

## Panoro Announces Significant Increase and Upgrade for Antilla Cu/Mo Project Resource

Vancouver, B.C., December 16, 2013 - **Panoro Minerals Ltd.** (TSXV: PML, Lima: PML, Frankfurt: PZM) ("Panoro", the "Company") Panoro is pleased to announce that it has received an updated mineral resource estimate for its 100% owned Antilla porphyry copper-molybdenum Project located in southern Peru from Tetra Tech.

## Highlights

- Base Case Indicated mineral resource of 188.5 million tonnes at 0.40% Cu and 0.009% Mo at a cut-off of 0.20% Cu<sub>eq</sub>;
- Base Case Inferred mineral resource of 145.9 million tonnes at 0.28% Cu and 0.009% Mo at a cutoff of 0.20% Cu<sub>eq</sub>;
- The new resource reflects a 38% increase in contained copper and 53% increase in contained molybdenum;
- The strip ratio of the conceptual pit shell used to constrain the mineral resource is reduced to 1:1 from 2.5:1 in the 2012 resource estimate; Potential to increase resource tonnage in several directions and below the current pit shell through additional drilling on the basis of strong copper-molybdenum mineralization; and
- New exploration targets identified on the Antilla property.

### Mineral Resource Estimate

Tetra Tech completed the mineral resource estimate for the Antilla project utilizing all drill and assay results available to June 11, 2013. The resource estimate has been completed based on the results of 9,130 meters of drilling by Panoro (49 drill holes) and 5,162 meters of drilling (39 drill holes from drilling by others). It includes supergene and hypogene sulphides from the East block deposit contained within a single conceptual pit shell. The conceptual pit shell has been modelled to include that portion of the mineral resource block model having a reasonable prospect for economic extraction based on the new knowledge of the deposit. The mineral resource estimate in the Indicated Category is summarized in Tables 1 and 2 below. See Plan 1 at the company website (www.panoro.com) illustrating the resource limits and drillhole locations.

Cut-Off Grade	Million	Cu	Мо	Contained Cu	Contained Mo
% Cu <sub>eq</sub>	Tonnes	(%)	(%)	(Blb)	(MIb)
0.20	188.5	0.40	0.009	1.7	36
0.30	138.4	0.46	0.009	1.4	27
0.40	84.1	0.54	0.010	1.0	19
0.50	51.6	0.62	0.010	0.7	11
0.60	27.8	0.69	0.011	0.4	6.7
0.70	12.9	0.78	0.012	0.2	3.4

### Table 1: Sensitivity of Indicated Mineral Resource to Cut-off Grade

Note: Base case in bold. Mineral Resources have an effective date of September 27, 2013 and were estimated by Qualified Person Paul Daigle, P.Geo. (APGO, 1592). The estimate is based on 9,130 meters of drilling by Panoro and 5,162 meters of drilling from other campaigns. Mineral Resources are reported above a 0.20% Cu<sub>eq</sub> cut-off grade and are constrained by a conceptual pit shell. Mineral Resources are reported using long-term copper price of US\$ 3.25/lb and a molybdenum price of US\$ 9.00/lb. Input parameters used for pit optimization are mining cost of US\$1.90 /t mined, total operating cost of US\$10.00/t including general and administrative costs, and metallurgical recoveries of 90% for copper and 80% for molybdenum. Mineralization would be mined from an open pit with final pit slopes of 45° and treated using conventional flotation and hydrometallurgical flow sheets. Rounding in accordance with reporting guidelines may result in summation differences.



Zone	Cut-Off Grade	Million	Cu	Мо	Contained Cu	Contained Mo
	% Cu <sub>eq</sub>	Tonnes	(%)	(%)	(Blb)	(MIb)
Hypogene Sulphide	0.20	42.6	0.30	0.010	0.28	9.4
Supergene Sulphide	0.20	132.6	0.45	0.008	1.3	23.4
Leach Capping	0.20	8.7	0.28	0.010	0.054	1.92
Overburden	0.20	4.5	0.27	0.010	0.027	0.99
Total		188.5	0.40	0.009	1.66	35.71

Table 2: Mineral Resource in Indicated Category Classified by Mineralization Type

The mineral resource estimate in the Inferred Category is summarized in Tables 3 and 4 below.

Cut-Off Grade	Million	Cu	Mo	Contained Cu	Contained Mo
% Cu <sub>eq</sub> 0.20	Tonnes 145.9	(%) 0.28	(%) 0.009	(Blb) 0.9	(MIb) 28
0.20	140.0	0.20	0.000	0.0	
0.30	49.4	0.38	0.009	0.4	10
0.40	16.8	0.49	0.010	0.18	3.3
0.50	7.3	0.57	0.010	0.09	1.4
0.60	3.0	0.64	0.009	0.04	0.59
0.70	0.45	0.71	0.009	0.007	0.09

Table 3: Sensitivity of Inferred Mineral Resource to Cut-off Grade

Table 4: Mineral Reso	urce in Inferred Catego	orv Classified by Mir	neralization Type

Zone	Cut-Off Grade	Million	Cu	Мо	Contained Cu	Contained Mo
	% Cu <sub>eq</sub>	Tonnes	(%)	(%)	(Blb)	(MIb)
Hypogene Sulphide	0.20	87.9	0.26	0.008	0.50	15.5
Supergene Sulphide	0.20	49.3	0.33	0.009	0.36	9.8
Leached Capping	0.20	8.5	0.22	0.011	0.04	2.1
Overburden	0.20	0.26	0.24	0.010	0.001	0.05
Total		145.9	0.28	0.009	0.90	27.45

These mineral resource estimates include Inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. There is also no certainty that these Inferred mineral resources will be converted to the Measured and Indicated mineral resource categories through additional drilling.

A conceptual starter pit containing 15 million tonnes at a grade of 0.72% copper and 0.017% molybdenum at a cut-off of 0.25% Cu with a stripping ratio of 0.9 was defined in AMEC's 2009 resource estimate (June 19, 2009 PML release). This higher grade mineralization and much of the rest of the Inferred resource



defined by AMEC has been upgraded to Indicated status in the current study. Conceptual pit shell modelling within the Indicated resource by Tetra Tech has shown that a significant proportion of the higher grade mineralization could be amenable to early scheduling in a starter pit. However, the updated definition of a starter and/or higher grade pit is being deferred to a Preliminary Economic Assessment for the project, to be initiated in the near future.

The mineral resource consists of a sub-horizontal blanket of supergene sulphide mineralization dominated by chalcocite and molybdenite underlain by a second blanket of primary chalcopyrite and molybdenite mineralization. Both mineralized zones are parallel to the surface, but are either overlain by a leached capping and/or covered by colluvium containing some mixed sulphide and oxide copper and molybdenum mineralization.

Mineralized horizons are hosted by stratified quartzites and quartz arenites of the Soraya Formation. The character of hypogene alteration and mineralization suggest that it may represent the distal portion of a nearby intrusive-hosted porphyry-style copper deposit.

Luquman Shaheen, President & CEO, stated, "We are pleased that the updated resource for the Antilla Project demonstrates key improvements to the project's metrics that provide a strong basis on which to commence a Preliminary Economic Assessment in the near future. The upgrade of 188.5 Mt to Indicated resource, the addition of 145.9 Mt of Inferred resources and the strip ratio decrease in to 1:1 are significant improvements from the previous 145 Mt Inferred resource with a strip ratio of 2.5:1. This Antilla Project resource update together with the Cotabambas Resource update announced in October gives Panoro a resource base which has grown over 400% since 2007."

### Parameters and Assumptions Used in the Mineral Resource Estimate

The conceptual pit shell constraining that portion of the mineral resource block model having a reasonable prospect for economic extraction based on the current knowledge of the deposit has been constructed according to technical and economic parameters in Table 7.

Parameters	Mineral Resources Pit Shell	Units
Copper Price	3.25	US\$/lb
Molybdenum Price	9.00	US\$/lb
Copper Selling Costs (SCu)	0.16	US\$/lb
Molybdenum Selling Costs (SAu)	0.45	US\$/lb
Copper Price net of Selling Costs (PCu)	3.04	US\$/lb
Molybdenum Price net of Selling Costs (PAu)	8.55	US\$/oz
Processing Throughput	30,000	t/day
11 II	10,500,000	t/year
Mining Recovery Rate	97	%
Mining Dilution Rate	3	%
Mining Cost	1.90	US\$/tonne mined
Mill Cost	7.25	US\$/tonne Milled
Additional cost for mineral resources	0.15	US\$/tonne Milled
Ore handling cost	0.50	US\$/tonne Milled
Environmental Cost	1.00	US\$/tonne Milled
General and Administrative Cost	1.10	US\$/tonne Milled
Total Operating Cost	10.00	US\$/tonne Milled
Overall Pit Slope Angle	45	Degree

### Table 7: Parameters Used in the Construction of the Mineral Resource Conceptual Pit Shell



# **Exploration Potential**

As can be seen in Plan 2 at the company website (<u>www.panoro.com</u>), the East Block which hosts the current mineral resources at Antilla is located in the east part of the property where copper and molybdenum mineralization is associated with quartz monzonite porphyries of the middle Eocene to early Oligocene Andahuaylas-Yauri batholith which have intruded quartzites and arenites of the Cretaceous Soraya formation. In the western part of the property, similar late phase porphyries intrude arenites, shales and limestones of the Jurassic Piste formation. The potential to increase the resource at the Antilla project includes a number of possibilities:

*Local Scale.* Drilling to date indicates that supergene mineralization extends both north and south of the current resource as well as, in places, to depth. Additional drilling could add to the resource in these areas.

**District Scale.** Systematic geochemical sampling and geological mapping suggest that the current limits of the mineral resource are located in the center of an east-west structural trend some 2.5 km wide and 5 km long. The trend is characterized by significant anomalous copper and molybdenum and includes outcropping quartz monzonite porphyry exhibiting copper mineralization and potassic alteration as well as an apparent leached cap zone developed in the quartzites and arenites of the Soraya formation.

A second extensive copper anomaly occurs in the 1.3 km by 1.5 km Chabuca zone located to the east of the current resource. Here, anomalous copper and molybdenum are associated with outcropping coppermineralized and potassically altered quartz monzonite porphyry. The possibility of underlying hypogene porphyry copper mineralization in both the East and West Blocks largely remains to be tested. Additional systematic geochemical sampling is currently in progress in the north and western parts of the property. See Plan 3 at the company website (www.panoro.com).

**Property Scale.** In the western extreme of the property, a new exploration target named Piste was recently discovered. It consists of outcropping porphyry and skarn-type mineralization hosted by limestones, arenites and shales. A program of rock chip sampling and detailed geological mapping is in progress.

# About Panoro

Panoro's strategic focus is to move its advanced stage projects to the feasibility and development stages and to explore its other projects. The Company owns the advanced Cotabambas Copper-Gold-Silver-Molybdenum and Antilla Copper-Molybdenum Projects which include mineral resources of:

- Cotabambas: Indicated Resource 117.1 Mt @ 0.42% Cu, 0.23g/t Au, 2.74 g/t Ag and 0.001%Mo @ 0.2% Cu<sub>eq</sub> cutoff Inferred Resource 605.3 Mt @ 0.31% Cu, 0.17g/t Au, 2.33 g/t Ag and 0.002 %Mo @ 0.2% Cu<sub>eq</sub> cutoff (Tetra Tech, 2013).
- Antilla: Indicated Resource 188.5 Mt @ 0.40% Cu and 0.009% Mo @ 0.20% Cu<sub>eq</sub> cutoff Inferred Resource 145.9 Mt @ 0.28%Cu and 0.009%Mo @ 0.20% Cu<sub>eq</sub> cutoff (Tetra Tech, 2013).

Panoro is very well positioned to advance exploration at the Antilla and Cotabambas Projects. The Company has \$11 million in cash which will allow completion of additional infill and exploration drilling and preliminary economic assessments as both projects move towards feasibility studies.



Panoro's significant portfolio of properties is located primarily in the south-eastern region of Peru. This region contains a number of important copper and copper/gold deposits including Glencore-Xstrata's Las Bambas and Antapaccay Copper Projects and the Tintaya Copper Mine. In September 2010, Xstrata announced US\$5.2 billion of investment to develop Las Bambas. The Antapaccay copper project is in operation. The region also includes First Quantum Minerals' Haquira Copper Project, HudBay Minerals' Constancia Copper Project and Southern Copper's Los Chancas Copper Project. The Constancia project is currently in construction with start-up planned for 2014.

Luis Vela, a P. Geo Qualified Person under National Instrument 43-101, has reviewed and approved the scientific and technical information in this press release.

On behalf of the Board of Panoro Minerals Ltd.

Luquman Shaheen, M.B.A., P.Eng., P.E. President & CEO

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