

# **Haughton-Mars Project**

## **Project Summary**

### **Report for 2011 and Plans for 2012-2014**

The Haughton-Mars Project (HMP) is an international research project to study the Haughton meteorite impact crater and surrounding terrain on Devon Island, Nunavut, viewed as a site similar to the Moon, Mars, and other planetary bodies. The HMP conducts scientific research, technology development, and education activities to advance space exploration for the benefit of all humankind. The project is managed by the Mars Institute with support from NASA and other partners, including local Nunavut communities.

#### **HMP-2011: Summary of Research**

- Studies of the geology and microbiology of Haughton Crater and Devon Island.
- Completion of research in the Mars Greenhouse.
- Tests of a robotic arm on the Mars-1 Humvee Rover.
- Tests of technologies for a robotic drill (soil sampler) for Moon-Mars exploration.
- Tests of spacesuits for future human Moon-Mars exploration.
- Tests of geotechnical instrument operation for human Moon-Mars exploration.

On HMP-2011, the following Inuk from Grise Fiord was hired and participated in all aspects of our project: Ben Audlaluk.

#### **HMP-2012 to 2014: Summary of Proposed Research**

- Studies of the geology and microbiology of Haughton Crater and Devon Island.
- Geophysics investigations of rocks, soil, and ice.
- Tests of technologies for a robotic drill (rock sampler) for Moon-Mars exploration.
- Tests of robotic vehicles for Moon-Mars exploration.
- Tests of spacesuits for future human Moon-Mars exploration.
- Drive of two Humvee Rovers together in simulated long-distance rover drives.
- Documentary filming.

Due to budgetary constraints, the HMP-2012 to 2014 field campaigns are expected to be shorter than in the past: 3 - 4 weeks instead of 7. Proposed field dates are approximately: 7 July – 7 August. The proposed research activities will continue to offer adult and student employment and educational opportunities for local Nunavut communities, in particular Grise Fiord and Resolute Bay. Employment opportunities will include positions as deputy camp manager/senior field guide, field assistants, and direct participation in our research program and environmental monitoring.

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