



Pele Mountain Begins Drilling at East Highland Gold Project

Symbol: **GEM**

Listing: TSX Venture Exchange

Common Shares Outstanding: 101,843,608

FOR IMMEDIATE RELEASE

January 18, 2010 - Toronto - **Pele Mountain Resources Inc. (TSX Venture: GEM)** ("**Pele**" or the "**Company**") today announced the start of diamond drilling at its East Highland Gold project in Northern Ontario. East Highland is 100-percent owned by Pele Gold Corporation, a wholly owned subsidiary of the Company.

Pele focused its efforts at East Highland in the late-1990s, concluding with the successful mining and processing of bulk samples at the Markes and 'A' zones in 1999. Approximately 3,800 tonnes of material was mined from a small open pit at the 'A' zone, returning an average gold grade of 5 grams per tonne (g/t), confirming the presence of high grade, narrow vein, gold mineralization. Only two of five mineralized benches planned for the bulk sample were actually mined at the time and Pele management believes that drilling is likely to delineate additional near-surface, mineable tonnage.

Prior to the bulk sample, diamond drilling had established that the 'A' zone continues to a vertical depth of approximately 200 metres and that the gold-bearing trend appears to remain open along strike to the east and at depth. A 1997 report by Peter Bevan, P. Eng., indicates that the 'A' zone hosts a historic (non NI 43-101 compliant) inferred resource of 101,001 tonnes averaging 7.33 g/t gold, to a depth of 190 metres.

Pele's first-phase 31-hole, 1,000-metre drill program includes the 'A', Lone Ranger, Haystack, and Golden Eagle East zones and is aimed primarily at locating near surface, mineable, gold mineralization. The drill plan also includes the extension of two historic holes toward another potential gold zone parallel to the 'A' zone.

At Lone Ranger, nine channel samples over a 100-metre strike length, gave results ranging from non detect ("ND") to 14.76 g/t gold over 3.6 metres across a portion of mineralized outcrop. The Lone Ranger mineralized zone, approximately 40 metres wide, has been traced in outcrop over a 160-metre strike length, and remains open along strike. Samples with high grade values carrying visible gold are associated with widespread stockwork quartz veining carrying variable pyrite in the felsic unit. Previous channel sampling at Lone Ranger returned gold values ranging from ND to 34.0 g/t gold over 2.0 metres.

At Haystack, 23 channel samples over a 675-metre strike length on both the East and West zones, gave results ranging from ND to 3.2 g/t gold over 2.2 metres, 2.84 g/t gold over 3.05 metres, and 2.39 g/t gold over 1.2 metres. Other samples gave anomalous gold values, defining a continuous gold zone over a strike length

exceeding 500 metres with all samples exceeding 0.5 g/t gold over an average width of 3 metres. In this zone, a higher grade section averaged 2.8 g/t gold over 135 metres of strike length.

At Golden Eagle East, the only channel sample taken gave 0.78 g/t gold over 5.85 metres, where stripping exposed a portion of a mineralized ironstone unit containing pods of mottled grey white quartz veins carrying strong sulphides, mainly pyrite.

(See Pele's press release dated December 23, 2009 for the detailed results from the Lone Ranger, Haystack, and Golden Eagle East zones.)

At West Highland, Pele has received a report on geological mapping which includes a detailed structural analysis of the areas surrounding the Gutcher Lake Stock (GLS) along with recommendations for further exploration. The report, authored by Robert H. Thivierge, P.Ge., and Paul-Claude Delisle, P.Ge., states: "The recognition of large-scale structural features related to gold and copper mineralization, particularly around the margins of and within the Gutcher Lake pluton, renders a significant potential for the extension of known mineralization zones and the discovery of significant new zones."

Specifically, the report recommends the resumption of drilling at several zones along the southern contact of the GLS, with particular interest in the Talisker zone. In 2005, Pele's drilling at Talisker yielded near-surface gold intercepts of 8.4 g/t over 8.16 metres, 12.0 g/t over 3.16 metres, and 12.4 g/t over 2.25 metres plus other lower grade intercepts (see Pele's press release dated February 22, 2006). The report also recommends additional mapping and outcrop stripping in these areas, as well as at the western extension of the Murphy Mine along the eastern contact of the GLS. The Thivierge / Delisle report has been posted on the Pele website at http://www.pelemountain.com/images/docs/Report_geological_mapping.pdf

Pele's Highland gold properties cover more than 10,000 acres of the Michipicoten Greenstone Belt, located approximately 100 kilometres to the southeast of Hemlo in Northern Ontario. The properties include shear-hosted gold occurrences along the regional Goudreau-Localsh Deformation Zone, home to several past producing gold mines including the Renabie Mine (over one-million ounces) and where Richmond Mines Inc. is now operating the Island Gold Mine and milling complex. The Highland properties have excellent geologic potential for the discovery of a mineable gold deposit similar to Renabie and the Island deposit.

About Pele

Pele Mountain Resources has generated and advanced high-quality mineral projects for more than a decade, discovering and developing the mineral wealth of Northern Ontario. At its vast Eco Ridge Mine uranium project, Pele is focused on the sustainable development of a safe, secure, and reliable operation near Elliot Lake. At its high-grade Highland gold properties, Pele is drilling several zones to identify mineable, near-surface gold resources. At its 70 square-mile Pigeon River property, Pele is preparing to fly a VTEM survey over large unexplored magnetic targets in search of a Ni/Cu/PGE massive sulphide deposit. The Company also holds the Ardeen Gold and Sudbury Nickel projects, which are actively explored and funded under option agreements with Coventry Resources Ltd. and Wallbridge Mining Company, respectively. Pele's shares are listed on the TSX Venture Exchange under the symbol "**GEM**".

For further information please contact Al Shefsky, President, at (800) 315-7353, or visit the Pele website at www.pelemountain.com.

Neither the 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. Some of the statements contained in this release are forward-looking statements, such as estimates and statements that describe Pele's future plans, objectives or goals, including words to the effect that Pele or management expects a

stated condition or result to occur. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. The economic viability of the 43-101 mineral resource at Pele's Eco Ridge Mine Project has not yet been demonstrated by a preliminary feasibility study.