

Haughton-Mars Project Project Summary Report for 2010 and Plans for 2011

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 humankind. The project is managed by the Mars Institute with support from the Canadian Space Agency and NASA. (Note: The HMP is separate from the more recent Mars Society activity at the same site).

HMP-2010: Summary of Research

- Studies of the geology and microbiology of Haughton Crater and Devon Island.
- Preparation of the Greenhouse for 1 year of autonomous (robotic) operation.
- Tests of technologies for a robotic rover for Moon-Mars exploration.
- Tests of technologies for a robotic drill (soil sampler) for Moon-Mars exploration.
- Tests of spacesuits for future human Moon-Mars exploration.
- Tests of long-range communications technology for remote teams.

On HMP-2010, the following Inuit from Grise Fiord and Resolute Bay were hired and participated in all aspects of our project: Ben Audlaluk, Terry Pijamini, Sallia Pijamini, Peter Eckalook, Uluriak Amarualik, and Nathan Kalluk.

HMP-2011: Summary of Proposed Research

- Studies of the geology and microbiology of Haughton Crater and Devon Island.
- End of Greenhouse Research after successful 1-year of autonomous operation.
- Tests of technologies for a robotic drill (soil sampler) for Moon-Mars exploration.
- Tests of a robotic arm on the Mars-1 Humvee Rover.
- Tests of spacesuits for future human Moon-Mars exploration.
- Tests of geotechnical instrument operation for human Moon-Mars exploration.
- Drive of Moon-1 Humvee Rover to simulate Long-Distance Moon rover drive.

Due to budgetary constraints, the HMP-2011 field campaign will be much shorter than usual: 3 weeks instead of 7. Proposed field dates are: 11 July – 1 August 2011. 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.

For more information, please contact Dr Pascal Lee at: pascal.lee@marsinstitute.net