

Mars Space Construction, LLC

Summary

Project Reference Material

11	Mars (Nat Geo Series) - DVD Video Title	\$ -	Season	Volume	Disk	Episode	Episode Title	Time Stamp	Viewed	Notes: Analog Summary
1	Mars (Nat Geo Series)	0	1	-	1	1	Novo Mundo	0:00:00	4/10/2021	The beginning, SpaceX narrative interjected, "Astronaut Core", "International Mars Science Foundation" (IMSF), "Mars Mission Corporation" (multi-national corporation funding Mars Missions), SpaceX (multi-planet species, space faring civilization, control room, failure/risk/innovaton, and evaluate risks against rewards. Team lands on Mars (2033). Commander broke ribs and punctioned lungs on landing.
1	Mars (Nat Geo Series)		1	-	1	2	Grounded	0:48:00	4/10/2021	Intially landing overshot base camp with supplies. Had to travel to base camp in overcrowded rover (Rover to slow) and limited supplies. 15 hour trip to base camp, Push overspeed protocols on rover to get to base camp.
	Mars (Nat Geo Series)		1	-	1	2	Grounded	0:50:00	4/10/2021	Scott Kelly - one year stay at ISS, study of long duration enviornmental health sciences, there is the possibility of something going wrong.
	Mars (Nat Geo Series)		1	-	1	2	Grounded	0:59:00	4/10/2021	Mission Commander, working member of team. Rover breaks axle, team needs to walk to base camp before night fall when temperatures drop -70 degrees. Surgical expertise in initial crew members needed. Commander dies after surgical operation after arriving at base camp.
1	Mars (Nat Geo Series)		1	-	1	3	Pressure Drop	1:20:00	4/10/2021	Early atstronauts were risk takers. Exploration is no for the faint hearted. It is for the brave. CEO of Mars Corp pushes president of corp over issues.
	Mars (Nat Geo Series)		1	-	1	3	Pressure Drop	1:45:00	4/10/2021	Get underground as soon as you can. Using lava tubes. Creating a habitat within a lava tube. Trapped water resources. Mapping lava tubes are hard to find. Un-manned aerial vehicles deployed for aerial survey's. Edge of robotic technology. 3D view of Martian surface of certain areas. Base camp faces electrical overload and has to be rewired with risk of system failure.
	Mars (Nat Geo Series)		1	-	1	3	Pressure Drop	1:53:00	4/10/2021	CEO faces board meeting with IMSF considering canceling of program. CEO investing 90% of own net worth in venture. Must find lava tube locations to survive with existing supplies. Fire, fire containment system malfunction. Remote sensing of work done on Mars is automatically sent by computer to Earth for Corp. review.
	Mars (Nat Geo Series)		1	-	1	3	Pressure Drop	2:02:45	4/10/2021	The search is on for lava tubes near temp. base camp. Tube with horizontal entrance. (Study of lava tubes) . Lower into lava tube. Looking for ice within lava tube. Habitats - deployed, pressurized, and decorate. Lava Tube Found.
1	Mars (Nat Geo Series)		1	-	2	4	Expansion	0:13:00	4/10/2021	Multiple commander changes during las 10 years. Each commnder chages brings a new directive from corp office on Earth creating friction between rotating crews and management. No single focus or direction during transition. It is like a presidential shift change in U.S. Areas of conflict are electrical systems upgrades, greenhouse progress, etc. Search for Martain life using drones.
	Mars (Nat Geo Series)		1	-	2	4	Expansion	0:25:00	4/10/2021	Meeting with CEO and president for pushing schedule forward. President is showing resistance. Pushing forward with disregard to safety, mission protocols, supplies, power, etc. Mission goal is to become self-sufficent as soon as possible. Earth management is pushing Mars team faster than is comfortable by team.
	Mars (Nat Geo Series)		1	-	2	4	Expansion	0:32:00	4/10/2021	Electrical upgrades with new team. Overlooked protocol and accident happens. Technician dies and another in medical re-habinnig for months. Electrical delays occur.

1	Mars (Nat Geo Series)	1	-	2	5	Dust Storm	0:48:00	4/10/2021	Dust storm sneaks up on Mars station (need early warning system for Mars weather). Electrical upgrades are not done yet. Station in lock-down for period of storm. Full storm protocol, power reductions, food consumption, EVA's suspended. Nuclear reactor not on;ine, on backup power. One complication from complete station outage. Rationing power in greenhouse because of storm. Dust storm can be both regional and global and can contain lightning. Solar power is a problem during dust storms. Dust is like talcum powder and gets into everything. Solar arrays need continuous cleaning. Storm raging for months. Medical checkups for everyone. Greenhouse technician having difficulty dealing with power rationing. Mentally unstable and nobody has a clue.
	Mars (Nat Geo Series)	1	-	2	5	Dust Storm	0:58:00	4/10/2021	Create a Analog simulation of Mars environment (Antarctic). Creating a team that works together. Separated from planet Earth. Mental health records and medical comments are on a need to know basis. (protocols for adding medical comments need to be reviewed by commander)
	Mars (Nat Geo Series)	1	-	2	5	Dust Storm	1:00:00	4/10/2021	CEO and president have discussion on sending additional freighters during storm. President to CEO, "Pushing to hard to fast, something is going to break". Power rationing kills all plant just starting. Greenhouse technician has breakdown. Medical doctor testing crew for isolation and mental health. Handling conflict, cannot separate when conflict arises. Still have to continue mission.
1	Mars (Nat Geo Series)	1	-	2	5	Greenhouse	1:24:00	4/10/2021	Greenhouse technician goes off deep end and opens greenhouse airlock to Mars environment exposing the station and its crew to catastrophic failure and death. (Need to have all compartments piped with knockout gas which works quickly activated from coded access panel at compartment door. For use in emergency containment. Airlocks can not be opened for general use. Only coded emergencies. Emergency protocols need to be developed.) President talks to sister, manager of Mars site. Electrical repair technicians bring nuclear system online. Explosive decompression in Greenhouse area kills seven people in the contained area.
	Mars (Nat Geo Series)	1	-	2	5	Greenhouse	1:34:00	4/10/2021	Looking through the wreckage of Greenhouse. What happened and why? (Compared to troubled Apollo 13, space exploration is driven by public opinion and political support.) Fate of mission is back on Earth where President & CEO work out a compromise. Board of IMSF vote on terminating mission on Mars. Mars manager recalled back to Earth by President.
1	Mars (Nat Geo Series)	1	-	2	6	Moving Forward	2:00:00	4/10/2021	Moving forward. Getting ready to evacuate Mars. Visiting Starship. (SpaceX's first successful launch and return of rocket.) They found microbial life on Mars.
1	Mars (Nat Geo Series)	1	-	3	1	Special Features	-	4/10/2021	How do we land on Mars? Multiple methods - parachutes, rockets, etc.
	Mars (Nat Geo Series)	1	-	3	1	Special Features	-	4/10/2021	How are we going to get off this rock? Get off Earth, build a rocket. Building re-usable boosters. Drive down cost of low Earth orbit.
	Mars (Nat Geo Series)	1	-	3	1	Special Features	-	4/10/2021	Planning our route to Mars. We know the technology we need to go today. Robotic visits to Mars ahead of time with supplies. Might be underground. Using robots to expand perimeter. Similar to station in Antarctica.
	Mars (Nat Geo Series)	1	-	3	1	Special Features	-	4/10/2021	Enduring the journey to Mars. Human condition does not lend itself to space. Zero gravity physical changes from Earth to Mars. Weakened bones, radiation sickness, isolation in space, form of human sacrifice.
	Mars (Nat Geo Series)	1	-	3	1	Special Features	-	4/10/2021	Why should we go to Mars? Because we are explorers, obvious next step, curiosity, looking for signs of life in solar system, changes your perspective of Earth, opportunity to unite people of diverse cultures.
	Mars (Nat Geo Series)	1	-	3	1	Special Features	-	4/10/2021	Zubrin's guide to colonizing Mars. WE can do this with a little bit of MOXY.

1	Mars (Nat Geo Series)	2	-	1	2	We Are Not Alone	0:00:00	4/14/2021	Science has a permanent presence on Mars until a private company (Mining Team Arrives) from Earth sponsors scientific colony on Mars. Makes decisions without consulting to allow a mining company to go to Mars without letting colony management know about it. The mining group arrives without bringing resources like water and food. Explorers exploit. Miners came to Mars separate from any space agency or international group. Miners will not report to any existing colony authority. Mining CEO meets with new (IMSF) President in office on Earth. CEO pushes president to accept conditions of mining company. Pipelines on surface of Mars. Mining pipeline route crosses scientific environmental restricted zone on Mars. Co-existence with groups that do not respect or follow treaties are as hard on Mars as they are on Earth.
1	Mars (Nat Geo Series)	2	-	1	2	Worlds Apart	0:00:00	4/14/2021	Mining company is doing seismic test at night and being very secretive about it. Mining pushed to accelerate schedules for construction. Accelerated schedule cause accidents.
	Mars (Nat Geo Series)	2	-	1	2	Darkness Falls		4/14/2021	Solar flare takes all electricity out. No warning (need early warning system in place watching Sun) at Mars colony. Technicians on surface being exposed. Science technician takes rover without permission during solar storm. She is lost and running out of air. Solar flare destroys all electrical relay stations on surface.
1	Mars (Nat Geo Series)	2	-	2	2	Contagion	0:00:00	4/14/2021	Drilling for water on the Mars surface. Picture of colony in lava tube. Worker gets frostbite and loses toes. Worker disobeys instructions and jeopardizes her life. Technician comes down sick, quarantine at medical bay, multiple doctors on site. Sickness originated from drill site. Diseases are always found when expanding into new remote areas. Pathogens know no borders. Continuous testing as people are working. Mars can cause humans to be exposed to dangerous microbes. There needs to be positive containment until person is decontaminated before entering habitat, Remote closing of isolation doors at containment locations. One technician dies of respiratory failure and fever and additional 12 down sick. Non-Public disclosure of a plague on Mars. Mars coverup of what is going on. Government forces coverup and will compensate families. (comparison of Arctic development by Russia and coverup of anthrax epidemic. Chinese SARS epidemic kept secret). Teams treated with medicine and get better. Colony manager pressures for President on Earth to replace Mars Base Operational Manager of Colony.
	Mars (Nat Geo Series)	2	-	2	2	Power Play			Solar mirrors finished. IMSF has problems with private companies selling water on Mars that should be free to everyone on Mars. Science versus company profits is the same battle that has been waged for years. Mars is the new un-restricted frontier. IMSF president gave ultimatum to CEO of private company to pull out of Mars or else. Command Center shuts down private mining colony from electricity they need for drilling operations.
	Mars (Nat Geo Series)	2	-	1	2	The Shake Up			Mars manager takes field trip and assigns assistant manager control in Command Center. While commander is away the assistant decided to cut off power to mining colony and almost kills everyone. Assistant is confined to quarters (quarters are locked down from command centers protocol, quarters becomes jail cell). Power is restored to mining colony by manager.