

The Illusion of Mars

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Abstract

The Mars Society's Mars Desert Research Station (MDRS) in Utah was recently home to a trans-Tasman crew for two weeks in April-May 2012. Mike Bodnar, from Wellington, New Zealand, captured the mission on video and has subsequently produced a full-length documentary. The documentary observes the "illusion" of Mars via the MDRS habitat and the landscape in which it sits, and examines whether such an analog facility can actually contribute to the future exploration and possible settlement of the Red Planet.

1. Introduction

Mission 118 at the MDRS was called "KiwiMars 2012". It was led by Commander Haritina Mogosanu, a Romanian by birth but now a New Zealand citizen living in Wellington. Her crew comprised of Ali Harley (mission geologist), Bruce Ngataierua (health and safety officer), Mike Bodnar (executive officer and mission journalist), and from Melbourne Annalea Beattie (life sciences specialist and artist) and Don Stewart (flight engineer).

The crew spent two weeks living and working together in the MDRS habitat, going on field expeditions either on foot or using the MDRS ATVs (quad bikes), and conducted research in geology, biology, astronomy and nutrition. Their activities, interaction, thoughts and feelings were fully documented by Mike Bodnar, drawing on his background as a professional broadcaster and video producer. His resulting documentary *The Illusion of Mars* will be premiere at the AMEC conference.

2. The illusion of Mars

The basic foundation of the Mars Desert Research Station is that the facility and the environment in which it stands afford the opportunity to further understand the practicalities of survival and exploration of the planet Mars, and have the potential to contribute to the total knowledge necessary to undertake such a venture.

The reality of course is that the atmosphere in Utah is breathable, the gravity is Earth-strength, and the habitat and 'spacesuits' are not pressurized. The ATVs operate with standard four-stroke petrol engines, and the climate – while it can get very cold during the winter season – is nowhere near as challenging as it would be on Mars.

In short, the MDRS presents an *illusion* of Mars more than a scientifically-precise analog. And yet, even without the massive challenges the actual red planet will deliver, the MDRS does have the potential for understanding at least some of the intricacies of living in an alien environment. Human interaction, nutrition, sustainability, health and safety issues... all of these – even in limited two-week tenure – provide a small sample of what longer-term explorers might have to face.

As Commander Mogosanu said in a New Zealand media interview before the mission, "the MDRS is as real as you want to make it".

3. The documentary

Six hours of video footage was shot during Mission 118, capturing everything from daily habitat routines such as checking and replenishing the water supplies, cleaning and vacuuming the habitat, and preparing the dehydrated and freeze-dried food, through to kitting up in the mock spacesuits, exploring the Jurassic landscape of the surrounding Utah desert, understanding the geology, and searching for fossils and evidence of life in an extreme environment.

The raw footage has now been edited into a commercial-length “hour-long” 48-minute documentary complete with narration. It includes in-depth interviews with the crew as to their expectations of KiwiMars 2012, along with their thoughts during and after the mission.

From it, we learn about the challenges of human interaction in a confined space (the habitat), the trials of making edible meals from dried food ingredients, the importance of routine maintenance in an environment where you can’t just nip down to the local hardware store for a part, and the importance of self: the personal and cultural values that people need in order to feel comfortable in an alien environment.

The documentary presents its audience with a concise snapshot of the challenges of interplanetary exploration, but leaves the viewers to make up their own mind whether such analog research stations provide any value, any real knowledge or further progress towards the goal of reaching, exploring and eventually settling Mars.

4. The premiere

Delegates to AMEC will be seeing the premiere of *The Illusion of Mars*, even before any New Zealand audience. As such, their feedback will be very valuable to the producer in any final tweaking of the production, and it is hoped that the documentary will stimulate and contribute to discussion, around the value and significance of the proposed Mars Oz facility.