located along the Destor-Porcupine Fault Zone in the Timmins Gold Camp with over 85 million ounces of past gold production. The main Golden Highway Project covers 12 km of prospective ground along the DPFZ of which 2 km hosts the September 2020 43-101 mineral

resource estimate comprised of an indicated resource of 676,900 ounces gold contained within 5.11 Mt @ 4.12 g/t Au and a total of 1,386,600 ounces gold contained within 10.78 Mt @ 4.00 g/t Au in the inferred category at a 2.60 g/t Au at South West and 3.00 g/t Au cut-off for the other deposits. The new resource will update September 2020 mineral resource estimate. A PEA study completed on the September 2020 South West Deposit, one of 6 deposits located on the Golden Highway project, highlighted an 11-year mine life with an after-tax NPV_{5%} of C\$236MM, IRR of 30% and a 3.4 year payback, generating C\$371MM LOM after-tax free cash flow. The project envisaged underground mining producing 76,000 oz/pa at a cash cost of US\$590/oz.

FOR FURTHER INFORMATION, PLEASE CONTACT:

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The Company's public documents may be accessed at www.sedar.com. For further information on the Company, please visit our website at www.monetaporcupine.com or email us at info@monetaporcupine.com.

This news release includes certain forward-looking information and forward-looking statements, collectively "forward-looking statements" within the meaning of applicable Canadian securities legislation. Forward-looking statements are frequently identified by such words as "may", "will", "plan", "expect", "anticipate", "estimate", "intend" and similar words referring to future events and results. Forward-looking statements include, but are not limited to information with respect to the future performance of the business, its operations and financial performance and condition such as the Company's drilling program and the timing and results thereof; and the ability of the Company to finance and carry out its anticipated goals and objectives.

Forward-looking statements are based on the current opinions and expectations of management. All forward-looking information is inherently uncertain and subject to a variety of assumptions, risks and uncertainties, including the speculative nature of mineral exploration and development, fluctuating commodity prices, competitive risks and the availability of financing, as described in more detail in our recent securities filings available at www.sedar.com. Actual events or results may differ materially from those projected in the forward looking-statements and we caution against placing undue reliance thereon. We assume no obligation to revise or update these forward-looking statements.