



Pele Mountain Initiates Long-Term Research Study to Minimize Environmental Impact at Eco Ridge

Symbol: **GEM**

Listing: TSX Venture Exchange

Common Shares Outstanding: 95,486,944

FOR IMMEDIATE RELEASE

August 5, 2009 - Toronto - **Pele Mountain Resources Inc. (TSX Venture: GEM)** ("**Pele**" or the "**Company**") today announced the commencement of a long-term research study to minimize environmental impact at its Eco Ridge Mine Uranium Project in Northern Ontario.

The study, to be performed by MIRARCO, a leader in applied research and innovation for the mining industry, housed within Laurentian University in Sudbury, will monitor progressively larger micro and bench-scale tests which simulate various biologically-mediated heap-leach scenarios. The study will provide detailed information on long-term mineralogical, geochemical and microbiological studies, assisting in mineral recovery optimization and the preliminary modeling of cost-effective low-maintenance closure strategies. Large-diameter core drilling is now underway at Eco Ridge to supply a 300-kilogram representative sample of the Main Conglomerate Bed for use in the study.

As detailed in the Project Description, which was submitted to the Canadian Nuclear Safety Commission and the Federal Government's Major Project Management Office in September 2008, Pele has proposed underground uranium mining with uranium processing through a combination of underground bioleaching and surface heap leach extraction at Eco Ridge. Approximately 35 percent of mined ore will be trucked to surface and deposited on a heap leach facility ("**HLF**"). The preliminary design for the heap leach cells, prepared by SNC Lavalin, aims to fully contain the leach solutions and to allow for progressive decommissioning. The HLF would be operated, decommissioned, and reclaimed using methods successfully employed at other modern mine sites around the world. No tailings pond is planned at Eco Ridge.

With its excellent regional infrastructure, well understood geology, politically stable and mining friendly jurisdiction, Elliot Lake is an ideal location for the development of a long-term secure and reliable uranium supply. Pele's 100-percent owned Eco Ridge Mine project contains a NI 43-101 compliant resource of 6.4 million pounds of "indicated" U_3O_8 (5.68 million tonnes grading 0.051-percent U_3O_8) and 36.1 million pounds of "inferred" U_3O_8 (37.26 tonnes grading 0.044-percent U_3O_8) with the potential for significant expansion. More than 300 million pounds of U_3O_8 were mined from similar deposits near Elliot Lake by Rio Algom and Denison Mines from 1956 to 1996.

This press release has been reviewed and approved by Fergus Kerr P. Eng., Vice President Uranium Operations for the Company and a Qualified Person under NI 43-101.

About Pele

Pele is focused on the sustainable development of the Eco Ridge Mine in the historic Elliot Lake mining camp. The company is developing a safe, secure, and reliable uranium project in order to deliver lasting benefits to local communities and its shareholders. Pele also holds a diverse portfolio of gold, diamond, and base metal projects in Northern Ontario. Pele stock is 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.

About MIRARCO

Mining Innovation, Rehabilitation and Applied Research Corporation, founded in 1998, is a not-for-profit company formed through collaboration between Laurentian University and the private and public sectors. MIRARCO provides a bridge between researchers and industry with expertise in rock mechanics and ground control, mining modeling and simulation, virtual reality, environmental monitoring and mine rehabilitation.

For further information on collaborative research opportunities please contact Steve Hall, President/CEO, at (705) 675-1151 (x5106), or visit the MIRARCO website at www.mirarco.org

The TSX-V has not reviewed and does not accept 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 Elliot Lake Project has not yet been demonstrated by a preliminary feasibility study.