

**A Hypothesis : The Opportunity and Curiosity Mars Rovers are Situated on Earth**

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**SECOND ISSUE**

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# **REVISION HISTORY**

## **SECOND ISSUE**

Some sections have been removed completely because evidence has since been satisfactorily explained. These include,

**Moving Artefacts**  
**Self Portrait of Curiosity**

Other sections have been moved to Appendix 1 where evidence has been challenged well enough to show there is now considerable doubt about the initial hypothesis in those sections. These include,

**The “piece of wood” image**  
**The “arm bone” image**

The section about evidence on previous faked NASA missions has been moved to Appendix 4.

Some new sections have been added.

**Microbial Life Images**  
**Ventifacts and Unexplained features**  
**Sand Dunes**  
**Lidar**  
**Radio Signals**  
**Landing**

The section on Mars photographs has been moved to an earlier chapter in this revision. The document has been modified throughout all sections to include comments from two scientists who critically reviewed the information in the first issue.

## INTRODUCTION

This document is a collection of evidence, which attempts to build a hypothesis that,

**“The Mars exploration rovers are not situated on the surface of Mars, and never left the Earth”**

The hypothesis may seem preposterous to anyone who is not familiar with the evidence contained within this document, therefore I would encourage readers to consider ALL of the evidence contained herein before dismissing the hypothesis. Evidence for the hypothesis comes from analysis of data which has been published primarily by NASA. If the hypothesis can be proven, the implications are very serious for mankind, which are discussed in the final chapter. The purpose of the document is to stimulate a public debate on the issue and stimulate further research which can establish whether the hypothesis is true. The issue was first brought to my attention by researcher Douglas Gibson of London, who approached me on 3<sup>rd</sup> August 2014 when I was giving a lecture in London at the Crown Moran Hotel in Cricklewood. In the short time available Douglas explained his hypothesis and also outlined some of the evidence he had been studying. Douglas has a degree in biochemistry and also interests in aviation, astronomy and theosophy. A few weeks later I visited Douglas in London to go through his evidence in more detail. After this meeting, I came to the view that some of the evidence is quite compelling and decided the best way forward was to produce a document which sets out the hypothesis and contains all the relevant information. It is intended that the document evolves through several revisions as material is evaluated and discussed by all parties concerned.

If we accept all the information put out by NASA, the exploration of space is a straightforward affair, which does not have a hidden agenda. There is evidence, however, which is outside the scope of this document, which suggests that other organisations such as the U.S. Air Force and the N.S.A. (National Security Agency) over several decades have designed and developed their own clandestine space faring hardware. Some allege this hardware has been used to for space exploration without the knowledge of the majority of the U.S. government or the knowledge of the citizenry of the world. The reason why I raise this point is to demonstrate that the real purpose of NASA may be different to what most people perceive, including those who work for NASA. If there are secret space technologies which the majority of NASA personnel do not know about, then NASA, the main public facing organisation, is effectively helping to conceal the truth about these technologies. It is important that all the information being put out by organisations such as NASA be scrutinised to see if it has veracity. If it does not have veracity, then the evidence should be given exposure. Many people having read this far will probably be dismissive because they cannot see a reason why an organisation like NASA would be involved in such a fraud. To condemn the hypothesis on that basis is unscientific and frankly very naive. If the hypothesis is true, then we can address the possible reasons why it is true after we have proven it to be true. This is a mindset that unfortunately many people fall into and is summarised by the expression, “Condemnation before investigation”.

There are a number of researchers who claim that certain photographs taken by the Mars rovers have been tampered with to make the sky look red or orange. They have shown that if the colour is corrected using graphics software, the sky is in fact blue, very much like the earth. They then jump to the conclusion that the Martian sky is therefore really blue and NASA are hiding this from the public. This argument however may be based on a flawed assumption: that the rovers are taking photographs of Mars. If the rovers were actually taking photographs from the surface of the Earth, would the reason for NASA colouring the sky red or orange not seem more logical? The reason why NASA are colouring the images of the sky could be to conceal the fact that they were taken on Earth. The same argument can also be applied to the work of Charles Schultz, author of “The Fossil Hunters Guide to Mars”. He contends that some of the photographs taken by the Mars rovers contain identifiable fossils, some of which we will examine later in this document. He has compared the Mars rover fossil

images with fossils found on Earth, and concluded that Mars has fossils all over the surface, which are similar, if not identical to those found on Earth. Shultz concludes that Mars's surface contains fossils. Again, another explanation for Schultz's evidence could be that the photographs he has studied were actually taken on Earth. If somebody showed you a photograph of an Earthlike fossil from Shultz's book, and asked you where the photograph was taken, would you say Mars? Probably not. As you will see in this document there are a number of images which have been published by NASA from the Mars rovers which seem to contain objects common to the Earth. These objects are not usually immediately obvious at first glance. This could be because all images are checked before they are published and therefore only small or semi concealed imagery slips through the net, so to speak. That said, in my opinion some of the images are compelling and suggest strongly they were taken from the surface of the Earth.



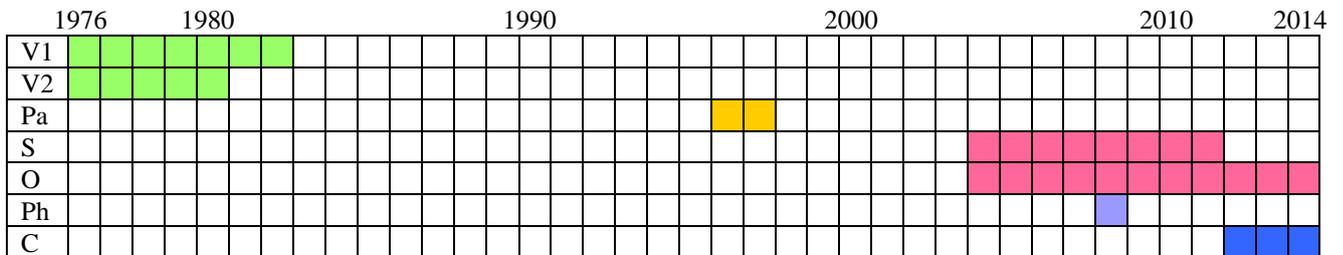
**Figure 1-Planet Mars**

# Mars Exploration

As Mars is easily visible to the naked eye it is not really possible to say when Mars was discovered. After the invention of the telescope in the 1600's, Christian Huygens in 1659 discovered features on the planet, one of which was named Sytris Major. In 1877 Giovanni Schiaparelli discovered what he claimed were several lines crossing each other and suggested they were some type of channels. Also in 1877 Asaph Hall discovered the two small moons of Mars and they were given the names Phobos, the god of panic or fear, and his twin brother Deimos, god of terror. In the 1950's some astronomers argued that observations of Mars showed possible plant life. The colouring of the surface appeared to change over time possibly representing seasons. Over the next few decades this theory was to become almost redundant due to more detailed images which most experts contended showed a dead planet. According to official figures, since the 1960's there have been no fewer than 44 attempted unmanned missions to Mars. Of these, 11 never left Earth orbit, 5 malfunctioned on the way to Mars, 7 crashed or malfunctioned on the surface of Mars, 4 flew past Mars, 11 successfully orbited Mars and 6 successfully landed on Mars. A low success rate for these missions and I would note that some of the reasons for failure seem highly implausible, such as "crashed on surface due to metric imperial mix up". The table below summarises the successful unmanned missions to Mars.

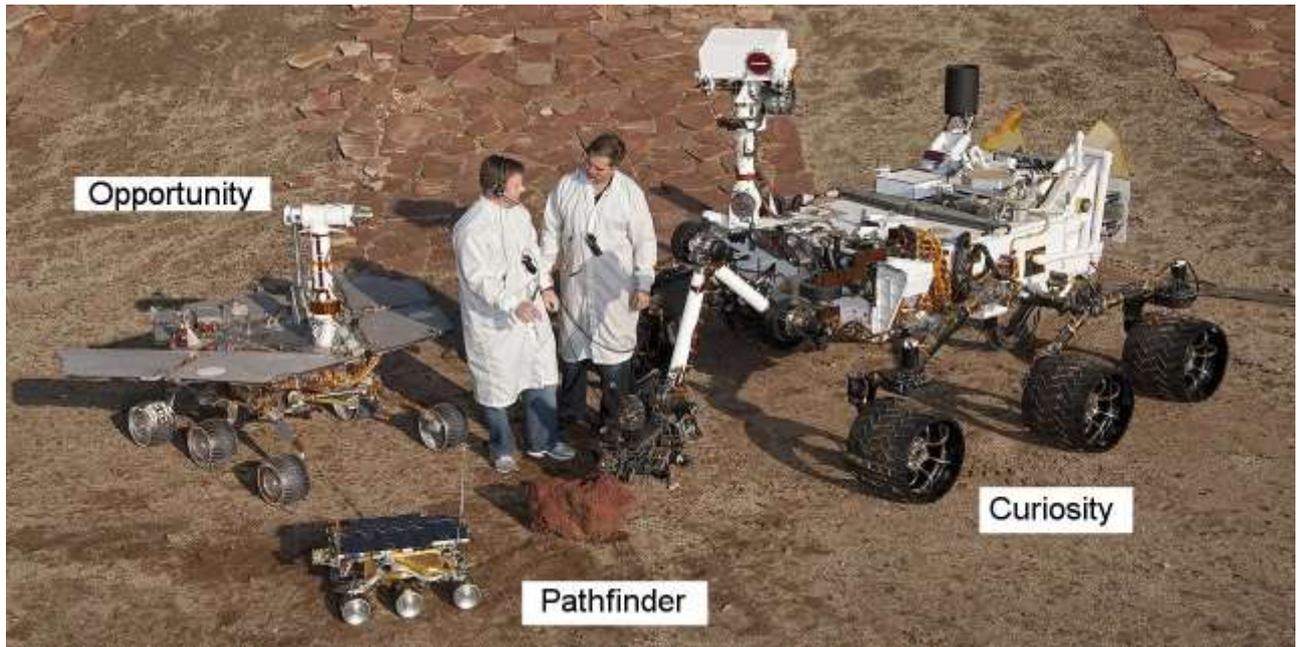
Year	Mission	Agency	Type	Data / Function	Status
1964	Mariner 4	NASA	Fly By	21 photographs	Ended '67
1969	Mariner 6 & 7	NASA	Fly By	201 photographs 20% of surface	Ended '69
1971	Mariner 9	NASA	Orbit	7,329 photographs, 85% surface	Ended '72
1971	Mars 2/3	Soviet	Orbit	60 photographs	Ended '72
1976	Viking 1	NASA	Lander	Surface images, soil sampling	Ended '82
1976	Viking 2	NASA	Lander	Surface images, soil sampling	Ended '80
1989	Phobos 2	Soviet	Orbit	Photographs	Ended '89
1996	Global Surveyor	NASA	Orbit	Study surface and weather	Ended '06
1996	Pathfinder	NASA	Rover	Photographs, soil / weather anal.	Ended '97
2001	2001 Odyssey	NASA	Orbit	Spectroscopy / water	Active
2003	Mars Express	ESA	Orbit	Spectroscopy / photographs	Active
2004	Spirit	NASA	Rover	Photographs / geology	Ended '11
2004	Opportunity	NASA	<b>Rover</b>	Photographs / geology	<b>Active</b>
2006	Reconnaissance	NASA	Orbit	Analyse landforms, weather etc	Active
2008	Phoenix	NASA	Lander	Search suitable env. for life	Ended '08
2012	Curiosity	NASA	<b>Rover</b>	Investigate habitability	<b>Active</b>
2014	Mars Obiter	ISRO	Orbit	Imaging & atmospheric studies	Active
2014	Maven	NASA	Orbit	Study atmosphere	Active

**Table 1 – Summary of Successful Mars Missions**



V – Viking, Pa – Pathfinder, S – Spirit, O – Opportunity, Ph – Phoenix, C – Curiosity

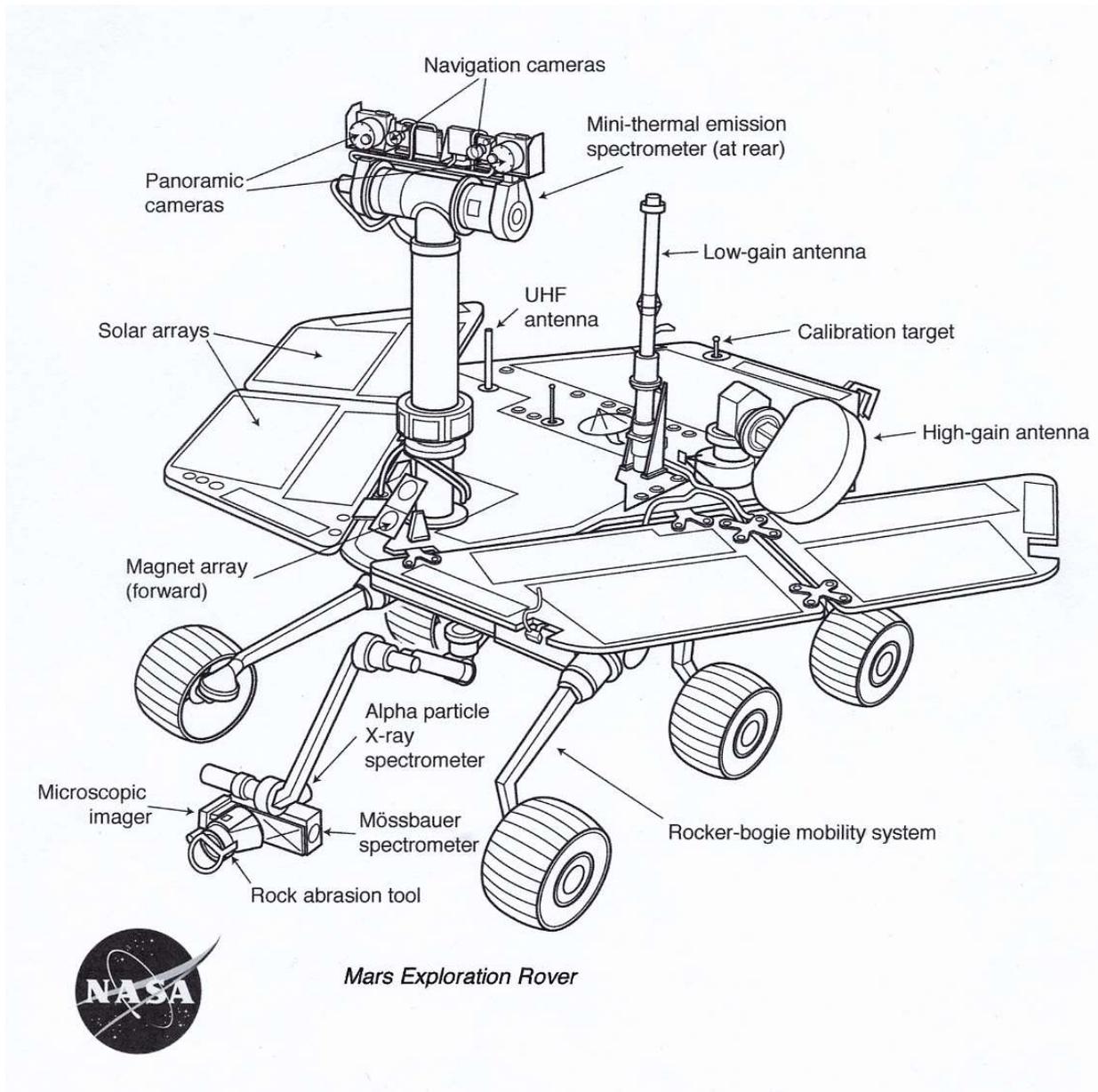
**Figure 2 – Timeline of Landers & Rovers**



**Figure 2 - Photograph Showing the Relative Sizes of Pathfinder, Opportunity and Curiosity**

In this document we are going to look mainly at images from the two rovers that are allegedly currently active on the surface of Mars, and also a small selection of images from redundant missions. The Opportunity rover has been active since 2004 and is still sending images back to the Earth. Incredibly it has exceeded its operational planned life expectancy by over 10 years. An identical rover, Spirit, was launched in the same time frame, but communication was lost in May 2011.

# Opportunity Rover



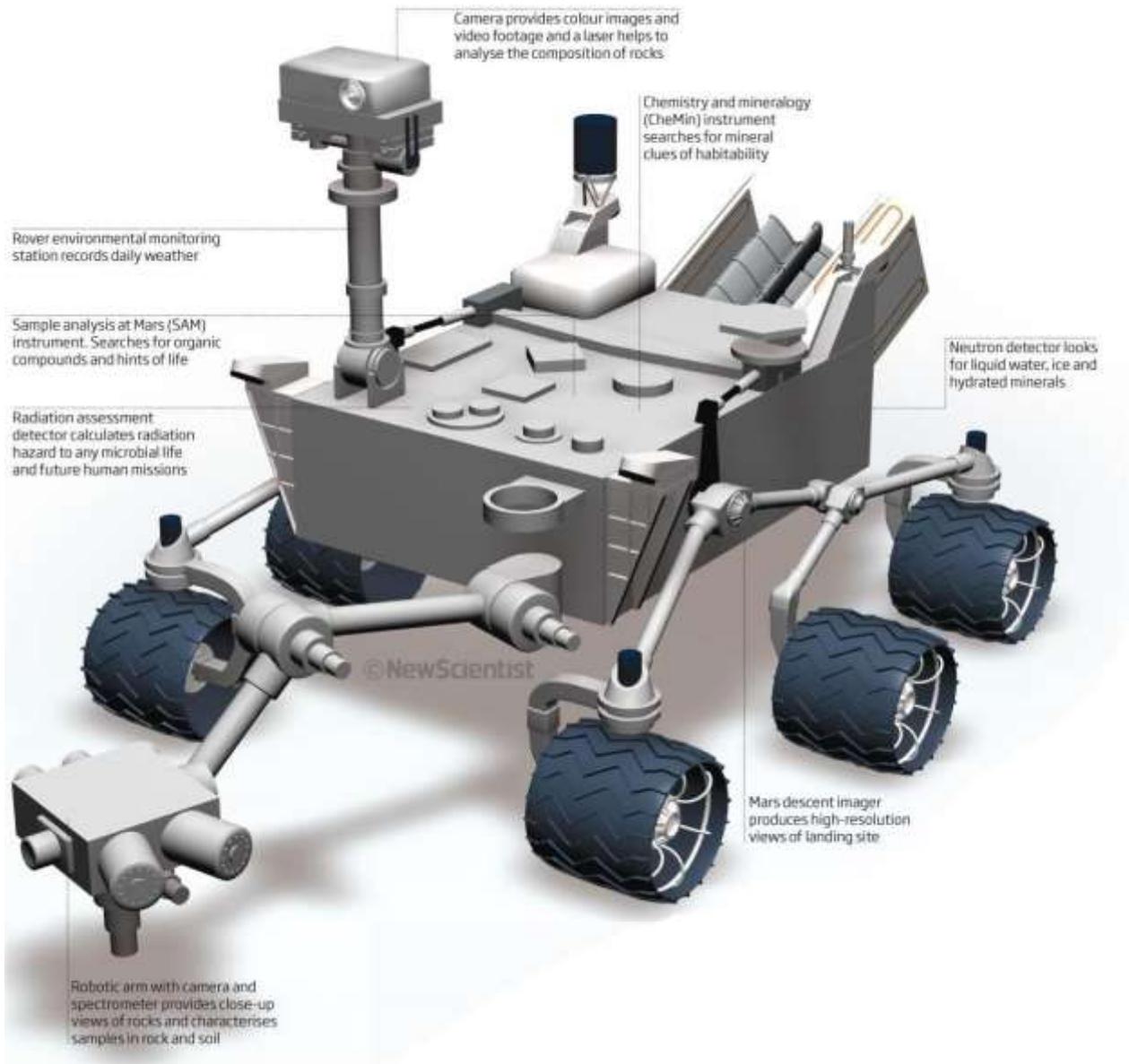
**Figure 3**  
**Diagram of Opportunity Rover**

The vehicle has 6 wheels, each with its own independent electric motors. It is steered by both the front and back wheels and is designed to operate safely on slopes of up to 30 degrees. The solar panels can generate 140 watts, which is not much more than an electric light bulb, for 4 hours each day. The rover is powered by rechargeable lithium ion batteries which provide the power for the motors and all the equipment on board. This type of battery is widely used on Earth in laptops, mobile phones and power tools. The rovers operating temperature range is -40 to +40 degrees centigrade. Radioisotope heaters provide a base level of heating assisted by electrical heaters where necessary. The average surface temperature on Mars is estimated to be -55 degrees centigrade. At the equator the temperature varies from 20 degrees C down to -73 degrees C. This is 33 degrees lower than the minimum operating temperature of the rover. It is claimed the vehicle consumes only 100 watts of power when it is in operation. For comparison, a typical sewing machine uses 100 watts, a hedge trimmer 450 watts and an electric drill 700 watts. The rover carries many instruments, batteries, solar panels, and moves using 6 electric powered wheels on uneven ground, but only consumes the same amount of

power as a sewing machine. It weighs 185 kilos, which is heavier than the weight of two average sized adults. Taking into account that gravity on Mars is only 3.71 m/s/s, which is 2.6 times less than on Earth, the effective weight of the rover would be around 70 kilos, which is about the weight of a small adult. The question which arises is would lithium ion batteries, being charged by small solar panels keep all the devices powered for over 10 years? The only way to prove beyond doubt that the batteries have this capability is to carry out simulated environmental soak testing over months or years. As far as I am aware there has been no documentation released by NASA or JPL showing completed environmental testing results. In my correspondence with Robert Manning I asked him to provide such documentation and none was provided. Does it seem plausible that 100 watts would be enough to power this device? – and that batteries could last over 10 years?

It is claimed that the mission profile for Opportunity was for the rover to “live” for 90 days. This being the case why would NASA risk being “caught” continually faking pictures using “impossible technology” for over 10 years? To answer this question, perhaps one needs to understand the nature of propaganda. If the mission ended after 90 days, the project would be put in the history books and forgotten about by large sections of the public. Extending the mission means new images can be placed in the media whenever there is a “new discovery”. Modern propaganda relies on repeating the same information over and over until people believe it. This document does not specify exactly why the rover missions may have been faked. If the hypothesis is correct then only by finding out why the missions were faked, can one begin to understand why the missions ostensibly lasted longer than 90 days.

# Curiosity Rover



**Figure 4**  
**Diagram of Curiosity Rover**

The other vehicle which is allegedly currently active on the surface of Mars is the Curiosity Rover. Much larger than its predecessor it is approximately the size of a car. Power is provided by a radio isotope electric generator, hence there is no need for solar panels. It is interesting to note that the Opportunity rover only had radio isotope heaters, not a radio isotope electric generator. The mission plan for Curiosity was to last for one year and be capable of functioning on any landing site. The power system chosen is different to Opportunity, because certain parts of Mars would not provide enough energy to power solar panels. The radio isotope electric generator powers the 899 Kilo rover and all of the instruments it houses. Again, as with Spirit and Opportunity rovers, the only way to prove the power system can meet the requirements is by undertaking environmental soak testing over a period of months. If the missions are real, then comprehensive soak testing should have been carried out. The author is not aware that any documentation that has been released by NASA or JPL to show test results from soak tests.

## Photographs from Mars Rovers and Landers

We come to some of the most damning evidence which supports the hypothesis, photographs published by NASA allegedly taken by the rovers on the surface of Mars. If the hypothesis is rejected by the reader, then I would ask the reader to suggest plausible explanations for what is seen in these images, and decide if their explanations have a higher likelihood of truth than is stated in the hypothesis. Photographs which are taken by the Curiosity rover are released to a private company called Malin Space Science Systems. NASA spends billions of dollars on these missions, and the fruits of the missions, why are the photographs then given to an outside organisation?

What is contained in this document is merely a representative sample of anomalies within the Mars rover images. Some images published by NASA are high definition, others not so, which means when printed in an A4 document format like this one, they may not show the full detail of the image. For this reason I have reduced the definition of the high definition images to around 2100 pixels width, resulting in 300dpi (dots per inch) on a printed page. I have then highlighted the area of the image we are interested in, and shown part of the image in higher definition.

### 0.1 Wildlife\_Images\_?



Figure 5  
Curiosity Rover Image PIA16204



**Figure 6**  
**Curiosity Rover Image PIA16204 – Close Up**

The image, taken by Curiosity rover appears to show a rodent like creature in between two rocks. The image, like many of the colour Mars images is lacking in colour tone, suggesting it may have had the colour removed, then the whole image given brown/orange tone. The rodent anomaly appears to be darker than the two rocks either side of it, suggesting it might be a different material to the rocks. NASA's website reveals that,

“In July 2007, the NASA Ames Intelligent Robotics Group took two K10 robots to Haughton Crater. The K10 robots were used to perform systematic surveys of several simulated lunar outpost sites.”

[http://www.nasa.gov/multimedia/podcasting/Haughton\\_Mars\\_project.html](http://www.nasa.gov/multimedia/podcasting/Haughton_Mars_project.html)

Haughton Crater is on Devon Island. A creature which is native to Devon Island is the arctic Lemming, pictured below.



**Figure 7**

### **A Lemming on Devon Island**

This evidence could be suggesting that the Curiosity image was in fact taken on Devon Island, at one of the rover test sites which we will discuss later. Another area where NASA has been with their rovers is the Arizona Desert. This article from September 2010 states,

“The ATHLETE rover, currently under development at NASA's Jet Propulsion Laboratory, Pasadena, California, is in the Arizona desert this month to participate in NASA's Research and Technology Studies, also known as Desert RATS.”

<http://www.jpl.nasa.gov/news/news.php?release=2010-287>

A creature which is native to the Arizona Desert is the Gunnison's Prairie dog. Three-quarters of the population of Gunnison's prairie dogs are located in Arizona and New Mexico.



**Figure 8**  
**Prairie Dogs**



**Figure 9**  
**Image Comparison of Prairie Dogs and a Lemming**

Some Mars experts have explained this Mars anomaly as nothing more than a rock which appears to resemble an animal. The group of rocks in question which features the rodent shaped anomaly was taken (according to NASA) on 28<sup>th</sup> September 2012. Interestingly another image featuring the same group of rocks was taken (according to NASA) on 24<sup>th</sup> October 2012 after Curiosity had moved some distance. We are therefore able to view the anomaly from a different angle approximately 4 weeks apart in time. If the anomaly is an animal, assuming it is alive, which it appears to be, then the anomaly would not be present in the second image four weeks later, thus providing proof it is an animal, not a rock.



**Figure 10**  
**Curiosity Rover Image PIA16918**

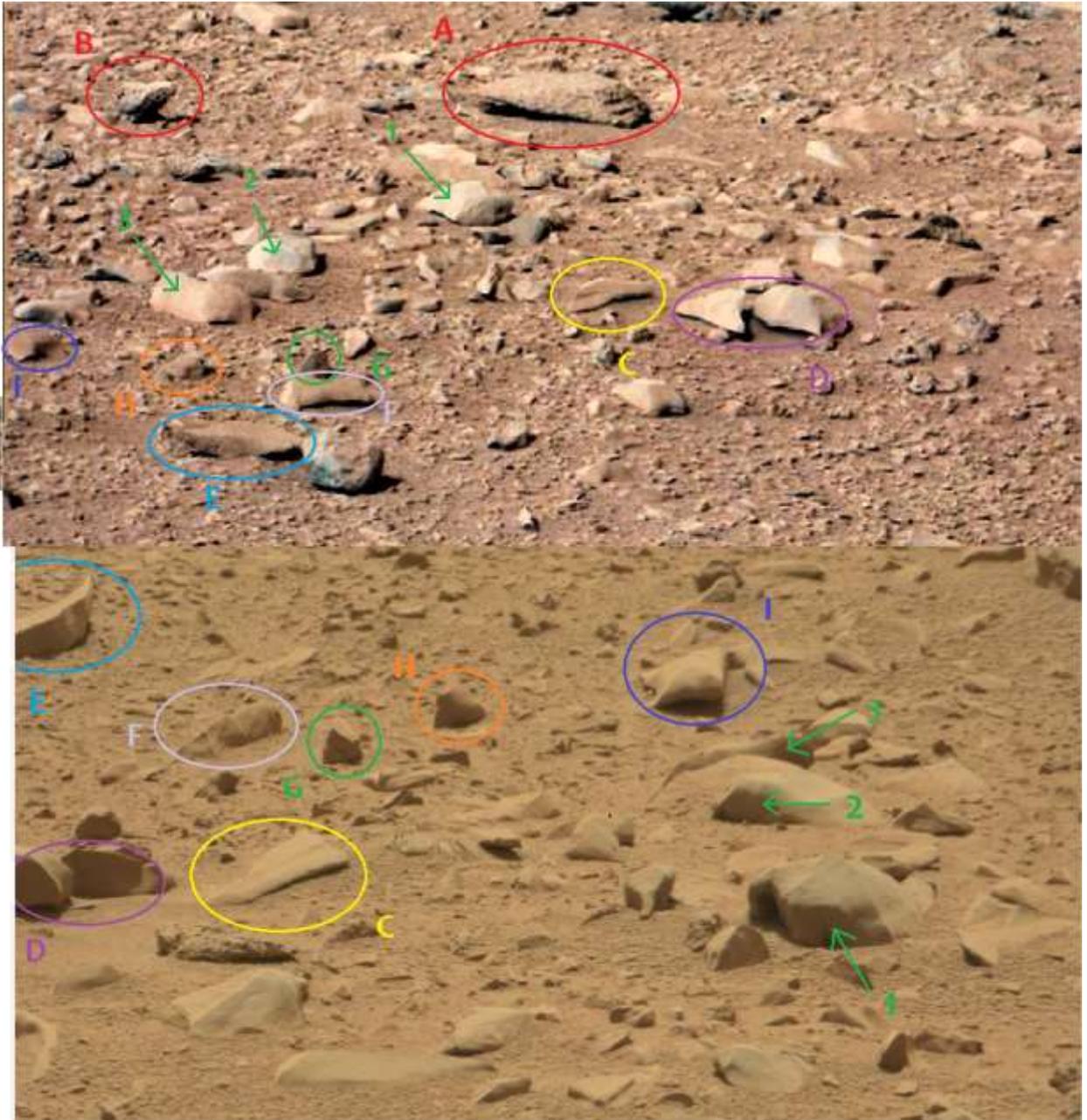


Figure 11

– Top : section of image PIA16204, Bottom : section of image PIA 16918

The images above identify 10 rocks within each image, from different perspectives. The rodent anomaly can be seen between rocks 2 and 3 in the top image facing to the right. The rodent anomaly should also be present between rocks 2 and 3 in the bottom image and should be facing left. Below is a close up comparison of rocks 2 and 3 from each perspective.



Figure 12

## Comparison of rocks 2 and 3 in PIA16204 and PIA16918

In the right hand image there appears to be sand lying against the back side of rock 3. Would this sand be visible in the left hand image? Or would it be mainly obscured by rock 3?

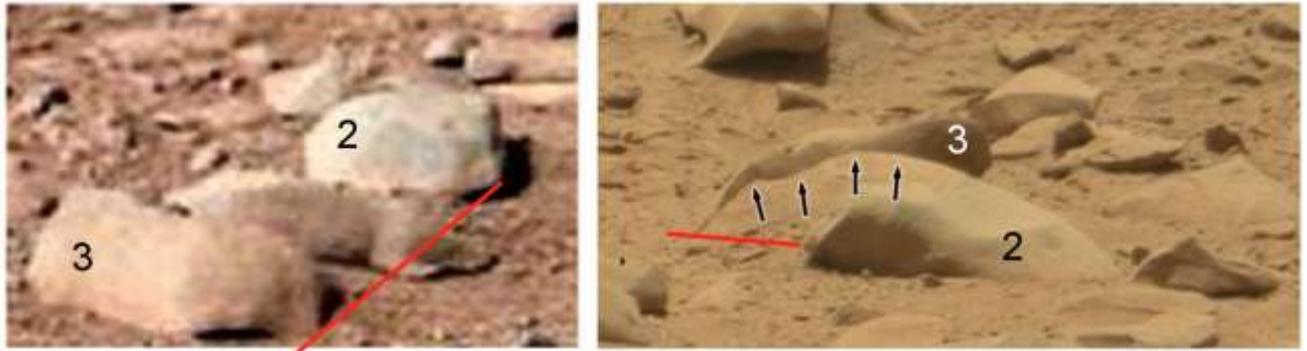


Figure 13

### Comparison of rocks 2 and 3 in PIA16204 and PIA 16918 – with red line

Could what looks like sand in the right hand image, in fact, be a rock which looks like a rodent when viewed from the other angle? If the rodent shaped object is not present in the right hand image, then this would be proof the object has moved and therefore probably is a rodent not a rock. If we are looking at an animal, then it is highly unlikely that both these images have been taken on Mars. The Mars atmosphere is not capable of supporting life such as rodents. The red line in the images is an estimated trajectory connecting the two rocks at the same points on each image. It appears that the rodent anomaly is protruding too far past the line in the first image to be the same “object” seen in the second.

Another possibility which might explain these images is that this anomaly was spotted shortly after the first image was taken. NASA could not remove the image because it had already been published. So they took an image from another angle and photoshopped the “sand” into the image so it appears to have a similar profile as the rodent?



**Figure 14**  
**Curiosity Rover Image 0109MR0684022000E1**



**Figure 15**

**Curiosity Rover Image 0109MR0684022000E1 – Close Up**

The image, taken by Curiosity, appears to show the vertebrae of a large animal or sea creature, such as a walrus or arctic whale. For comparison, below is an image of a whale skeleton.



**Figure 16**  
**Whale Skeleton**

Looking at the central section of the whales vertebrae in the diagram above, we see a similarity with the mars rover image. Walruses are known to drag themselves on land and huddle up in a group to sunbathe. The early walrus ivory hunters would shoot whole groups of Walruses in one spot, take the tusks and heads and leave the bodies to rot, so there would be backbones without skulls left. These places are known as Walrus graveyards, and have been discovered on Svalbard, where Mars rover research has been carried out.

The image could be a peculiar geological feature consisting of notches, cups and holes created by erosion and disposition. Perhaps the way the light is falling on the geology creates an image which looks like a vertebra, but is in fact geology. The image below shows more of the surrounding area. Does this image show peculiar looking geological features or an animal “vertebrae”?



**Figure 17**

**A wider view showing some of the surrounding geology**

Another question which arises is if this anomaly is part of an animal's vertebra. What could the formation in the red square of Figure 19 represent? Is this also part of an animal skeleton, if so what part?



**Figure 18**

**A ventifact or skeletal remains?**

Strange holes and shapes can be created on rocks on Earth by wind erosion, which are known as ventifacts. The image below shows rocks from the Antarctic dry valleys, which raises another question. If the features we see in the Mars image were caused by wind erosion, would the Mars atmosphere be capable of producing wind strong enough to create these features?

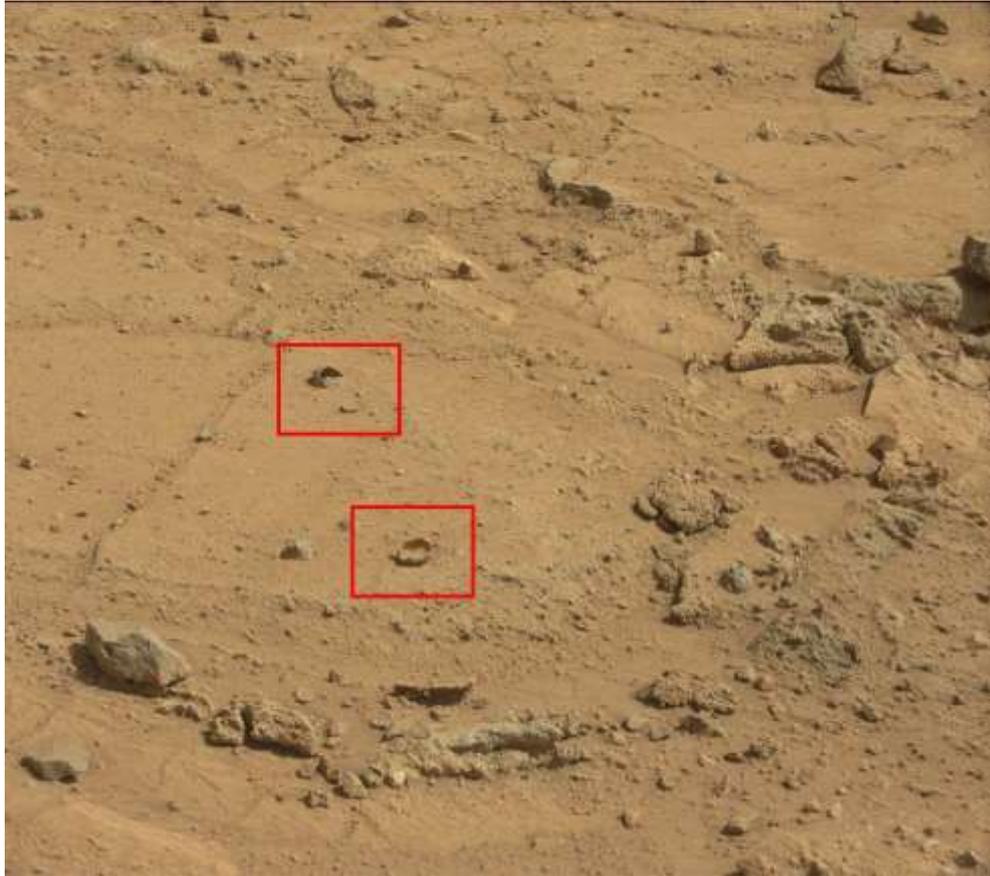


**Figure 19**  
**Ventifacts in the Antarctic**



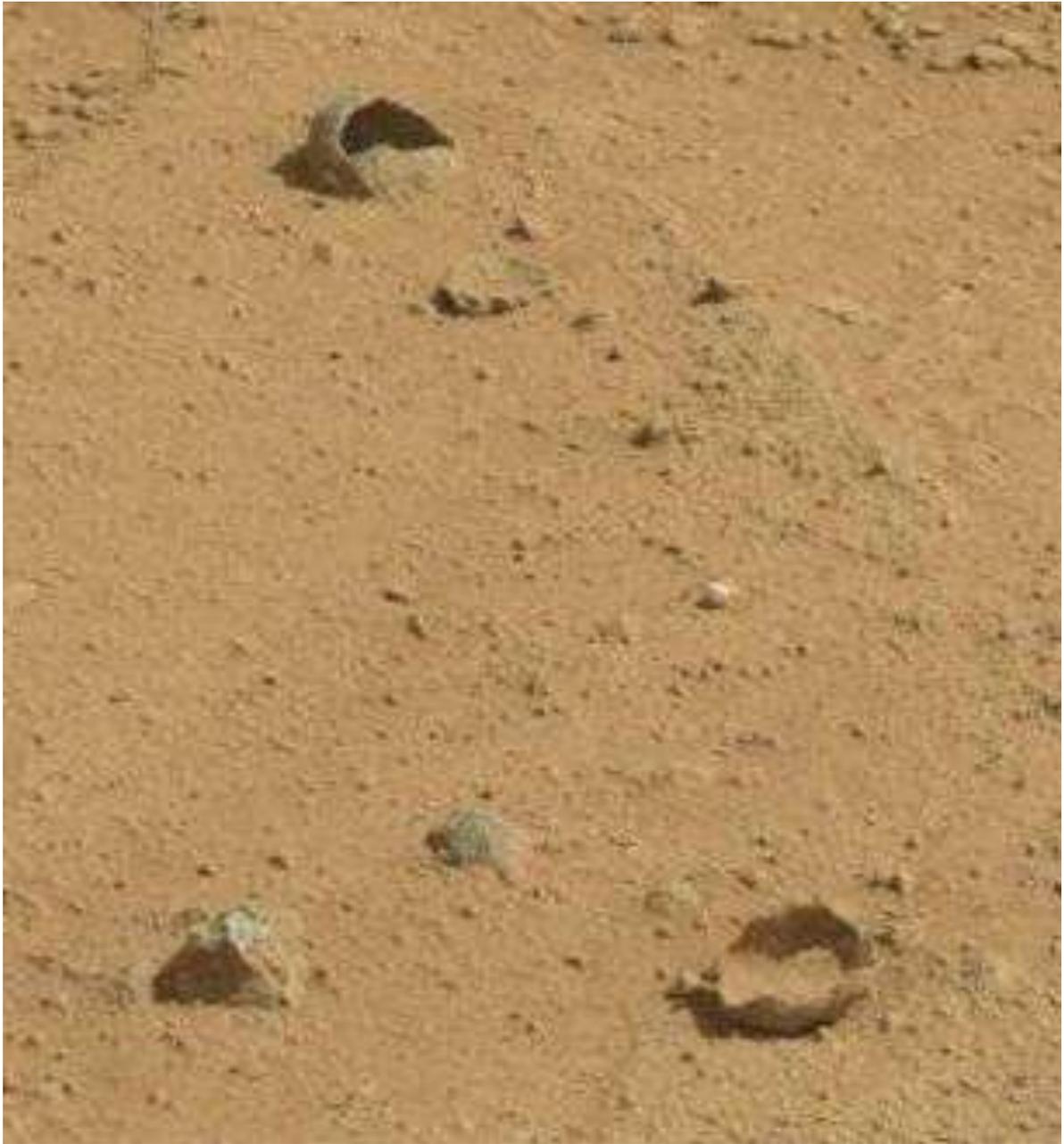
**Figure 20**

**More ventifacts in the Antarctic**



**Figure 21**

**Curiosity Rover Image 0401ML0016620170200804E01**



**Figure 22**

**Curiosity Rover Image 0401ML0016620170200804E01 – Close Up**

There are two objects in Figure 23 which are clearly hollow and curved with the appearance of broken egg shells. Are these eggs which have hatched? The object at the top in this image appears to be accompanied to the lower right by the broken off part of the “shell”. A rough estimate of the size of the objects is determined as follows,

Left mastcam field of view is 15 degrees wide.  $7\text{mm}/175\text{mm} = 0.6$  degrees

Mastcam was pointing 19 degrees down for top object, and 22 degrees down for bottom object giving a distance of about 4 metres.

$\tan 0.6$  degrees = length/4m, therefore length = 4.2cm (approx)

The objects appear to be in the correct size range for some type of egg shells, and it is fair to say that eggs are often found with two or more together in one place. Are we looking at two broken or hatched eggs within a short distance of each other?

## 0.2 Plant Life Images ?

The image below is from Spirits Microscopic Imager. Here is a comment about the imager from “The Fossil Hunters Guide to Mars”,

*“Another serious lack is the ability to take colour images with the microscope. This is really no more than a hand magnifier as it does not have the ability to examine really small items. It has the same magnifying power as a cheap plastic lens that you might get from the dollar store. It could have been equipped with a light hood to exclude outside light, a set of red, green, blue, infrared, and ultraviolet LEDs as light sources, and then it could have taken colour images very easily. The mass of the LEDs would have been very small and the increase in utility and function would have been immeasurable”*



Figure 23

**Spirit Rover Image 2M160631572EFFA2K1P2936M2M1**

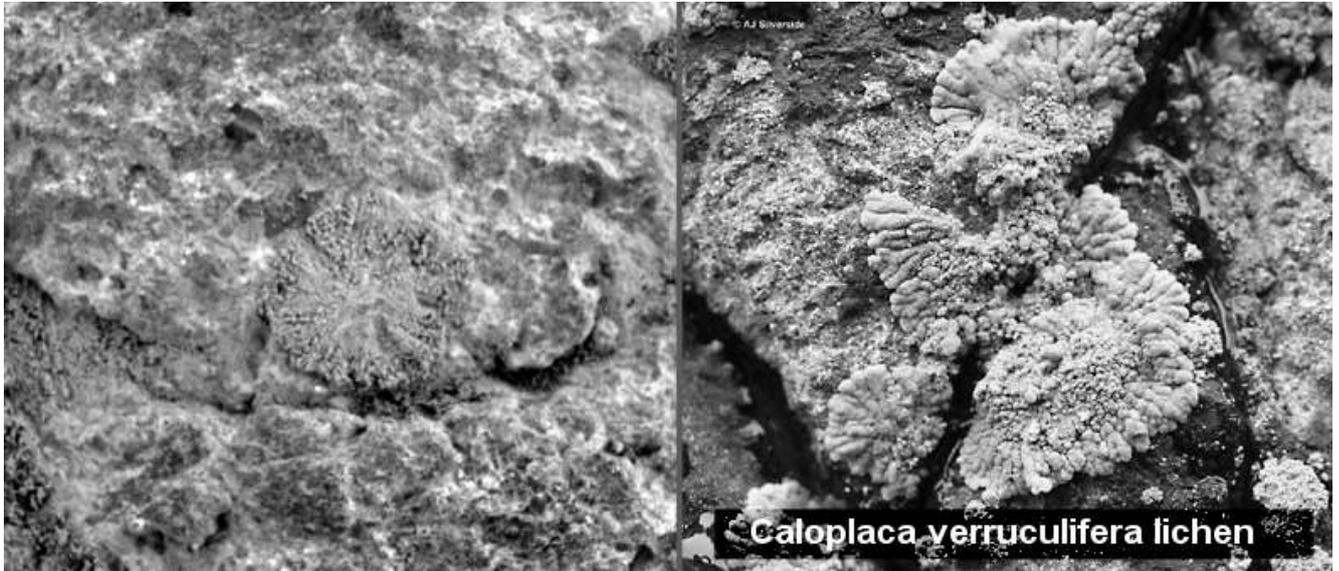


Figure 24

**Comparison of 2M160631572EFA2K1P2936M2M1 with lichen**

Does the image on the left show lichen? The second image is a comparison between the rover image and lichen found on Earth. The circular shape of the pattern in the centre is the result of the Moessbauer Spectrometer which has a plate with a circular hole in the middle and has been pressed into the surface. In Figure 26 the two circles resulting from this can be seen, with what looks like lichen appearing where the hole in the centre of the plate is situated. The hole has a diameter of some 20 mm. The imager has a depth of focus of no more than  $\pm 3$  mm. So what is on that inner circle of the image is what was left of a much greater area destroyed by the pressing down of the plate onto the surface. The same features continue outside of the second wider circle. So the circular appearance is not part of the surface detail. Are we merely looking at the texture of rock or soil, or is this biology?

### 0.3 Microbial Life Images ?

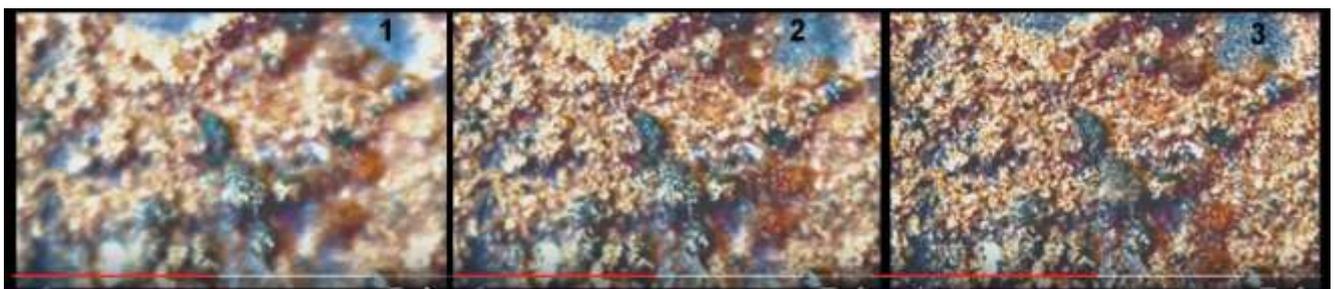
In 1976, the two Viking landers which allegedly landed on Mars each carried out four types of biological experiments on the surface. The experiments were intended to look for biosignatures of microbial life on Mars. The landers used a robotic arm to put soil samples into sealed test containers on the craft. The two landers were identical, so the same tests were carried out at two places on Mars' surface, Viking 1 near the equator and Viking 2 further north.

One of the experiments, the Labelled Release experiment took sample of Martian soil and inoculated it with a drop of very dilute aqueous nutrient solution. The nutrients were tagged with radioactive carbon. The air above the soil was monitored for the evolution of radioactive CO<sub>2</sub> gas as evidence that microorganisms in the soil had metabolized one or more of the nutrients. A steady stream of radioactive gases were given off by the soil immediately following the first injection. The experiment was done by both Viking probes, the first using a sample from the surface exposed to sunlight and the second probe taking the sample from underneath a rock; both initial injections came back positive. Subsequent injections a week later did not, however, elicit the same reaction, and according to a 1976 paper by Levin and Patricia Ann Straat the results were inconclusive.

Controversy still exists over whether the Viking landers discovered microbial life. A question which arises is why did NASA never attempt further similar experiments to test for microbes in the soil?

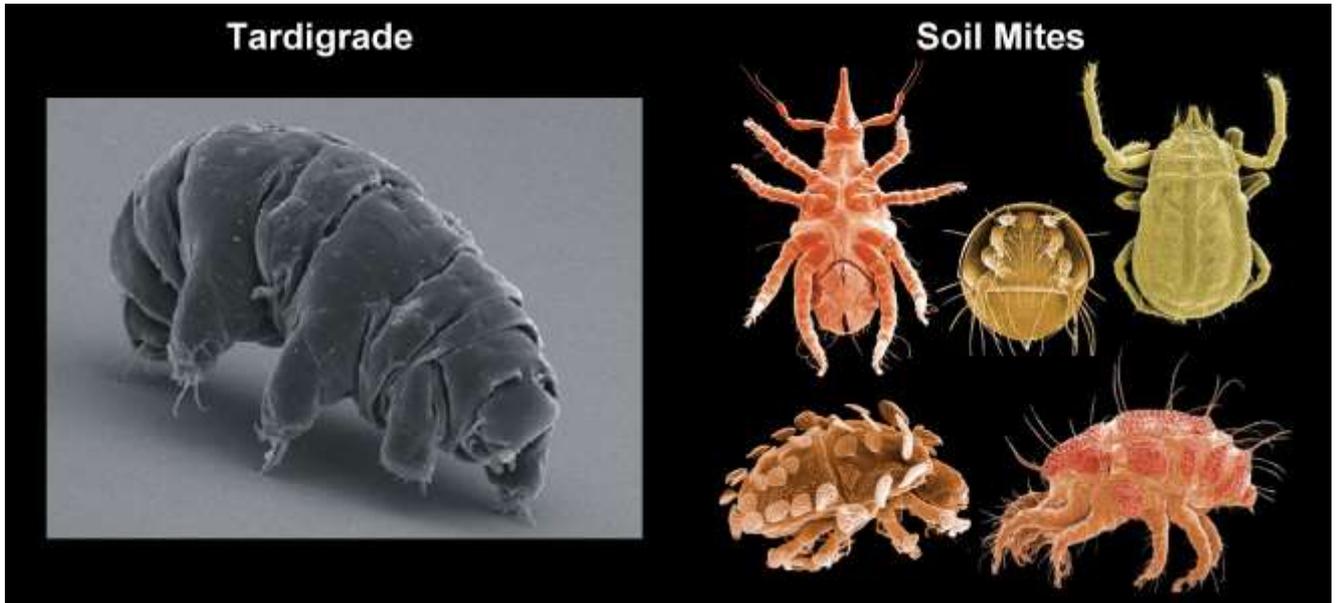
If the Viking landers and subsequent rovers have all been located on the Earth, could this provide an answer to that question?

Referring back to the chart in Figure 2, the Phoenix lander (allegedly) landed on Mars in 2008. The mission was to search for environments suitable for microbial life on Mars and to research the history of water there. Ron Bennett examined static images played in a sequence which clearly show movement of the artefacts over a period of time. Bennett concluded that the Phoenix Lander “found life on Mars”. He also suggests the moving objects in the images are tardigrades, because these are the only life forms which might be able to withstand Mars’s harsh environmental conditions. He seems to be fitting the conclusion to fit the data he believes to be true (i.e. from Mars). If Bennett is correct, that Phoenix lander found life, is it not equally possible the lander was not situated on Mars, but actually sending images back from microbes located on Earth?



**Figure 25**  
**Sequence of images from Phoenix Microscopic Imager**

The moving objects could then be something far less exotic than tardigrades, such as one of the thousands of species of soil mites found all over the Earth?



**Figure 26**  
**Comparison of tardigrade with soil mites**

If the images in Figure 27 above do show soil mites, then it is unlikely the images are coming from Mars, and more likely they were taken on Earth.

## 0.4 Fossil Images ?

A book published in 2008, by researcher Charles Schultz III entitled “A Fossil Hunters Guide to Mars”, examines images from the Spirit and Opportunity rovers and concludes that many of the rover images show fossils similar to those found on Earth. We will look at some of those images in a moment, but first we will look at a disclaimer at the beginning of Schultz work, it states,

*“ What I present here is evidence of fossilized sea life on Mars. In the course of describing these fossils, I may refer to them as sea urchins, sharks’ teeth, or other terrestrial forms. However, they are not. These are only structurally identical to those organisms and are not in any way related to them. It is very likely that these creatures have absolutely no genetic relationship to the creatures we have on Earth. They are simply shaped by their environment to function in the same manner as marine creatures on the Earth.*

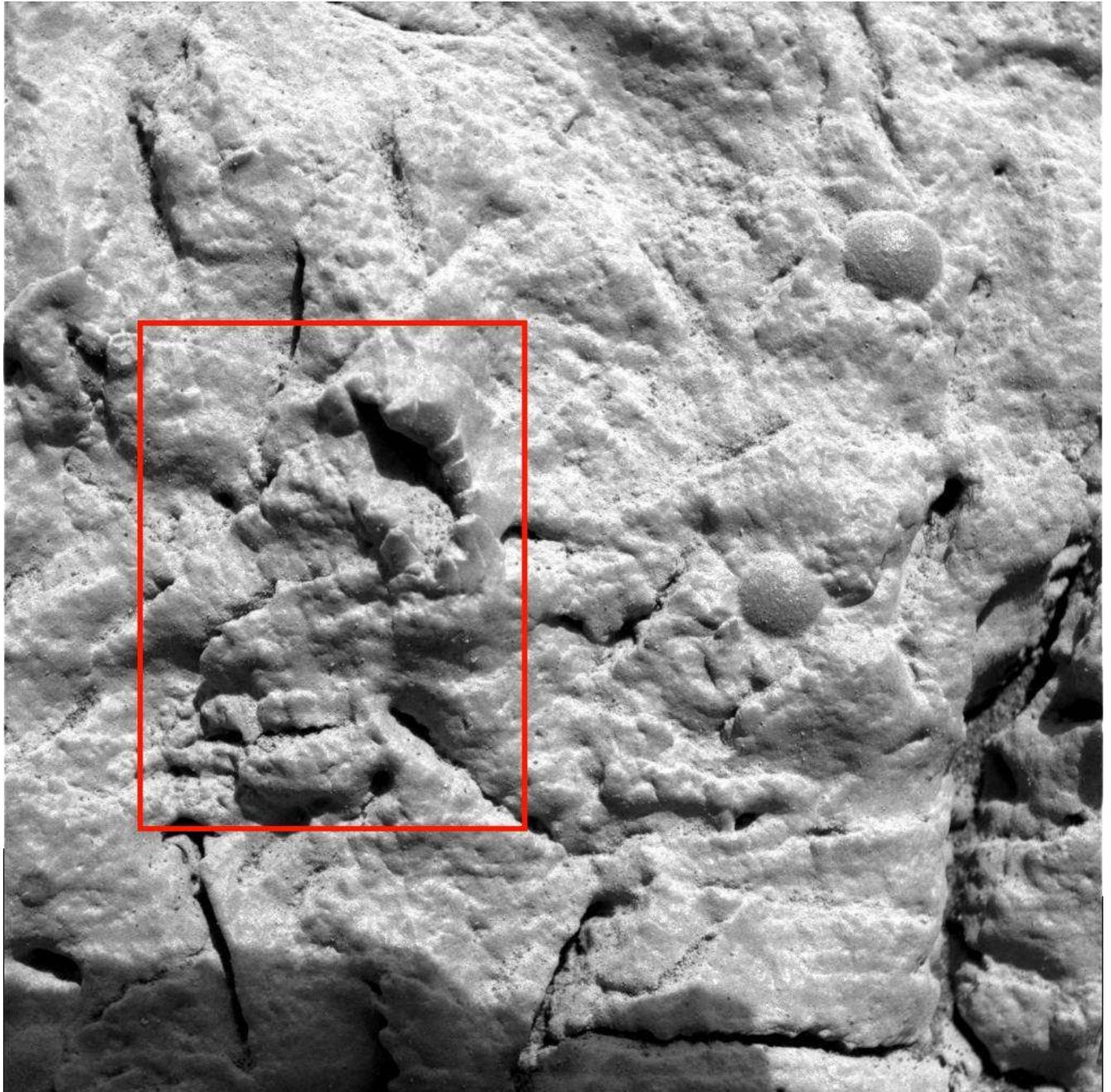
*If I call something on Mars a sea urchin or a trilobite, be aware that the similarity is strictly morphological, and is not endorsed in any manner as a scientific proof that these fossils are from sea urchins, trilobites, or any other terrestrial organism. Their forms are the result of the fact that form and function go hand in hand.”*

By making this statement Schultz is showing that he is convinced the images he is examining are from Mars. Is not the “elephant in the room”, that he is actually looking at Earth fossils, photographed on Earth? If Schultz is correct, that the fossils seem identical to Earth fossils, is it not an equally strong hypothesis that the images are from the Earth?

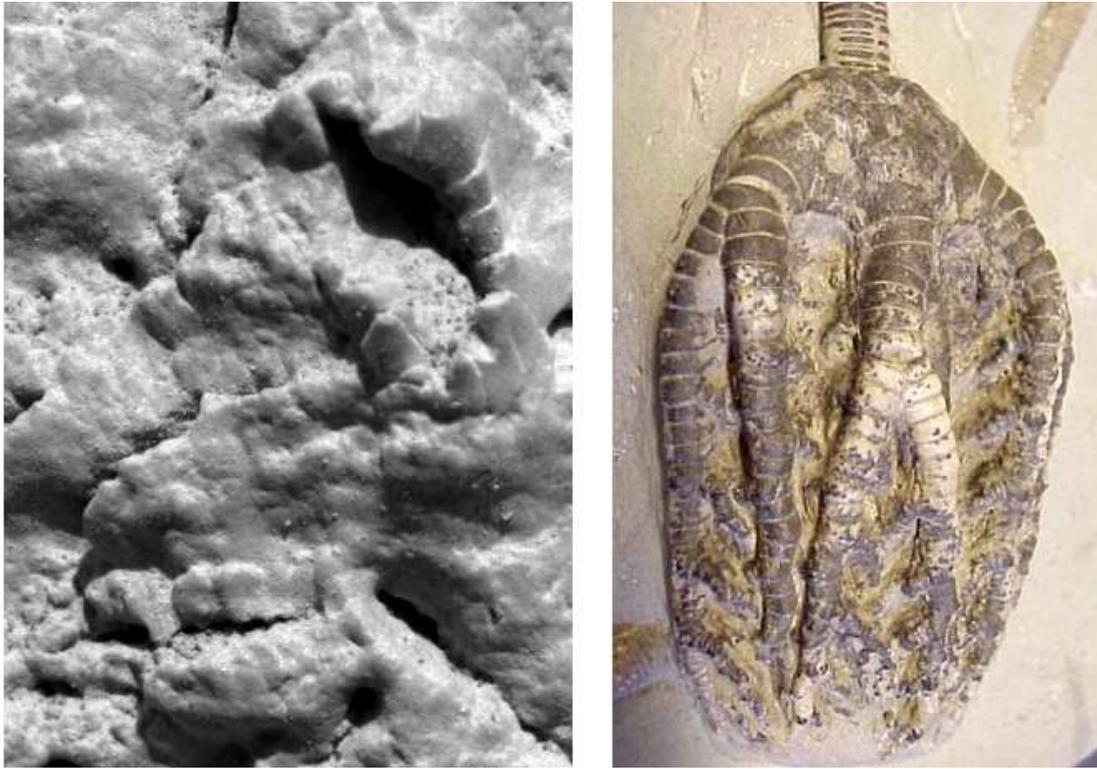
Shultz also states

*“The very agencies that are proclaiming their support for the search for alien life are the same organizations that are actively discrediting the discoveries that have been made. It begs the question, “why?”*

A plausible answer to that question is that the discoveries are not genuine.



**Figure 27**  
**Opportunity Rover Image 1M131201538EFF0500P2933M2M1**



**Figure 28**

**Comparison of Partial Crinoid Fossil with Complete Crinoid Fossil**

Experts have identified the image on the left as a crinoid fossil. Crinoids are creatures which can be found swimming in the oceans of Earth.

The images below are from “A Fossil Hunters Guide to Mars”,



**Figure 29**

**From “A Fossil Hunters Guide to Mars” – shell, shark’s tooth and scallop**

Above - Marine fossils from Sol 009, microscopic imager on Opportunity. From top left is a spiral shell, broken shell showing chambers, and a scallop. From bottom left are what appears to be a shark's tooth and a spiral shell similar to a conch. These were found in Eagle Crater.

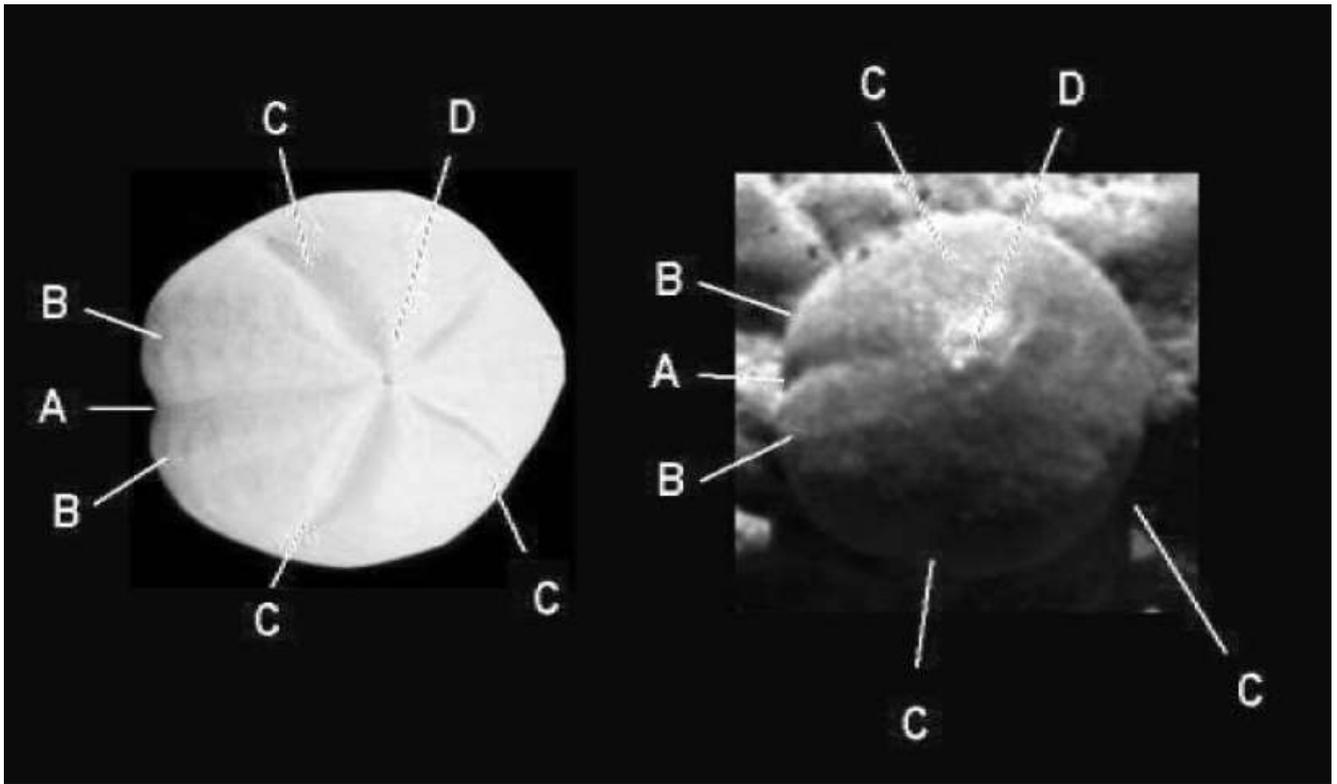


Figure 30  
From "A Fossil Hunters Guide to Mars" – sea gopher

Above - an organism on Mars similar to the sea gopher on Earth. The image on the left is the sea gopher, a type of sea urchin. The Martian urchin on the right was imaged on Sol 028 by Opportunity's microscopic imager. A denotes the major cleft on each, B denotes the outlined margin around that cleft, C shows other clefts, and D is the single wart at the top of each. I have found many such specimens in the Martian fossils imaged by the rovers.

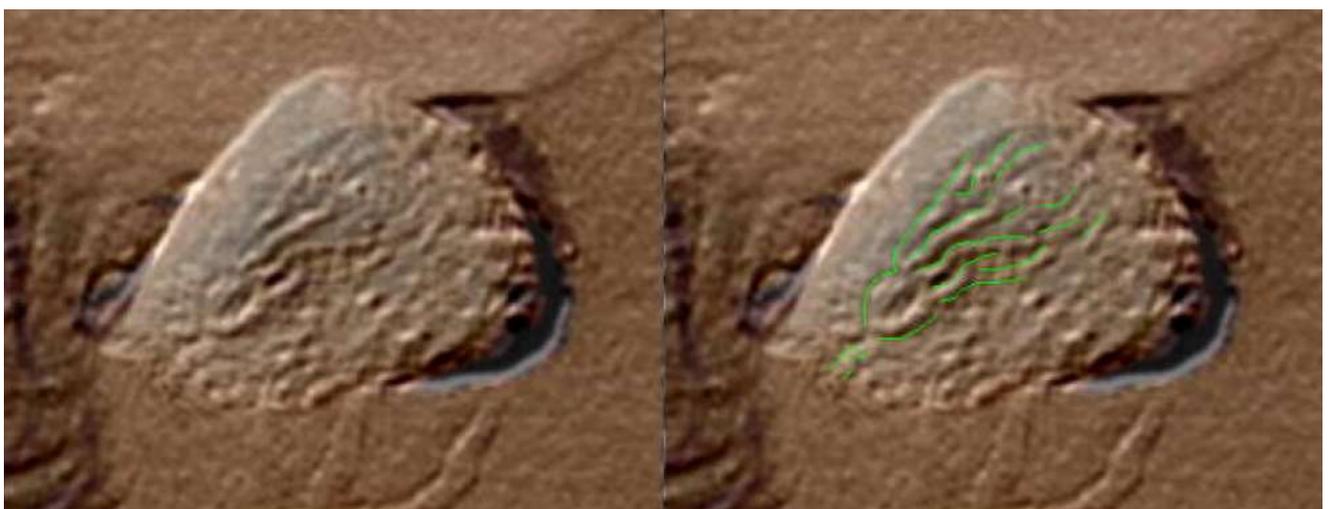


Figure 31  
From "A Fossil Hunters Guide to Mars" – crinoid fossil

Above – with the shadows enhanced (time-differential method) as the Sun moves over time, we can get finer details of the shape. In this case, I have marked up the tentacles and calyx of the crinoid in

green in the right image. Schultz does not see any reasonable alternative explanation for this except that it is a crinoid fossil.



**Figure 32**  
**From “A Fossil Hunters Guide to Mars” – whelk shell**

*Above - what appears to be a whelk shell in the sand. This is a stereo view showing the curve and the broken section. The long portion like a quill corresponds to the structure inside a terrestrial whelk. This is in the same image frame as the shell above. Many such shells are found in both Gusev and Meridiani.*



**Figure 33**  
**From “A Fossil Hunters Guide to Mars” – comparison with terrestrial whelk**

*Above - the left image is a terrestrial whelk shell, the right image is cropped from the Sol 913 image from above. There is little doubt that the shapes of these two objects are identical or nearly so.*

The “Fossil Hunters Guide To Mars” concludes,

*Spirit seems to be in an area that had numerous species that are very similar to terrestrial marine organisms, both past and present. There are many sea shells, some apparent urchins, crinoids, stromatolites, and what may be bones of larger animals such as reptiles (although that is speculative at this time). Altogether it creates an image of a Mars that supported a large population of diverse organisms, but in all they appear to be aquatic and not land dwelling. This would be consistent with the thin atmosphere and poor shielding from the radiation environment.*

*More in-depth exploration will be needed on the planet to determine what part, if any, that land organisms played in this lost ecosystem.*

The question which arises is,

Why have NASA been reluctant to acknowledge the findings contained in “A Fossil Hunters Guide To Mars”? Charles Shultz believes this is some sort of disclosure issue, and that NASA have perhaps been ordered they must not acknowledge, at this time, that life exists on Mars. Is not another plausible scenario that the images were all taken on Earth, which is the reason for the non disclosure?

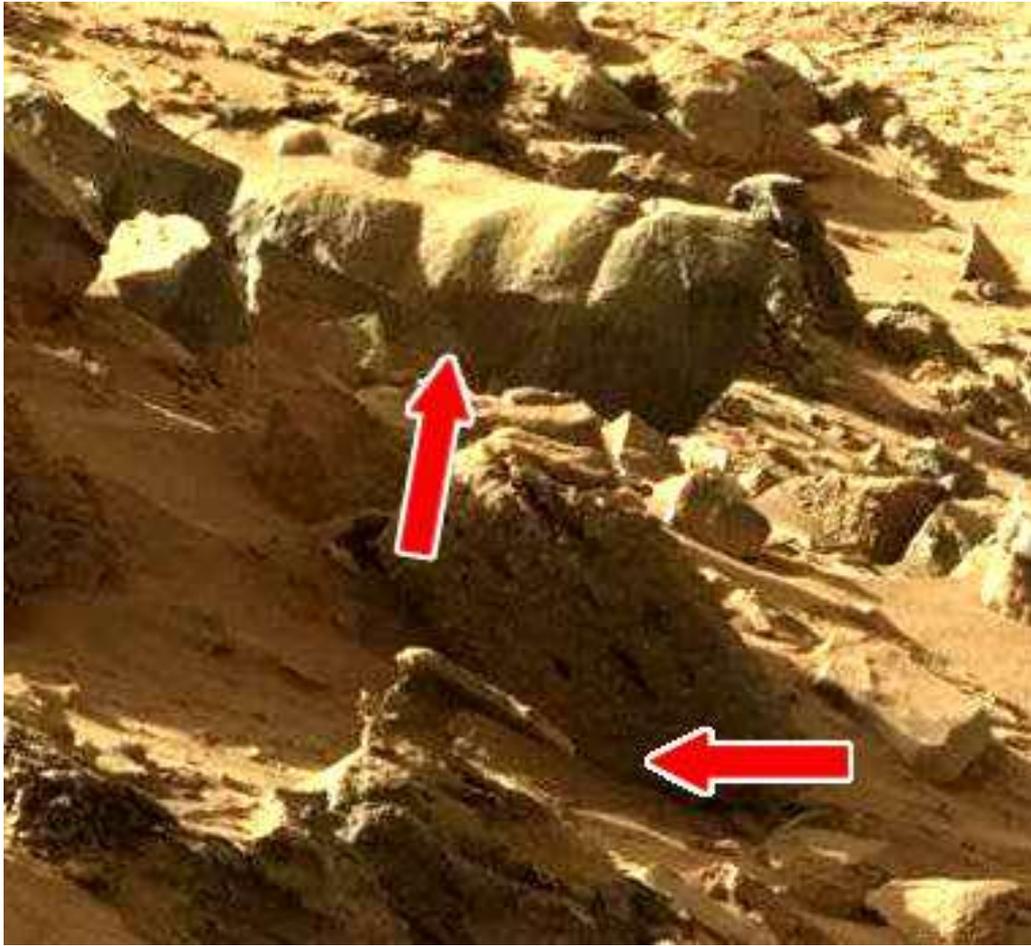
## 0.5 Ventifacts & Unexplained Features

Geologists have examined images across all the rover missions and pointed out ventifacts which have been created by particles in sand storms blowing against rocks in a particular direction. The ventifacts we see in the images are similar to ventifacts observed in certain locations on Earth such as the dry valleys of the Antarctic. An important question arises from this. Can the very thin Mars atmosphere create ventifacts very similar to those found on Earth?



Figure 34

Curiosity Rover Image 0530ML0021050360203355E01



**Figure 35**  
**Close up of 0530ML0021050360203355E01, with increased contrast**



**Figure 36**  
**Curiosity Rover Image PIA17766**



**Figure 37**  
**Curiosity Rover Image PIA17766, close up "B"**

The rock in the image above appears to be the same rock shown in Figure 36.



**Figure 38**  
**Curiosity Rover Image PIA17766, close up “A”**

Figure 39 is harder to explain as a ventifact. Could this be a man made object?



**Figure 39**  
**From “A Fossil Hunters Guide to Mars” – biological characteristics**

*Above - three mysteries in one shot. The top object has five concave sides in a perfect pentagon and the center has a round hole dead center. Object is hollow and its walls wafer-thin. The left pentagon*

*object shows perfect linear edges precisely at the angles of a perfect pentagon. The bottom right object is shaped like a rind and is one of about two dozen that I have found.*



**Figure 40**

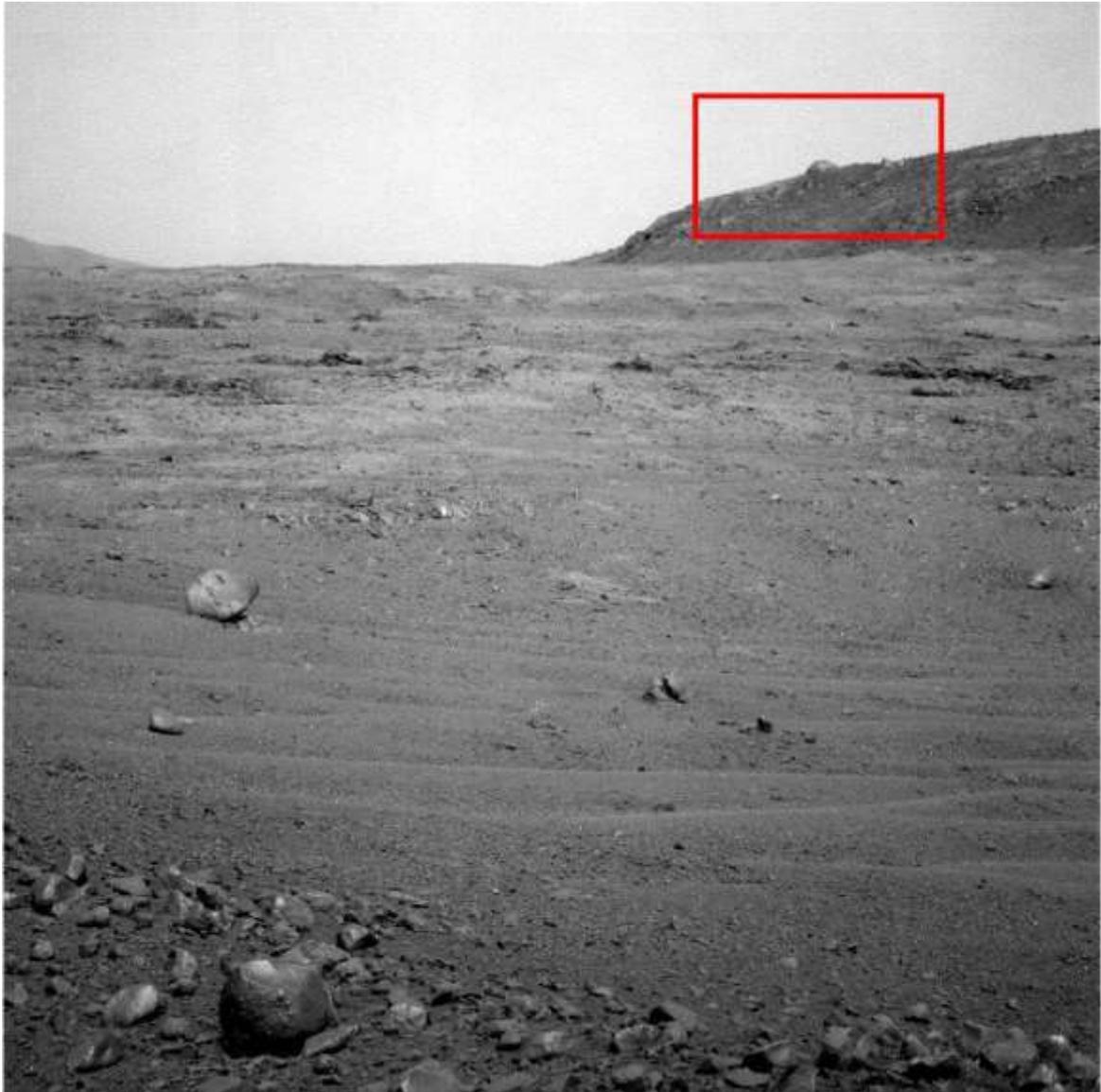
**41 – Curiosity Rover Image 0729ML0031250020305133E01**



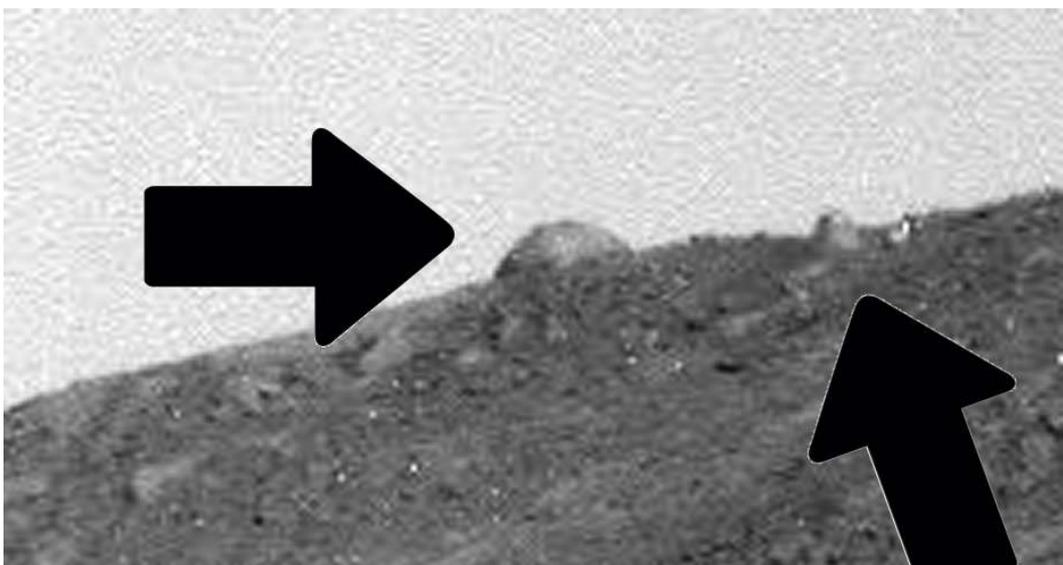
**Figure 41**

**Close Up of Curiosity Rover Image 0729ML0031250020305133E01**

Closer inspection shows very regular circular formation with the appearance of an “axel” or a “dumbbell”. Is this a man made object?



**Figure 42**  
**Opportunity Rover Image - 1P489773398EFFCNK6P2413R1M1**



**Figure 43**  
**Close Up of 1P489773398EFFCNK6P2413R1M1**

A possible explanation of these anomalies is that we are looking at the top of an accommodation building found at rover test sites on Earth such as the ones below.



**Figure 44**

**Rover test site in Utah**

Or perhaps what we see is a satellite dish or telescope dome shown in the image below. The objects do not look like random rock formations and suggest some sort of man made structures.



**Figure 45**  
**Telescope Domes of different sizes**

## 0.6 Impossible Cleaning

In 2007 Ted Twietmeyer examined images from the Spirit Rover and pointed out that the accumulation of dust on the rover was highly selective. NASA reported that problems had been encountered because the solar panels were no longer providing enough energy to charge the batteries. This, it was claimed was due to dust accumulating on the solar panels. Amazingly, the rover managed to recover itself because dust was blown off the solar panels by Mars “dust devils”. This seems highly unlikely in an atmosphere which is 200 times less dense than the earth.

I have cut and pasted some images from Ted Twietmeyers website which show that the dust on the Spirit Rover is not uniformly distributed, indicating that certain parts such as the hinges and mounting plates may have been handled from time to time, causing them to be much cleaner than the solar panels.

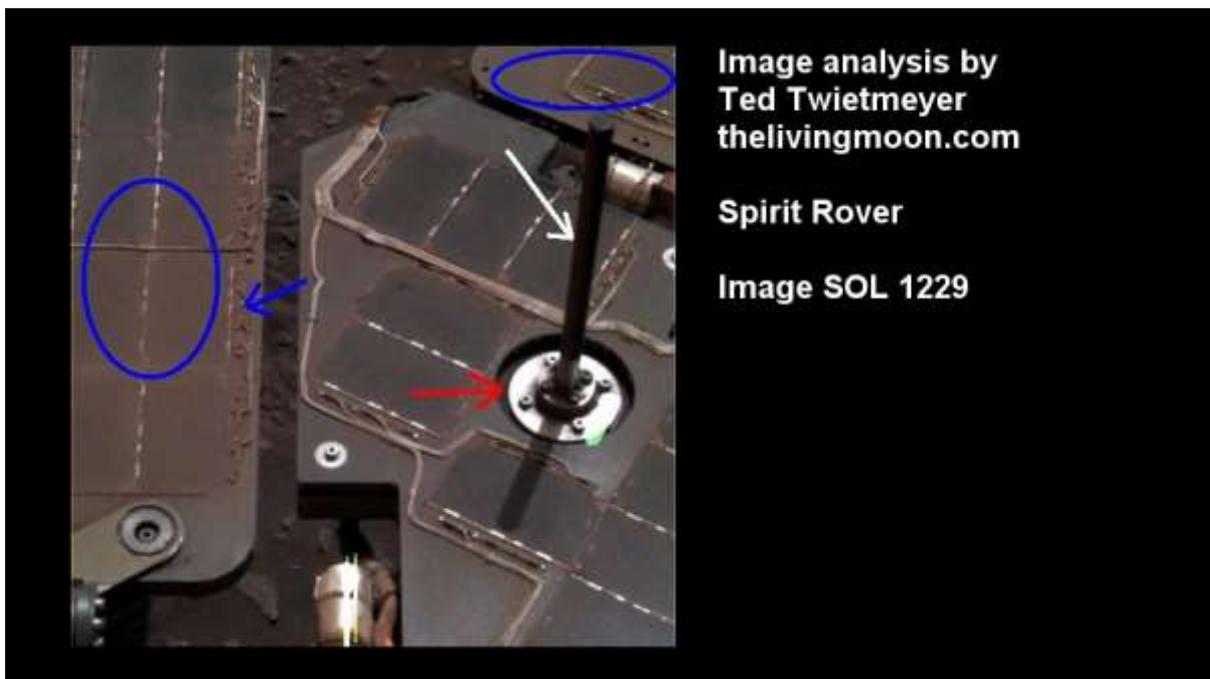
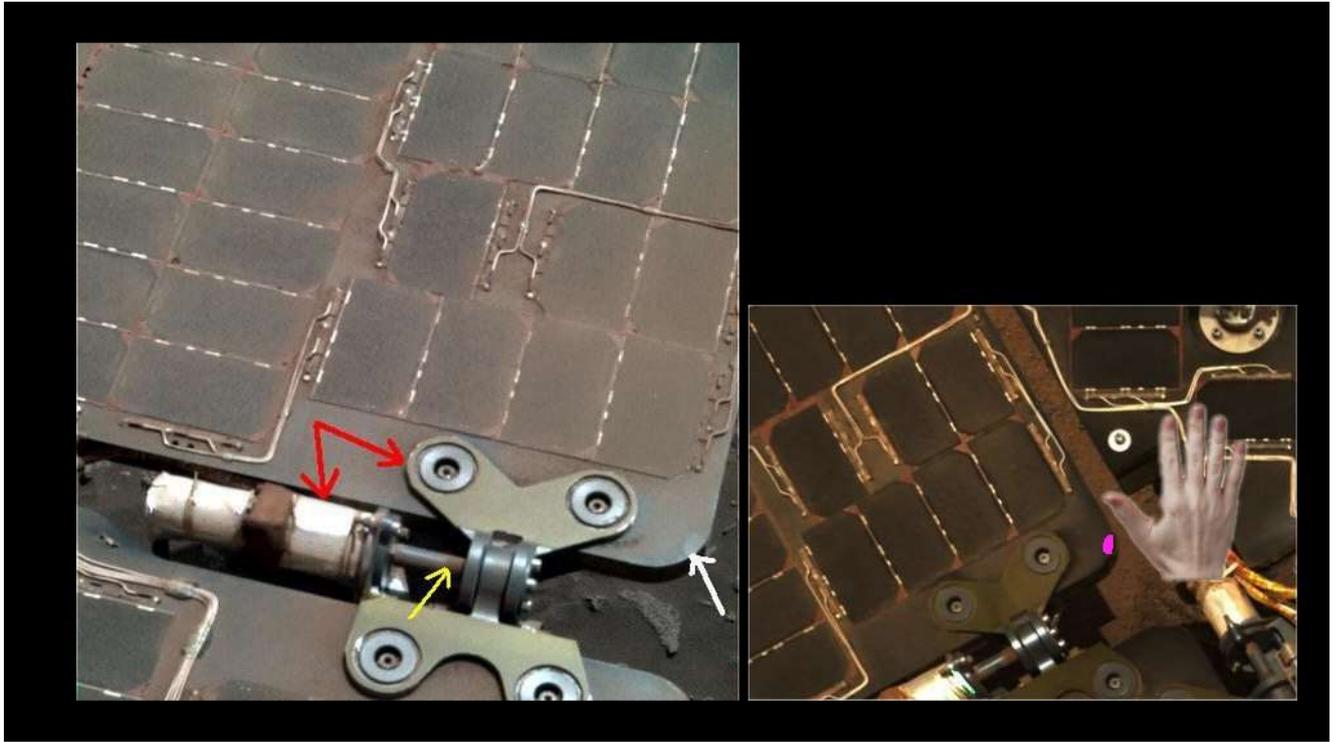


Figure 46

### 47 – Comparison of dust distribution on Spirit Rover

In the image below, the hinge marked with a yellow arrow does not have a consistent amount of dust on it. It appears to have been disturbed. How could this have happened? The image also appears to show a finger or thumb print in the dust on the corner of the solar panel mounting plate marked with a white arrow. In order to check if this finger or thumb print is the correct size, I have produced an image (below right), showing the size of a human hand in relation to the solar panel and compared it to the “print” marked in pink. The clean area indicated by the white arrow is the correct size for a thumb print.



**Figure 47**  
**Possible thumb print on Spirit Rover solar panel**

## 0.7 Colours

There are scientific reasons why the colours in many images are not the same colour as one would experience them with the naked eye. Using a particular colour balance might reveal more about an image than if the colours were presented without filtering or digital modification. However, these images are also being presented for public view, to millions of people and surely NASA understands the public want to know what the planet really looks like to the naked eye.

Because NASA changes the real colour of many of these images, much debate exists over the colour of the Martian sky. Huge controversy surrounds the first images sent back from Viking 1. The image below is alleged to be the first image sent back from the surface, which is no longer available on the NASA website. It shows a light blue sky and a slightly reddish surface. The image was at some pointed changed by NASA and replaced with the image shown underneath (revised),



**Figure 48**  
**Viking 1 Image PIA00563 (original)**



**Figure 49**

**Viking 1 Image PIA00563 (revised)**

NASA's explanation for the first image change was "suspended dust in the atmosphere". It is believed by some researchers such as Richard Hoagland, Anthony Beckett, Holger Isenberg and Gilbert Levin that the real colours of Mars are more like the original PIA00563 image, with a blue sky, and that NASA are tampering with the colours on most of their images to produce the colour seen in the second, revised, PIA00563 image.

The following image from the Spirit rover shows the colour calibration target in the same view as the surface and sky, and is conclusive proof that the image was not calibrated properly.

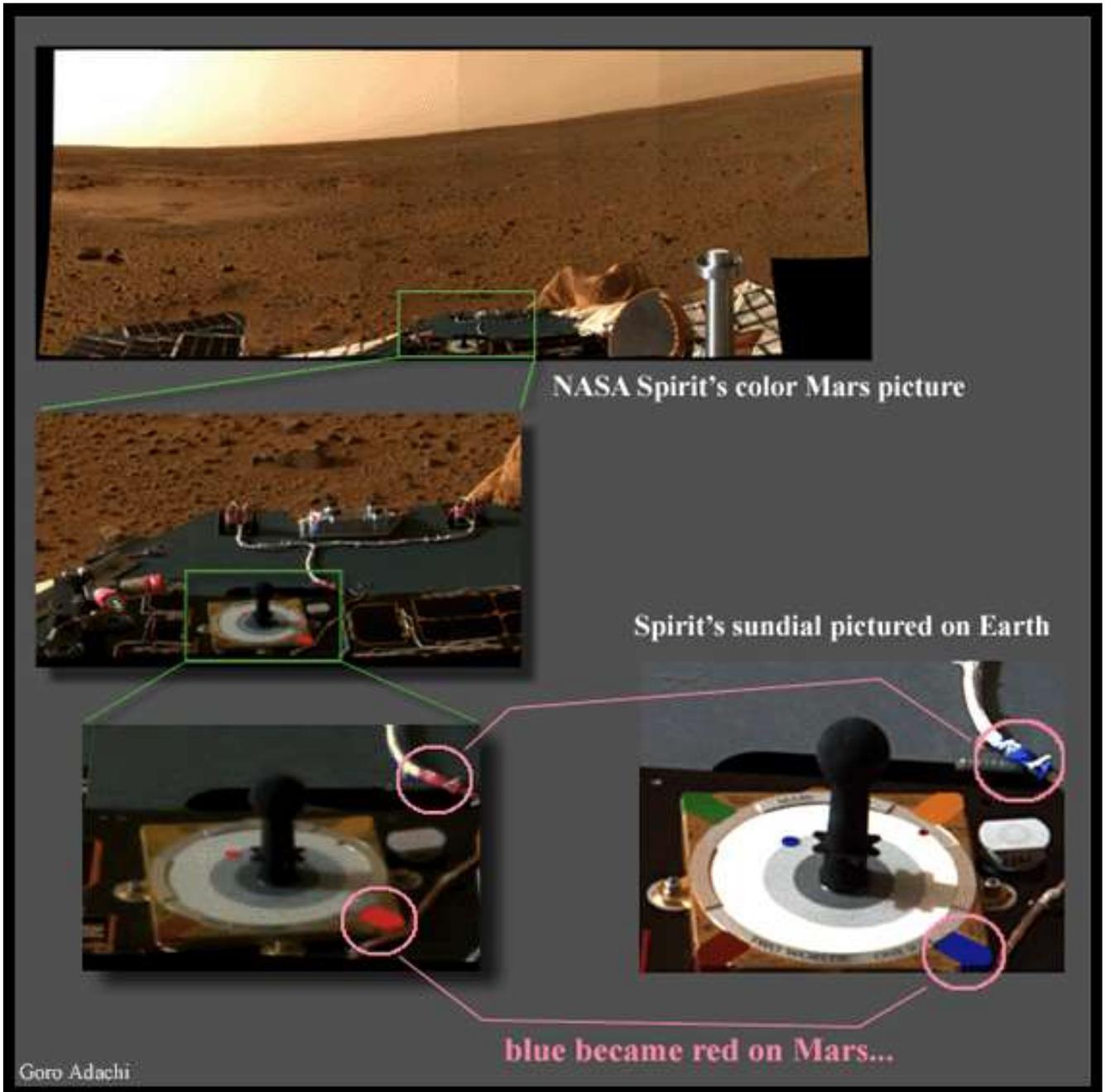


Figure 50  
Screenshot from [www.goroadachi.com](http://www.goroadachi.com), The Hidden Colours of Mars

If we assume this is standard practice, then it means many images are having their colours modified before they are published.



**Pic. A**, Viking 1, Nr. 12b069, 29. August 1976, 12.65 locale Mars time

This picture was created with color-correction derived from the [filter response data](#). (click on picture to view it in original size)

All Viking and Pathfinder images courtesy of JPL/NASA/Caltech.

original data  
without correction

**Figure 51**



**Pic. C**, Viking 1, 12h016,  
11 February 1978, 15.56

**Pic. D**

Blue amplified by 50%, green around 25%

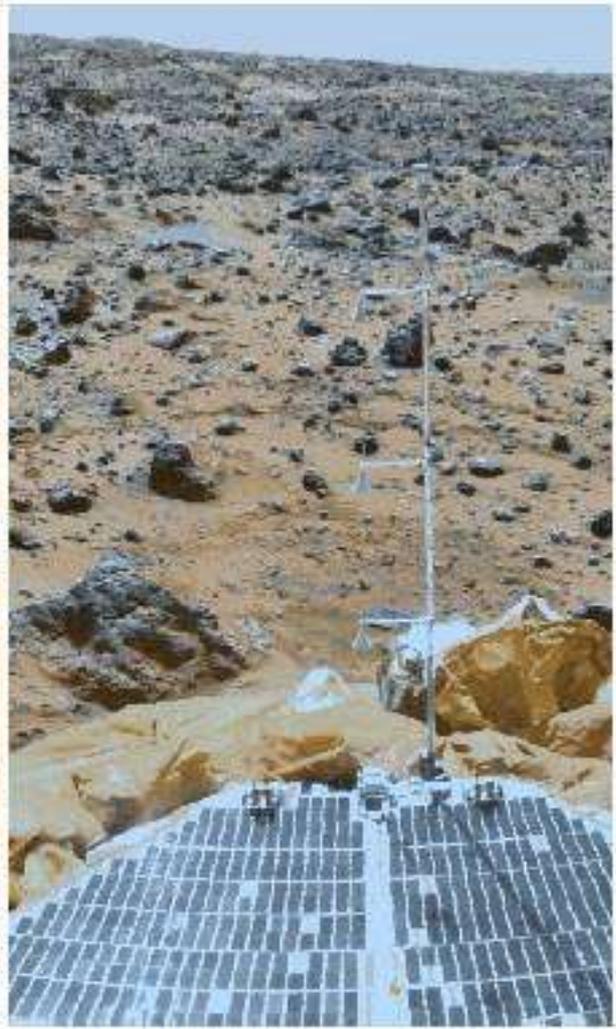
**Pic. E**, Viking 2, 21i093,  
18.May 1979, 14.24

**Figure 52**

Screenshots from [www.mars-news.de](http://www.mars-news.de), The Colours of Mars



**Pic. F,** Pathfinder,  
August 1997, source:[6]



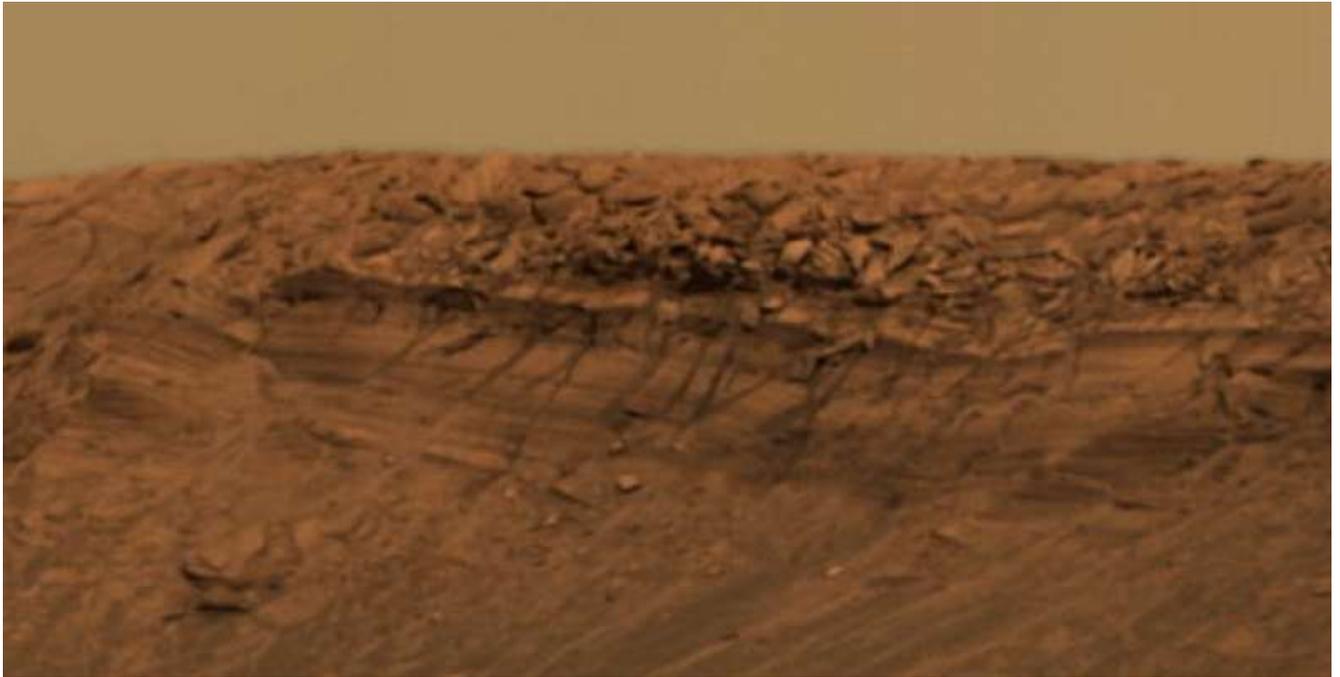
**Pic. G,**  
Blue amplified by approx. 50%,  
green by approx. 25%

**Figure 53**

**Screenshots from [www.mars-news.de](http://www.mars-news.de), The Colours of Mars**

Some of the researchers who point out the colour alterations made by NASA put forward the argument that the reason NASA is modifying the colours, must be to conceal something about Mars. In other words they do not dispute the images were taken on Mars. They assume that NASA must not want the public to know that Mars has a blue sky. Would a more likely explanation not be that the images were all taken on Earth and NASA are modifying the colours to make them appear less like the Earth?

Further examples of NASA issuing false colour images is given in “A Fossil Hunters Guide To Mars”,



**Figure 54**

**From “A Fossil Hunters Guide to Mars” – Burns Cliff press release**

*Above - NASA’s press release version of Burns Cliff made using infrared as a colour and destroying the contrast and image sharpness. The sky has been literally erased and painted over, then blurred into the crater edge. There is no good technical or scientific reason for this representation. The colours are so far off that it barely qualifies as a picture of Mars.*



**Figure 55**

**From “A Fossil Hunters Guide to Mars” – Burns Cliff true colour image**

*True colour image assembly of the raw data, showing Burns Cliff in Endurance Crater as it would appear to a human observer. Note a slight pink tint to the blue sky, very similar to what we see in deserts on Earth. From L4, L5, and L6 filters.*

Quote from “A Fossil Hunters Guide to Mars”,

*“In examining the many sky images on the NASA/JPL web site, I found that virtually all had been painted over grossly.” ...*

*“Analysis proves that NASA artists or image processors have altered the sky and ground to reflect some preference that they have been pushing for years- that Mars is somehow a very alien place. The truth is that Mars in most of its areas looks very much like Arizona or New Mexico. It would be very difficult for somebody to tell the two places apart when presented with pictures unless they were very familiar with the differences between the two.*

*Some people have said to me “but it’s a false color image. It doesn’t have to look exactly right.” To those critics I would like to point out that if you know the true color in the first place, and you are producing a false color image meant to look like a place, then it is your responsibility to make it look as accurate as possible, given the data you have at hand. If you deliberately distort the colors or “dumb down” the image data, you are doing a disservice to the public and yourself. On top of that, it’s downright dishonest.”*

Why are NASA being dishonest?

If the photographs were taken on Earth, does this not explain NASA’s dishonesty?

## 0.8 Impossible Weather

The temperature on Mars is variable as on Earth depending on the time of year, whether it is day or night and whether you are at the poles or the equator. Official figures estimate the temperature ranges from 20 degrees centigrade to -153 degrees centigrade.

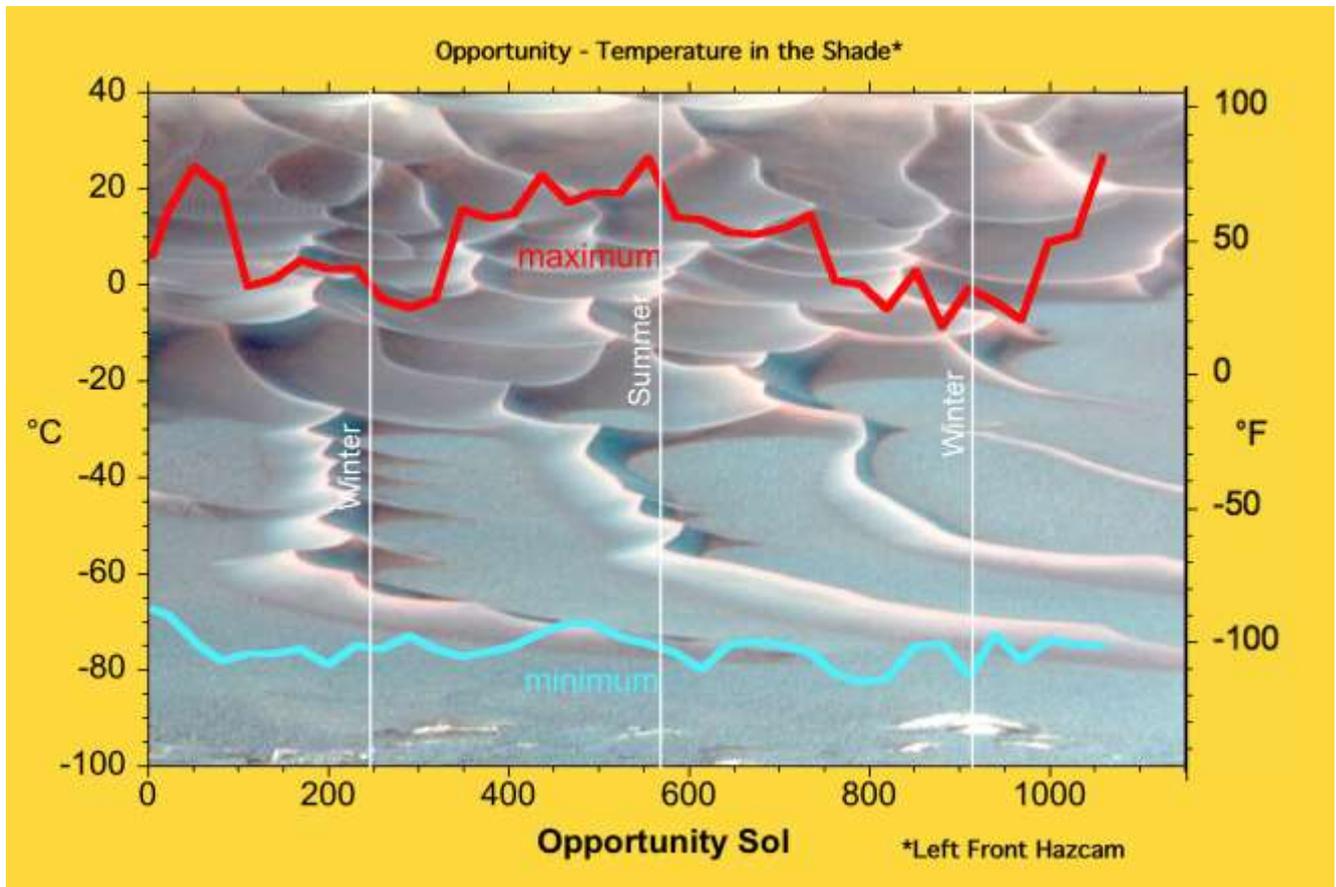
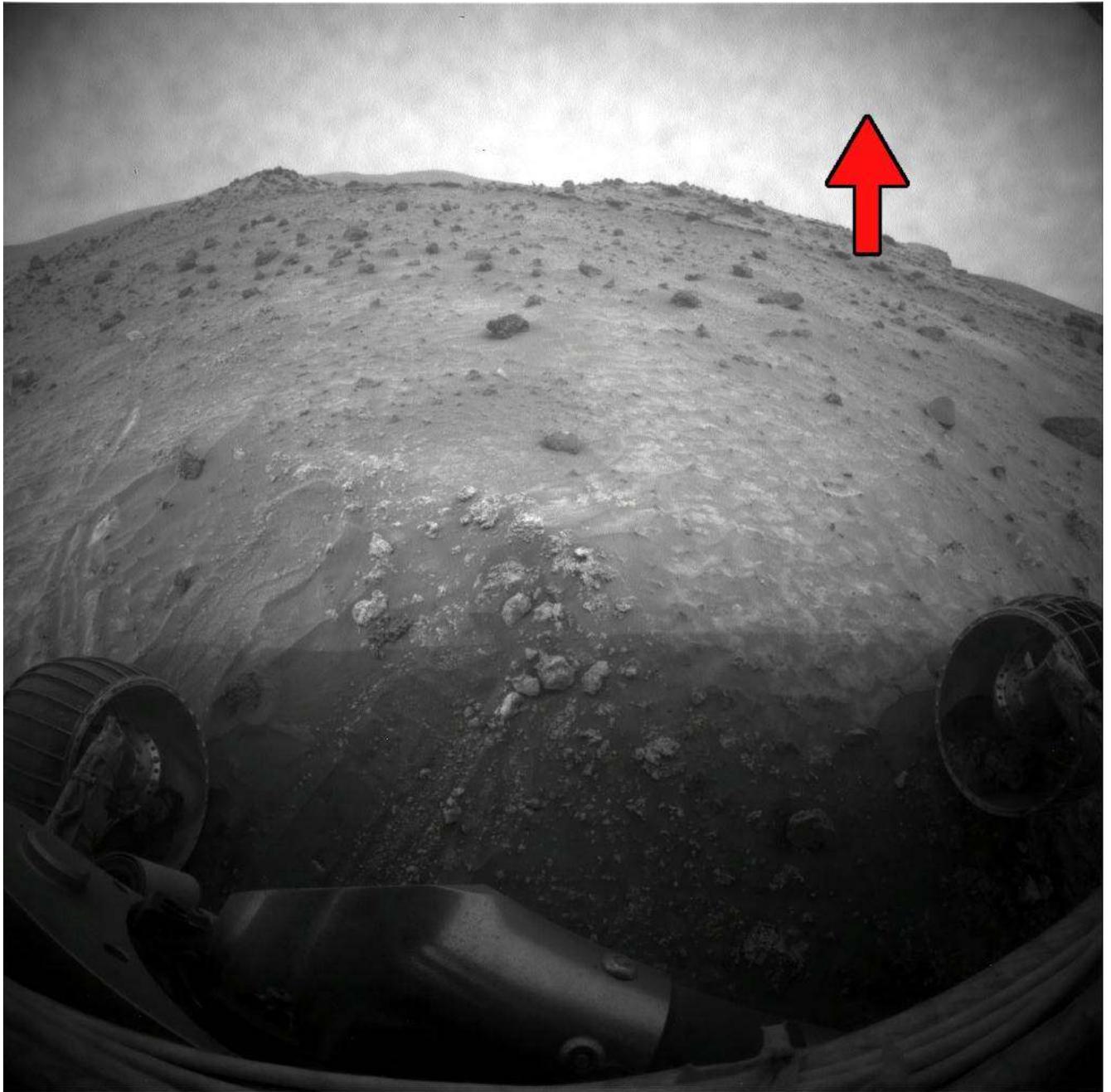


Figure 56

### NASA Graph Showing Annual Temperature Variation at Opportunity Location

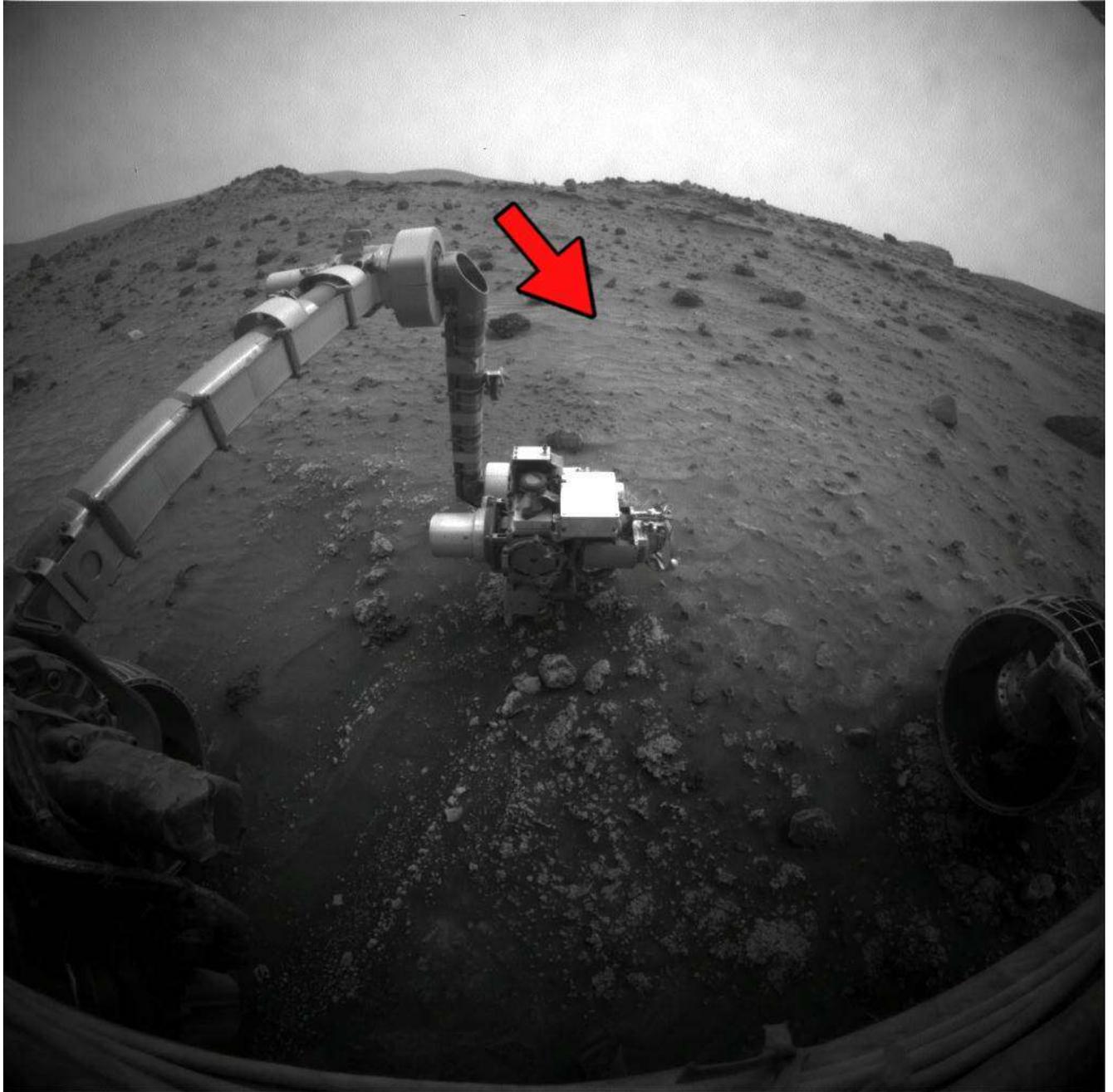
The atmosphere on Mars is composed primarily of Carbon Dioxide (95.3%), and is 100 times less dense than Earth's atmosphere. The atmospheric pressure is much lower than on Earth, 600 Pascals, compared to 101,300 Pascals on Earth. Current scientific thinking states that there is no liquid water on Mars, and it can only exist as vapour or ice due to the atmospheric conditions. This means the surface is dry and therefore there should be no flow of water, mud or soil.

It has been claimed that the sensors on Curiosity have reported air pressure as high as 780 Pascals and a temperature as high as 6 degrees centigrade over a seasonal cycle. At this pressure and temperature liquid water is a possibility.



**Figure 57**  
**NASA Image 2f237337944effaucmp1214l0m1**

This image shows moisture on the optics of the camera which is creating a smudging effect on the image of the sky. This phenomenon is not seen in most other images, suggesting that the dampness was either temporary or removed somehow. Several days after this image showing moisture was taken, the next image was taken which could be evidence of the effects of moisture in the soil.

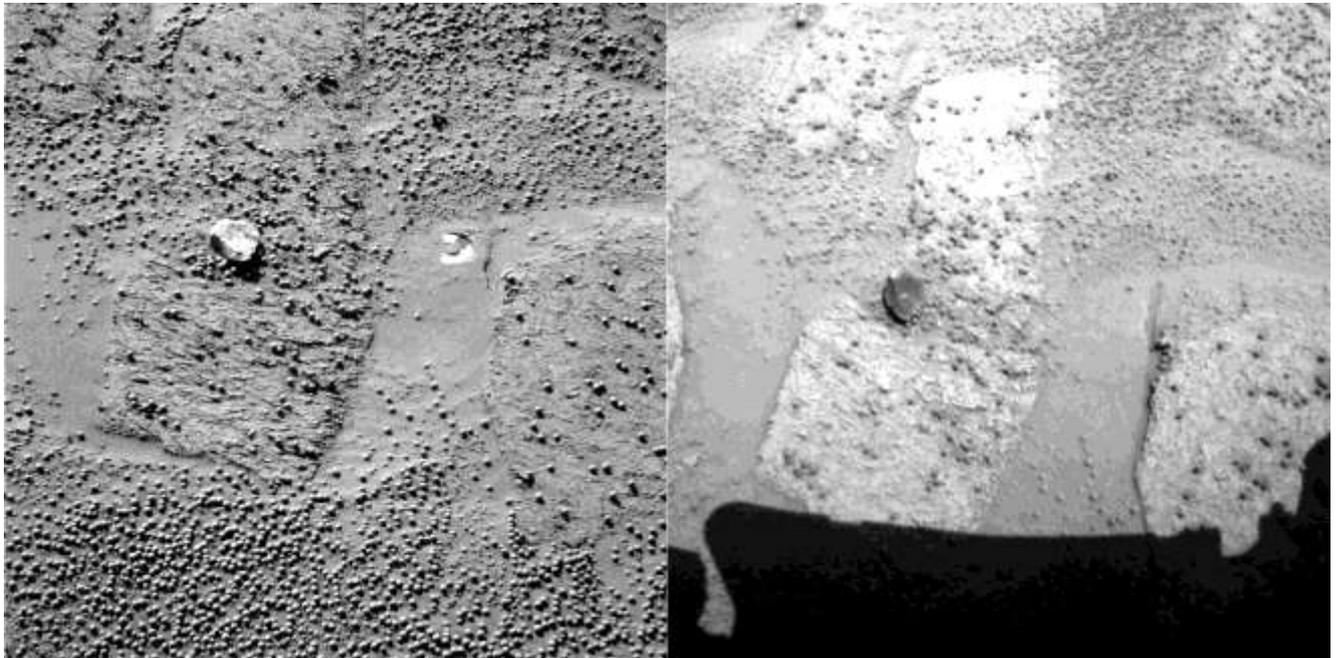


**Figure 58**  
**NASA Image 2f238926104effaucmp1159l0m1**

In this image we see what appears to be mud, which over a period of a few days is seen to flow or move in the direction of the arrow. This is best seen by animating a series of 20 NASA images in sequence from 2F237337944 to 2F240260511. The moisture and mud flow are both evidence of rain. It is claimed by scientists that presently there is no rain on Mars.



**Figure 59**  
**NASA Image 1f138744391eff2809p1214r0m1**



**Figure 60**  
**Comparison 1f138744391eff2809p1214r0m1 & 1P139113540EFF2811P2535L7M1**

The left hand image shows a close up view of a portion of the ground, the right hand image shows the same portion of the ground taken at a different time which has been zoomed in from the previous image. Does the comparison show flow of mud or water?

If it does, does this simply mean there is water flowing on Mars?

Here is a revealing quote from “A Fossil Hunters Guide to Mars” about the Spirit and Opportunity rovers’ inability to detect water,

*“First, there are no sensors for water on either of the rovers. There is no instrument capable of detecting moisture in the atmosphere, relative humidity, condensation, moisture in the soil, or liquid water in any form. No spectral device can see the emission or absorption lines for water; no sensor can test the relative cooling of wet and dry bulb thermometers, no set of probes or contacts can measure the conductivity of the soil. To me, this is a very serious oversight. How can a mission designed to find water be equipped with absolutely no water sensing devices? This is stunning in its stupidity.”*

The following questions arise,

Is this really an oversight by NASA?

Does NASA have a reason for not wanting to accurately report moisture levels?

If the rovers were situated on Earth, would the abundance of water provide very good evidence to those monitoring the mission, that the rovers are not on Mars?

## 0.9 Sand Dunes



Figure 61  
**Curiosity Rover Image PIA17766**

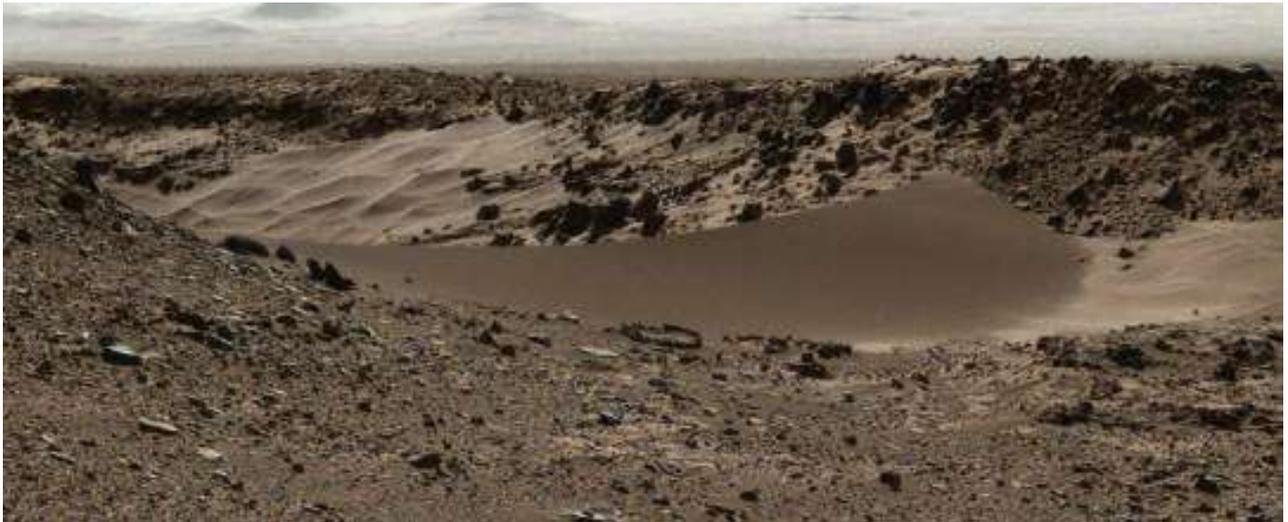


Figure 62  
**Curiosity Rover Image PIA17766 – close up**

The sand dune in the image looks artificial, ie the result of photoshopping. If this is the case, is there an innocent explanation for tampering with the image. What details are the fake sand dune covering up?

If the image was taken on Earth, is it possible the image had been modified to obscure features or objects that would prove the image as taken on Earth?

## 0.10 Lidar

NASA has spent a large amount of money mapping the Antarctic both below ice sheets and above ground. They used a company called Stone Aerospace, who created precise 3D models of the Antarctic landscape using LIDAR and other technologies. The question arises, why does NASA need very detailed 3D representations of this part of the Earth, bearing in mind the huge costs involved in setting up bases in very inhospitable locations? We can propose as part of this hypothesis, this data might be being used to create computer generated images, which are purporting to come from their Mars rovers. It is widely known that NASA has great expertise in computer generated images.

Does the image below allegedly taken by Curiosity rover illustrate use of CGI to create the background.



Figure 63

**Curiosity Rover Image NRA\_402109457EDR\_F0043076NCAM00437M**

# 1. RADIO SIGNALS

In 2010 a testimony was published on a blog website “AstroEngineer’s Blog” entitled “A Curiosity of Spirit”. The author is anonymous and claims to have worked for JPL on the Spirit and Opportunity Rover programmes in the field of software.

The account is over 14,000 words and goes into a great deal of technical detail on anomalies that two engineers discovered and secretly investigated while working on the programme. The account appears to be technically accurate and could be genuine.

<https://astroengineer.wordpress.com/2010/04/07/a-curiosity-of-spirit-full-document/>

Below is a brief summary of the account.

While investigating a software failure on the Spirit rover, one of the engineers decided to download from the rover a memory dump of large sections of the rover’s computer code. He compared the computer code with a version he thought the rover should have been running and found some differences. He investigated the functionality of the additional computer code which seemed to have been added to the Spirit rover. After much investigation of this additional code, he and another engineer came to the conclusion that the rover was interfaced to an additional undisclosed piece of hardware, and was communicating with this mystery hardware. They decided that the hardware was probably a radio communication device of some sort with very low power consumption. The additional computer code also contained image manipulation functions which had the capability to manage, modify and delete images from Spirit’s memory. None of this functionality should have been present in the code. In order to find who had added the mystery computer code one of the engineers executed some of the functions on their own Earth based computer platform, and then compared the resulting files, for similarities, with files from the JPL computer network. They were able to trace a user who had deleted files which had been generated using the same mystery software they had downloaded from the rover. The department where the computer was located was “Quantum Sciences and Technology”. They later identified a protocol the user was running to communicate with the Spirit rover via a data server with the undisclosed interface and wrote some software to eavesdrop on the protocol. The eavesdropping revealed that somebody within Quantum Sciences and Technology was accessing data from the rover almost in real time. This seemed impossible because it takes signals approximately 20 minutes before they arrive at the Earth. The engineers surmised the reason why this was possible, was because a technique had been developed by Quantum Sciences and Technology for faster than light communication between Earth and Mars.

Here is an extract from the account

*We reviewed what we felt confident we knew. Some mystery radio on Spirit was able to transmit to earth in a fraction of the time it would have taken for a radio signal to reach earth. The radio had a modest bandwidth. The data being transmitted by this radio included rover status, science data, and thumbnails of current imagery. The data quickly made its way from radio server to data server where two data reviewers viewed the data, seemed to select some of these images for remote deletion, selected others for unknown transformations, and then deleted all the temporarily downloaded data. A query sent to the radio server appeared to be able to request and almost immediately get (at speeds faster than light) a status report from the rover.*

In this testimony it is suggested that faster than light communication provides the answer to what was witnessed. Another explanation for what these engineers discovered is simply that Spirit was situated on Earth. The mystery communication could be via a transceiver located on the rover communicating

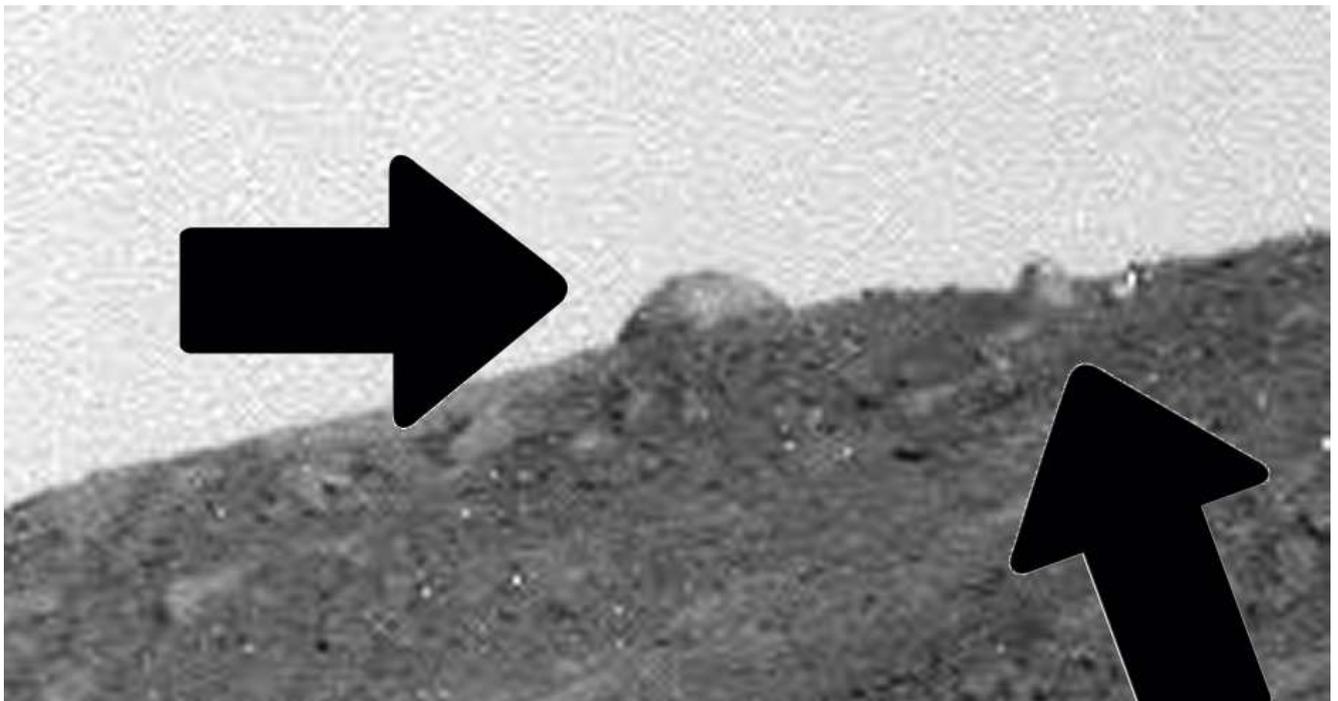
with another transceiver within a few miles or even yards of the rover connected to a data server at one of the rover test sites. If the rover is on Earth, perhaps those who are monitoring it have another way of reviewing the images which are captured by the cameras and decide which ones need to be deleted. They then use their back door communications link to identify the images by looking at thumbnails and delete or modify the ones that need to be censored before the data is “sent to Earth”.

In summary there are three aspects to this disclosure which are important to this hypothesis.

1. It is claimed there is a covert communication from Earth to the spirit rover which the main rover team know nothing about.
2. It is claimed that images can be, and are being modified and deleted covertly using this link.
3. It is claimed that there is “faster than light” communication via the covert link.

If true, these facts could point to the Spirit rover being situated on Earth and images which reveal obvious Earth characteristics, are being censored.

If this were the case, one might expect there to be a base of some kind on the Earth near where the rovers are actually located. This base could contain relatively short range radio communication with the rover via the link discussed above. It would also likely contain an encrypted satellite link in order to transmit the data which is eventually received by the Mars rover team. Satellite dishes which are in long term use are usually protected from the weather and the environment with a dome or golf ball covering. Is this what we are observing in the rover image below?



**Figure 64**  
**Close Up of 1P489773398EFFCNK6P2413R1M1**

The Spirit and Opportunity rovers contain an industry standard VME rack which houses the rovers central electronics control hardware, similar to the one shown below.



**Figure 65**  
**An industry standard VME enclosure**

It is common practice when using a standard rack to have spare capacity in the rack. This allows additional cards to be added to the system very easily. Cards use standard interfacing electronics and software.

Taking into account the testimony of the “AstroEngineer”, and the additional piece of VME hardware which the software appeared to be communicating with, it is logical to assume that somebody has added an additional VME interface card into the Spirit rover rack. According to the engineers, this was some kind of radio communications device giving external access to the rover’s memory and images within the memory. A VME communications card would provide such an interface, such as the one in pictured below. This could interface with a radio transceiver and allow remote access to the rover’s internal software, as described in the article above.



**Figure 66**  
**A VEM communications card**

If what is being suggested is true, this sheds light on how the conspiracy may have been perpetrated. The rover has been modified by adding a few relatively straight forward pieces of hardware, and the rovers' software has been changed so it allows the new hardware to carry out certain covert functions.

We can postulate further about how the Earth based rover is sending data to the team who are monitoring the project. If some further adjustments were made, such that the radio links to the Earth and the Mars orbiter were redirected to local (possibly NSA) satellites, and then onto the NASA Deep Space Network, and also a direct link to the Earth, this would give the team the appearance that the signals were coming from Mars. It is fairly straight forward to introduce a 20 minute delay in the signals before they arrive at mission control, thus simulating the distance the radio signals have to travel back from Mars.

This theory raises further questions. Is the rover being used, the same rover that was allegedly loaded onto the rocket? If so, how easy would it have been to remove the rover before it left the Earth? If this is what happened, there would have been several months duration (while the rocket is travelling to Mars), to move the rover to its Earth location and carry out the necessary modifications discussed above.

Another question which arises here is if the rovers are situated on Earth, Mars has a slightly longer day and therefore the sun position and amount of daylight would not always match what one would expect from Mars. In order to provide a possible answer to this, here is a quote from Robert Manning (MSL chief engineer) from an email he sent me in 2015,

*I don't know if you knew this, but we had to design these rovers to sleep a lot. (like your laptop). A typical Sol on Mars might consist of the rover waking up (on its own) at 10 or 11 am (mars local time) to listen for a new set of "scripts" (we call them sequences) from JPL (sent via the DSN using X-band). The rover gets the script and turns on its radio for a few minutes before going silent while it then does what we asked it to do in the script (talking to earth using the radio would drain the batteries too fast). It might work for 2 hours then take a 2 hour nap then wake again in the late afternoon where it will wait for one of our orbits to fly overhead (7-12 min overflight). The rover then dumps the data it collected as well as a report on its progress to the orbiter which then forwards the data to Earth within the hour. By then the rover puts itself to sleep until 10 or 11 at night. (Yes, its true, our rovers have the work ethic of a 15 yr old mutt).*

From this we can see that there is a considerable period between taking the photographs and them actually being sent to the Earth. This period could feasibly be used to modify the data being sent so that it is consistent with whatever the sun position is on Mars.

# Mars Rover Vehicle Development and Testing

## 1.1 Proof of Testing

Where were the Mars rovers designed, developed and tested? They were developed by the Jet Propulsion Labs which is situated in California. Most information which is publicly available appears to be a publicity exercise, rather than revealing detailed information about the design, specification and testing of each component. Where are the signed off test procedures which would show evidence that detailed tests may have been carried out? There are videos available produced by NASA at JPL showing some alleged testing. One example is the “drop test”, which was witnessed by the whole team who proceeded to clap their hands on seeing the rover lowered to the ground on wires. Short video interviews are also available with certain team leaders explaining particular aspects of the development phases. I would expect the testing to be carried out by a completely different part of JPL, or even another company. One very important principle in engineering design and testing is that the group devising the tests should not communicate with or work with the group carrying out the design. This is because it is possible for somebody to misinterpret the requirements, and if this misinterpretation is passed to other members of the team, who are involved in preparing the test procedures, it can result in a design which passes the tests, but fails to comply with the requirements. Standard engineering practice is to have an engineer or engineers read the requirements specifications, who do not talk to the design team, and then devise test procedures to be conducted which determine whether the product complies with the requirements. In my experience, a requirements document would typically contain hundreds of mandatory requirements specified in great detail. The job of the engineer writing the test procedures would be first to understand every requirement, and second devise a separate numbered test for every detailed requirement. Test procedure documentation would probably run into thousands of pages for a device like a Mars rover. Every subcomponent would have its own separate tests. Tests would normally also be witnessed by a third party independent of both the design and test departments, usually referred to as consultants, just to make sure no cheating is involved. At Rolls Royce where I worked, the test department were kept separate from the engineering design departments for very good reasons. In fact, there would occasionally be friction between the design and test departments and between design and test engineers. It appears from the NASA videos that this sort of engineering practice was not used by JPL. It looks as though they are all working as one big team. As far as I am aware there are no publicly available signed off test procedure documents. One would imagine that a very vigorous programme of testing should have taken place, including lengthy environmental testing, with test chambers used to simulate the Mars environment. Each test would have its own set of documentation. There are images available showing Curiosity in a test chamber, but no documentation available for scrutiny. There is very little information I could find about the design and testing of the rover vehicles other than the short videos produced by NASA. It might be argued that publishing detailed design and test procedures would be giving away secrets. Radio isotope thermo electric generators have been used as power sources in satellites, space probes, and unmanned remote facilities such as a series of lighthouses built by the former Soviet Union inside the Arctic Circle, so it is unlikely that design or test details would be particularly sensitive. Some of the instruments onboard the rover are considered innovative, but soak test results of the entire rover would not need to reveal any of the inner workings of such technology. From what I can see, other than the power generation system, the Curiosity rover is using fairly standard technology. Releasing the test documentation would be a good way of proving that the Rover is indeed fit for purpose and capable of doing what they claim. Why is this documentation not available for public scrutiny?

There are various companies involved in developing the various components and instruments for the rover. These companies have clearly done their own testing before the device is approved for use on the rover. Some test documentation is available for these sub-components from the companies

involved. This is still not proof that the rover is fit for purpose. All the various components supplied by outside companies have an interface with the rover. Interfaces are notorious for causing engineering problems because engineers working on each side of the interface work in isolation from each other. A fully integrated soak test is required to check that all the component parts function correctly together. I submitted an FOIA request on 18/5/2016 to NASA as follows,

*Dear NASA,*

*I am seeking test documentation for the following devices,*

*Opportunity Rover*

*Spirit Rover*

*Curiosity Rover*

*In particular I would like to see test procedures which describe how each of the rovers were tested as a whole in a simulated Mars environment over a period of weeks or months. These are sometimes known as soak tests. The intention of the test is to show the devices including all their component parts are fit for purpose in the environment they are designed to operate for a for a period of time which is comparable to the intended life of the technology.*

*I am requesting detailed test procedures, which should include detailed descriptions of all the test equipment used and the test results. The equipment would include environmental test chambers, monitoring and measuring equipment, test programmes etc. It would include detailed written procedures on how to set up and conduct each tests. After each test has been conducted, a test sheet is normally signed by engineers who carried out the test and independent witnesses who observed the test. I am also requesting the test results sheets.*

*Please include any failed test result sheets where findings were flagged up and details of any design reviews that were held in relation to failed tests.*

*NOTE : I am not asking for component testing. I am only interested in tests for the whole rovers.*

*The reason for requesting the information is to show that the technology which was produced is what NASA have claimed in media news items. The images sent back from Mars are not proof that the rovers are what NASA claim. Only these test results can provide proof, which is why they should be released for public scrutiny.*

*Thank You*

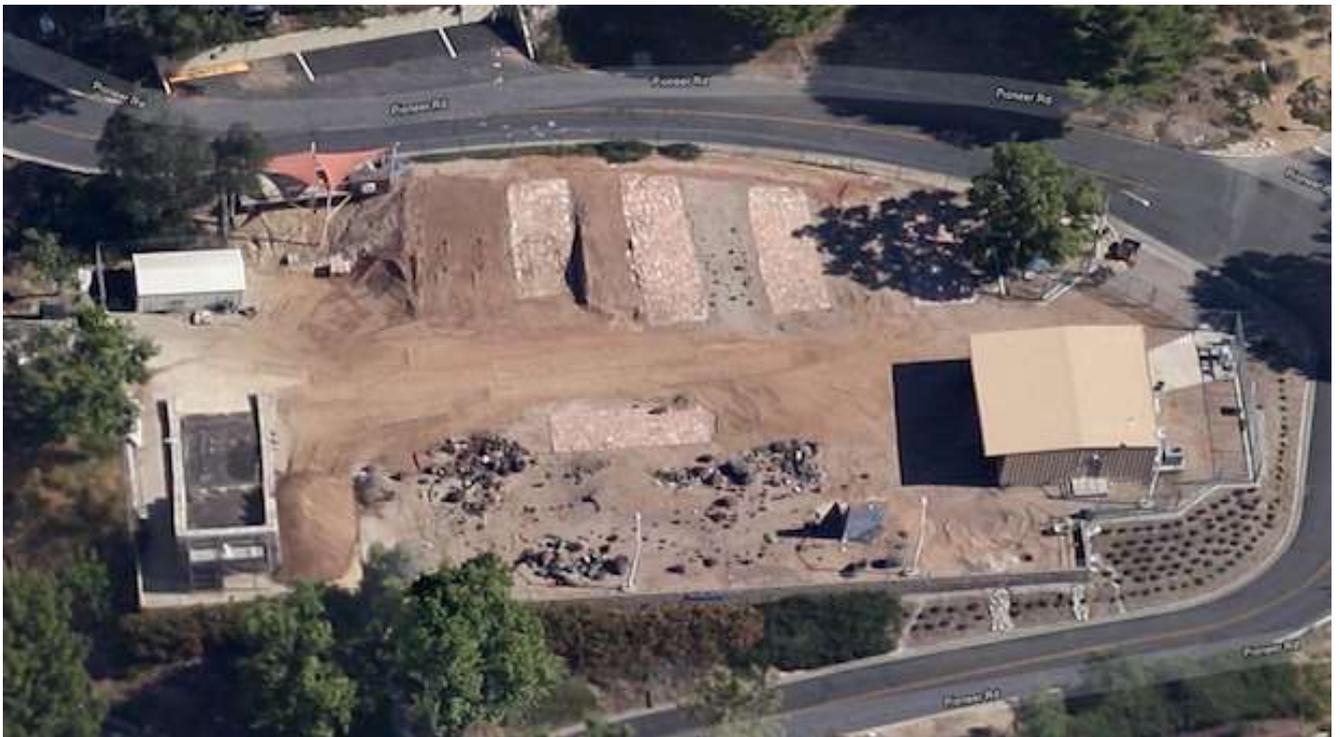
*Richard D. Hall*

NASA have replied and asked for further information. NASA's correspondence is contained in Appendix. I have since emailed the JPL Engineering Document Services and asked for a list of technical publications which are available under FOIA.



**Figure 67**  
**Opportunity Rover Under Test**

The photograph above looks like a staged publicity picture rather than evidence of any real testing being carried out. Most of the testing of the rovers took place on a small piece of land in Pasadena. Pictured overleaf, known as the Mars Yard.



**Figure 68**  
**Official NASA Rover Test Site Aerial View, "Mars Yard"**



**Figure 69**  
**Official NASA Rover Test Site, “Mars Yard” with Rover**

According to NASA’s Jet Propulsion Laboratory, “the rocks in the Mars Yard are several types of basalts, including fine-grained and vesicular, both in red and black. Rock-size distributions are selected to match those seen on Mars. Large rocks are not Mars-like composition, being less dense, but easier to move for testing. In addition to re-arranging rocks, other obstacles such as bricks and trenches are often employed for specialised testing”.



**Figure 70**  
**Official NASA Rover Test Site, "Mars Yard", Ground View**

## 1.2 Landing

In order to land the rovers successfully on Mars a series of hardware is used to slow down the payload as it approach the Mars surface. Heat shield, parachutes, air bags and rocket thrusters are employed in this task. Impressive computer generated simulations of the various stages have been produced by NASA which show in great detail the stages involved in slowing the crafts to a safe speed before decent to the surface. Landing the rovers is a very difficult engineering problem to address.

But real video footage of the various landing stages being tested is hard to find.

Both the gravity and the atmosphere are different on Mars than on Earth, therefore this hardware would function differently on Earth.

Mars atmosphere is less than 1% of the density as the Earths, which means an object in freefall on Mars reaches a much higher velocity, even though the acceleration is slower (2.64 times slower).

Despite the differences between Earth and Mars one would expect the various components involved in landing to have been tested and videoed on Earth. When one looks at the complexity of the Curiosity landing phases, it is hard to believe that a full dry run had never previously been carried out. In particular the final stage, which involves suspending the rover on ropes from a module suspended in the air with rocket thrusters.

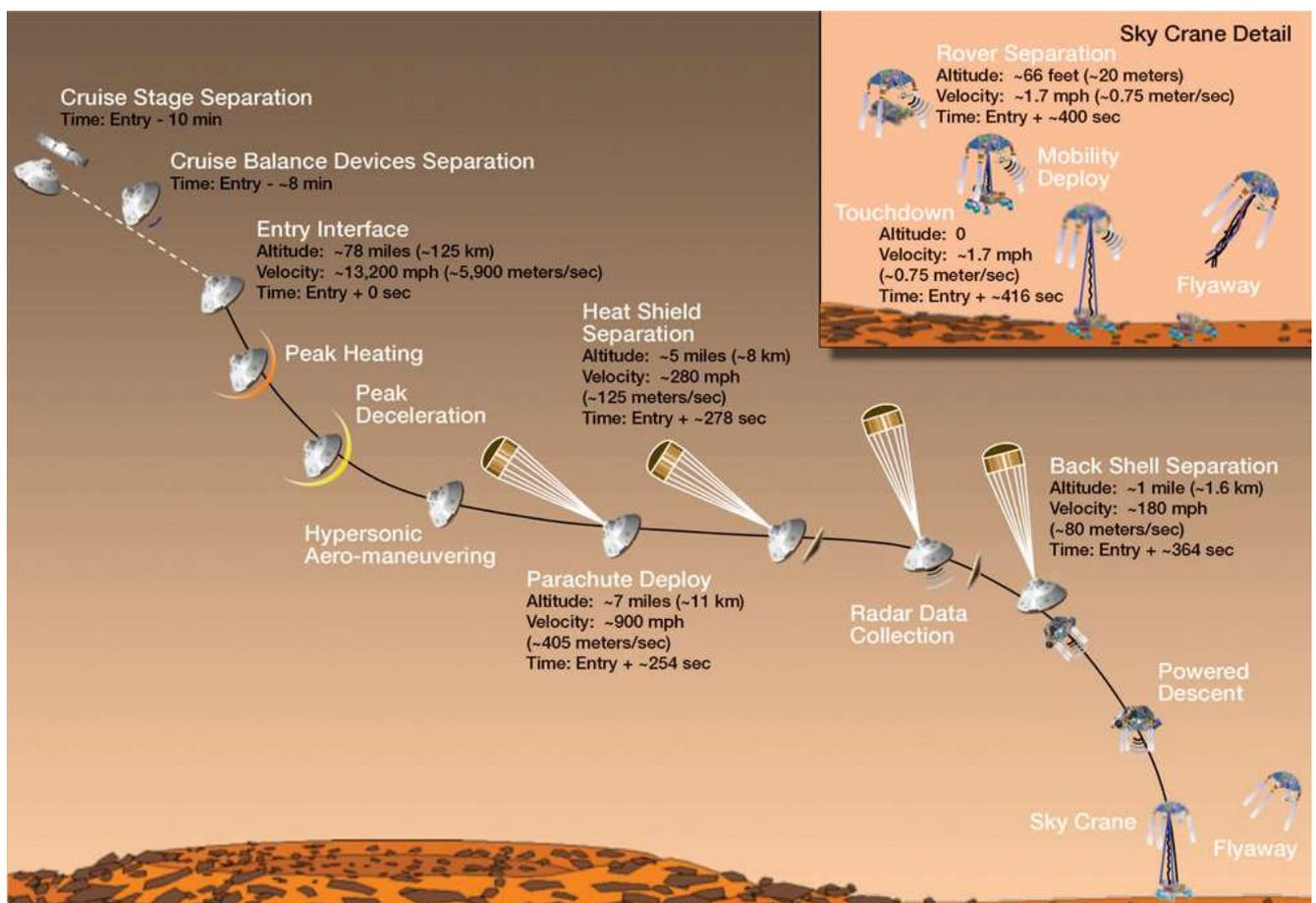
I include here some calculations from mechanical engineer, Fred Seddon. The calculations included here are "work in progress". If the problems can be verified, it is possible that the whole landing technology does not work as claimed by NASA.

I am going to start with a simple physics explanation of how Curiosity must be slowed down. There

are two forms of energy that must be addressed kinetic and potential. Kinetic energy is the energy a mass has when it is in motion, there are two ways to dissipate kinetic energy one is to impart it to another mass, the second is to change it to heat. To impart the kinetic energy to another mass would be similar to billiard balls striking each other, and the second way to dissipate kinetic energy would be the same way you stop your car you change the kinetic energy of the car into heat by using your brakes the same means must be utilized everywhere in the universe. Potential energy is the energy of a mass due to gravitational attraction and is proportional to the distance between the two masses. If you are in a tall building and you jump out of it you fall to the ground due to your potential energy but during your fall you change your potential energy to kinetic energy. When you hit the ground your potential energy is reduced to zero and your kinetic energy is imparted to the earth (like billiard balls) and then you become a body at rest.

For all my calculations I have included the corresponding units to insure that they agree and balance correctly.

For all my time, distance and speed values I utilized this picture from a children's science website. It gives very precise values along a time line from which when you add in the mass you can calculate many different physical values. You can see it here.



**Figure 71**  
**Curiosity Rover Landing Sequence**

The mass of the lander, according to Wikipedia is over 8000 lbs or 4 tons, which is about the mass of a city bus. All the values I have used are public domain with the exception of one which I will discuss later on. Now let's calculate how much actual energy that the heat shield needs to absorb in order to slow down the lander for the first part of the landing.

$$\text{Total energy} = \text{kinetic energy} + \text{potential energy}$$

$$KE = 1/2 (mv^2) \quad m= 8130 \text{ lbm} \quad v= 13,200 \text{ mph} \times (1\text{hour} / 3600 \text{ sec}) \times (5280 \text{ ft}/ 1 \text{ mile}) = 19,360 \text{ ft/s}$$

$$\text{Initial KE} = 1/2 (8130 \times 19,360^2) = ((\text{lb sec}^2)/\text{ft}) (\text{ft}^2/\text{sec}^2) = 1,523,601,024,000 \text{ ft-lb}$$

$$PE = mgh \quad m= 8130 \text{ lbm} \quad g=12.17 \text{ ft/s}^2 \quad h= (78 \text{ mi} + (4,217/2 \text{ mi})) \times (5280 \text{ ft}/ 1 \text{ mile}) = 11,544,720 \text{ ft}$$

$$\text{Initial PE} = 8130 \times 12.17 \times 11,544,720 = ((\text{lb sec}^2)/\text{ft}) (\text{ft/s}^2) (\text{ft}) = 1,142,258,840,712 \text{ ft-lb}$$

$$\text{Initial total energy} = 1,523,601,024,000 \text{ ft-lb} + 1,142,258,840,712 \text{ ft-lb} = 2,665,859,864,712 \text{ ft-lb}$$

Energy remaining at parachute deploy

$$KE = 1/2 (mv^2) \quad m= 8130 \text{ lbm} \quad v= 900 \text{ mph} \times (1\text{hour} / 3600 \text{ sec}) \times (5280 \text{ ft}/ 1 \text{ mile}) = 1,320 \text{ ft/s}$$

$$KE = 1/2 (8130 \times 1,320^2) = 7,082,856,000 \text{ ft-lb}$$

$$PE = mgh \quad m= 8130 \text{ lbm} \quad g=12.17 \text{ ft/s}^2 \quad h= 7 \text{ mi} + (4,217/2 \text{ mi}) \times (5280 \text{ ft}/ 1 \text{ mile}) = 11,169,840 \text{ ft}$$

$$PE = 8130 \times 12.17 \times 11,169,840 = 1,105,167,426,264 \text{ ft-lb}$$

$$\text{Total remaining energy} = 7,082,856,000 \text{ ft-lb} + 1,105,167,426,264 \text{ ft-lb} = 1,112,250,282,264 \text{ ft-lb}$$

Initial energy - Remaining energy = Energy used

$$\text{Energy used} = 2,665,859,864,712 \text{ ft-lb} - 1,112,250,282,264 \text{ ft-lb} = 1,553,609,582,448 \text{ ft-lb}$$

$$1 \text{ Btu} = 778 \text{ ft-lb}$$

$$\text{Total Btu} = 1,553,609,582,448 \text{ ft-lb} / 778 = 1,996,493,131$$

Total Btu = **2 Billion**

Lets put this in a perspective everyone can understand and find the weight and length of a freight train that would have the same kinetic energy, travelling at 60 mph (88 ft/s).

Rearranging the equation  $KE = 1/2 (mv^2)$  to solve for mass we have  $m = 2KE / v^2$  inserting the values  $m= 2 (1,553,609,582,448) / (88)^2 \quad ((\text{lb sec}^2)/\text{ft}) = (\text{ft-lb}) / ((\text{ft/s})^2)$

$m = 401,242,144 \text{ lbs}$  which equals 200,621 tons, an average coal car full weighs 110 tons 200,621 tons total / 110 tons/car = 1824 train cars the length of a coal car is 53 feet coupler face to coupler face 53 ft x 1824 = 96663 ft 96663(ft)/5280 (ft/mi) = **18.3 miles**

Now this hypothetical coal train's kinetic energy represents the total amount of energy (KE + PE) that the heat shield of the lander dissipated for the first phase of the mars lander. I made this simple graph showing the energy dissipation vs time, the values were so huge that I had trouble representing it properly and please note at the end of the parachute deploy the value is not zero as it shows. There is still a substantial amount of energy remaining, but without using a log scale it ends up on the X axis. See figure below,

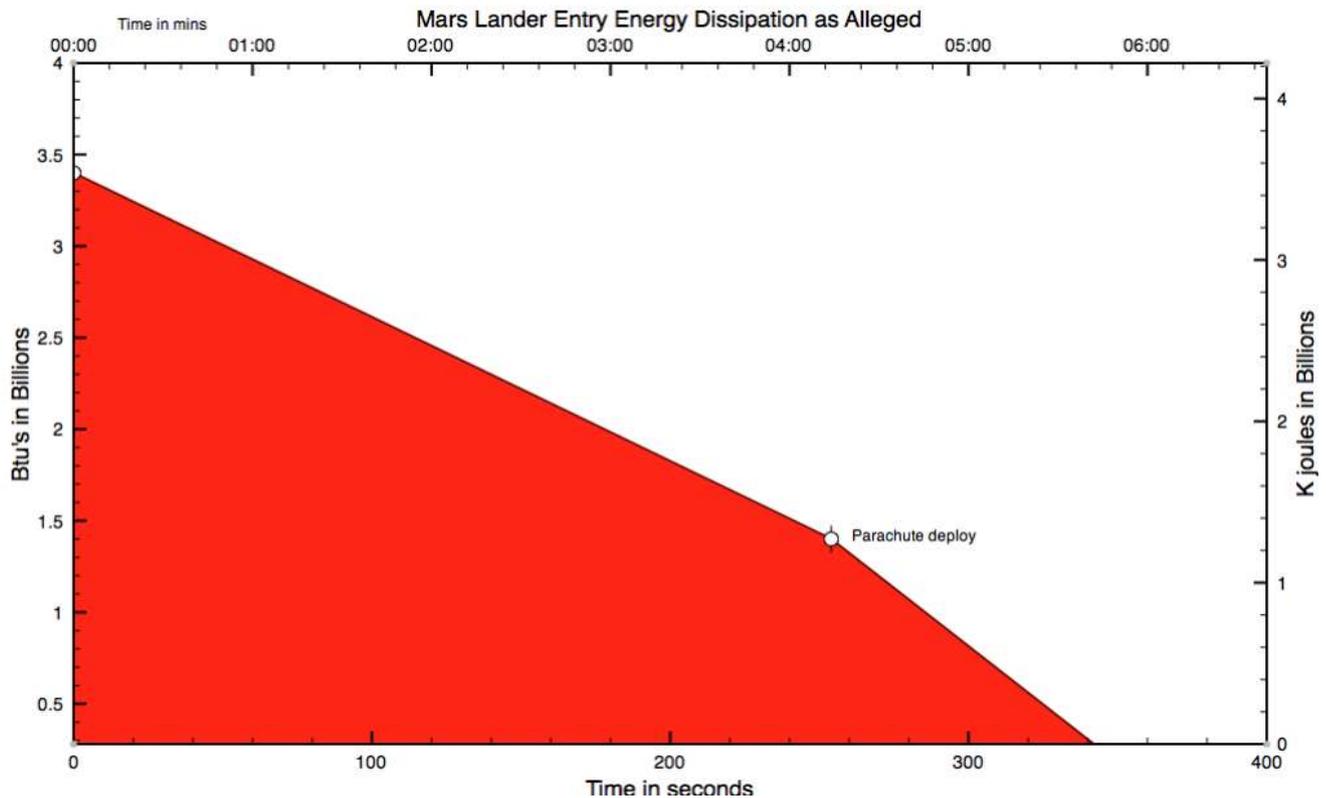


Figure 72 – Curiosity Lander Entry Energy Dissipation as Alleged

As I have shown in my prior calculations there is an enormous amount of energy that must be dissipated in order for the vehicle to slow down during descent. All the publications pertaining to the shield that I researched have all stressed that the heat shield protects the vehicle from the heat generated by high-speed entry into a planet's atmosphere. There is no mention whatsoever anywhere that I looked, that it primarily serves as a braking device. Curious? The heat shield is made of PICA (Phenolic Impregnated Carbon Ablator) lets see how Wikipedia describes it. "Ablation is removal of material from the surface of an object by vaporization, chipping, or other erosive processes." "In spacecraft design, ablation is used to both cool and protect mechanical parts and/or payloads that would otherwise be damaged by extremely high temperatures. <http://en.wikipedia.org/wiki/Ablation>

There is one physical property of the shield that I have not been able to locate anywhere namely the specific heat (Cp) of PICA (Phenolic Impregnated Carbon Ablator). Here is what the wicki says about specific heat. "Heat capacity, or thermal capacity, is the measurable physical quantity that specifies the amount of heat required to change the temperature of an object or body by a given amount

Let's start and do some more calculations but before we begin let's pretend that our space bus is on the side of a mountain and is equipped with conventional disk brakes. In order to keep our bus from speeding out of control as we proceed down the mountain we ride the brakes and constantly generate heat in order to reduce/control our speed. However, as we proceed we find that at some point our brakes no longer work. The reason is our disks have become so hot that they are no longer able to absorb any more heat. The brake pads merely slip on the surface of the brake disks and there is no friction present to generate heat with. The solution to this is to either cool the brake disks or to start out with disks that are large enough to absorb all the required heat during our trip down the mountain. At this point I hope everyone can identify the different types of energy that our trip down the mountain represents. The top of the mountain represents potential energy, as we progressed down the mountain our potential energy is changed to kinetic energy and as we apply the brakes our kinetic energy is

changed to heat. Here's the formula for total heat.

Total heat  $Q = (\text{mass}) (\text{specific heat}) (\text{Temperature final} - \text{Temperature initial})$  or  
 $Q = M C_p (T_2 - T_1) = \text{Btu} = \text{lbm} (\text{btu} / \text{lbm F}) (F_2 - F_1)$

I found the maximum temperature the heat shield obtains is 3790°F at which point it "ablates". Now whatever definition you use for ablate... wears, vaporizes, melts basically it means it disappears and is gone. Since the heat shield is designed to ablate I must assume that the mass is consumed at that temperature. Where else does the heat go? So we should be able to calculate the mass of the heat shield needed to absorb the heat. BUT WE DON'T KNOW THE SPECIFIC HEAT OF PICA. So this is where the "swag" enters the picture. The  $C_p$  of water is the highest of all common substances at 1. Hydrogen has a  $C_p$  of 3.42 but neither of them would be a viable substance to build a heat shield with, but we have to start somewhere. If we take our equation for total heat and rearrange it and solve for mass it becomes.

$$M = Q / C_p (T_2 - T_1)$$

Since we are flying through space we need to use an absolute temperature scale, ie, one that starts at absolute 0 or the Rankin scale. This scale seamlessly replaces Fahrenheit without the need for a conversion factor. Also I will assume an initial temperature 10°R. To convert to °R we add 460° to our 3790°F and subtract 10°R for our  $T_2 - T_1$  this gives a value of 4240°R we insert the values into the equation and we have.

$$M = 2,000,000,000 / (1 * 4240) \text{ btu} / (\text{btu} / \text{lbm} \cdot \text{°R}) \text{ °R}$$

$$M = 471,698 \text{ lbm or } 236 \text{ tons}$$

Now let's go backwards and assume a mass for the shield and calculate what the specific heat would need to be. The diameter of the shield is 15 ft if I assume the thickness is 2 inches and earlier I pointed to a website that gave me the density of PICA for a value of 0.00975 lb/in<sup>3</sup> doing all the arithmetic you will calculate the weight to be 496.2 lbs or 500 lbs. Now let's calculate the specific heat based on this "SWAG".

$Q = M C_p (T_2 - T_1) \text{ lbm} (\text{btu} / \text{lbm} \cdot \text{oF}) (\text{oF} - \text{oF})$  solving for  $C_p$  the equation becomes

$C_p = Q / M (T_2 - T_1)$  Using our former values and the new value of M we have

$$C_p = 2,000,000,000 / (500 * 4240)$$

$$C_p = 943.39 \text{ or } 3,949,785.252 \text{ J} / \text{Kg} \cdot \text{K} \quad (1 \text{ btu} / \text{lbm} \cdot \text{oF} = 4186.8 \text{ J} / \text{Kg} \cdot \text{K})$$

Since this relationship on all the calculations is strictly linear (no  $X^2$  terms) if you reduce the thickness by half, the specific heat doubles and vice versa. This material should not be called PICA (Phenolic Impregnated Carbon Ablator) it should be termed Amazium or Thermalinfinitium or some other term which expounds the virtues of its property to absorb an inordinate amount of energy without a corresponding rise in temperature relative to other lesser common substances. I know this is not exact but it gives us much better insight as to how the material would have to perform in order to meet the basic requirements that NASA has claimed to achieve. I can't begin to explain how suspect I am that such a high tech material that has been developed in relationship to the space program specifically for applications of "heat control" does not have this basic physical property available everywhere. One paper I looked at showed a stress strain diagram which is typically used for materials of a structural capacity but I have yet to find the properties listed that are heat related other than the temperature to ablate.

So far we have only looked at energy and temperature we have not explored acceleration, force, or power. If we have time and a velocity change of a given mass we can calculate the required force to

decelerate or accelerate it. The rate at which we accelerate or decelerate mass will give us force. Acceleration is the rate of change of velocity over a time period and can be expressed as.

$$a = (v_2 - v_1) / (t_2 - t_1) = (\text{ft/s} - \text{ft/s}) / (\text{s} - \text{s}) = \text{ft/s}^2$$

Referencing the kids science space picture (or my energy calculations to get ft/s) we can insert the following values.

$$a = (1,320 - 19,360) / (254 - 0)$$
$$a = -71.01 \text{ ft/s}^2$$

This is the average deceleration rate and must be constant during this entire time frame to arrive at the final velocity. I am only going to look at averages because an average over a time period will still give us total force and power. For the sake of clarity I am going to drop the negative sign from acceleration, the same force is required to either accelerate or decelerate a given mass from one velocity to another over the same time duration. In order to maintain this constant deceleration the space bus must have an accompanying constant force acting upon it. This relationship is force equals mass times acceleration.

$$F \text{ (lbf)} = MA \text{ ((lb sec}^2\text{)/ft) (ft/s}^2\text{)}$$
$$F = 8130 \times 71.01$$
$$F = 577,311 \text{ pounds force}$$

This is a constant force which must be applied in order to slow the mass down. In order to obtain the total force which is known as impulse we have this relationship. The quantity of impulse is force  $\times$  time interval.

$$J = F (t_2 - t_1)$$
$$J = 577,311 \times 254$$
$$J = 146,636,994 \text{ pounds force total}$$

This force only addresses the kinetic energy aspect we have to repeat the same exercise in order to find the potential energy force on the the space bus. The potential energy will be a true constant force on the mass. The acceleration due to gravity on Mars is 12.17 ft/s<sup>2</sup>

$$F = 8130 \times 12.17$$
$$F = 98,942$$
$$J = 98,942 \times 254$$
$$J = 25,131,293 \text{ pounds force total}$$

The sum of these 2 forces is equal to 171,768,287 lbf. This is the total force needed to slow the space bus down from 13,200 mph to 900 mph

Since we have energy over a time period we can determine power. You need to understand that power and energy are two different concepts. Power is the rate at which you use energy. One horsepower equals 550 foot pounds per second

$$1,553,609,582,448 \text{ ft-lb} / 254 \text{ s} = 6,116,573,159 \text{ ft-lb/s}$$
$$6,116,573,159 \text{ ft-lb/s} / 550 = 11,121,042 \text{ horsepower}$$

Now if we go back and look at our 19 mile long coal train it would be a fair guess that this value would be in the ball park to get it rolling along at 60 mph.

## SECOND EMAIL

My premise is this, look at the entry point that I use for the lander, it is 78 miles above the surface and it is traveling 13K mph it slows down to 900 mph at 7 miles above the surface.

I calculated the total amount of energy that has to be dissipated in order to accomplish this and this total amount of energy has to be either absorbed or some how dissipated by the heat shield.

The next part is the atmosphere, at the surface the atmospheric pressure to put it in lay terms is "two inches of water" what this means is it would be the same pressure you would have to blow on a straw in a small carton of milk in order to blow bubbles. On the earth to duplicate earths atmospheric pressure you would have to blow bubbles 34 FEET into water (or 10 meters) can you even blow bubbles into water at 2 meters?

At 78 miles to 7 miles above the surface the atmosphere is almost negligible, very close to a vacuum IE reference the mars atmospheric profile. I realize the graph is in a log scale and the pressure is in millibars, but using a log scale on the X axis makes the graph a straight line (almost), and using millibars for the unit of pressure plots the graph at a reasonable full scale plot, you need a very small unit of pressure to display the graph properly. Read the X axis in this manner  $10^1 = 10$ ,  $10^0 = 1$ ,  $10^{-1} = 1/10$

So looking at these 2 points I feel there is not enough atmosphere to actually slow the lander down and how in fact does the heat shield actually accomplish this? My calculations are used because I have such exact stated/published data points, and if you check them it is just a whole bunch of arithmetic, but by all means I welcome some one looking at my work, it is majorly hard to proof your own work. I will do anything i can to help you present this information as well, but it absolutely has to be correct and provable, and it is on this part where I have some trepidation, I cannot quite yet calculate a provable refutation. Here is the one piece I need (I think) the formula for a line on a graph is  $y=mx+b$  this is a straight line linear function. The equation for the atmosphere should be something like this  $Y$  (Height) =  $M$  (slope or in this case a log function)  $X$  (pressure) +  $B$  (constant ~ probably 0) then you can solve it the other way around so given a height you can generate a pressure with the function. Now here is why, as the lander approaches the atmosphere pressure increases (from vacuum to near vacuum) and the speed decreases and continues. I am somewhat confident that i can write a fortran program and evaluate what happens over time between these 2 points IE is there enough atmosphere to slow the space bus down from 13K mph to 900 mph? I am enclosing a graph of earths atmosphere on a linear plot for both axis and you can see the pressure profile is curved IE second order/log function, if you plotted the mars profile on the same kind of graph the curve would also look the same/similar. I hope this helps you understand a little more what i am trying to prove and as I said I am more than happy to have this information presented and will assist in anyway that I can.

## The Curiosity Team

A rocket was launched from Cape Canaveral on 26<sup>th</sup> November 2011, which allegedly contained the Curiosity rover destined for Mars. What evidence exists which proves this craft actually went to Mars? One can watch a video of the Curiosity Team sitting behind black desks allegedly monitoring its progress as it enters the Martian atmosphere, deploys a parachute and lands on the surface. At one point in this operation when the parachute is allegedly deployed, one of the team is heard to say “parachute deployed”, followed by the rest of the team clapping their hands and whooping, then on an overhead computer screen an animated graphic appears of a craft with a cartoon parachute popping out. Why can’t the craft transmit images as it is entering Mars’s atmosphere? What proof do we have that there is a craft deploying a parachute?



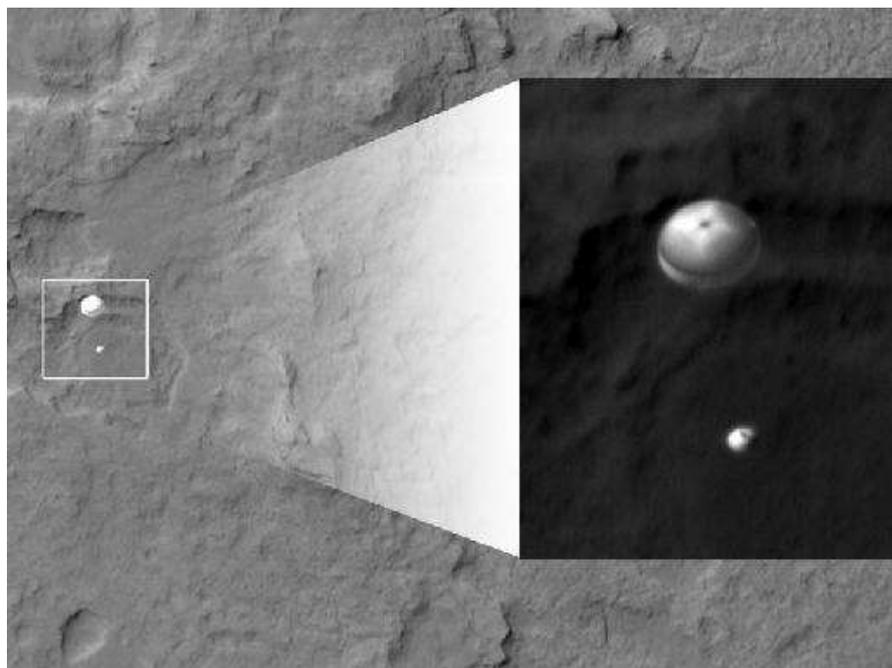
**Figure 73**  
**Curiosity Team Monitoring the Descent to Mars**

What interests me when we see images like this one, is: Why doesn't the camera film from over the shoulders of the operators, so we can see what they are looking at on the screens. In fact, I would ask why do we need any operators at all considering that light takes a full 3 minutes to travel from the Earth to Mars, which means that any adjustment to the craft's programme would take 6 minutes to be confirmed. This is a very different situation to supposed moon missions where a signal to the moon takes just 1.3 seconds; which would make communication with Apollo craft more spontaneous and perhaps require a room full of operators. With a 6 minute feedback loop, the whole landing programme would have to be almost fully automated, so what are all these people actually doing? It is true that adjustments could be made to the landing programme by sending new data based on data being fed back, but would that require all these operators? – Is this just a show to make the whole thing seem more sophisticated and dramatic than it really is?



**Figure 74**  
**Curiosity Landing Video**

A video is available which allegedly shows the entry vehicle travelling down towards the planet. Proponents of this mission would cite this as proof that Curiosity landed on the surface of Mars. I would suggest that it proves nothing. It proves that NASA have released a video which anyone with experience in video effects and editing could produce.



**Figure 75**  
**NASA Image – Curiosity spotted on parachute by Mars Orbiter**

Proof of a landing on Mars?

Following the alleged successful landing of Curiosity on the surface of Mars, NASA's Jet Propulsion Laboratory in Pasadena, California, hosted a briefing for media which I will make comment on.



**Figure 76**  
**Adam Steltzner at the 2012 Landing Briefing**

<http://www.youtube.com/watch?v=FVzfDZIEwaU>

The conference itself is not direct evidence for the hypothesis of this paper, but gives an insight into the team which allegedly engineered the Curiosity rover mission. In particular I would draw attention to Adam Steltzner, who it is claimed, lead the team which devised a new way to land Curiosity rover on Mars. In the Q & A session, Steltzner was asked several simple questions and gave answers which suggest he has little technical knowledge of the mission. The event had more of a feel of a Hollywood movie awards ceremony, than a space mission conference, with very little scientific language or engineering discussion about what happened. If somebody claimed the Curiosity team were in fact actors being asked to improvise the entire briefing, without any prior knowledge of the science or engineering of the project, I would not be surprised if it were true. The Team repeatedly referred to the mission as a movie.

Steltzner was asked,

“Tell us about the landing?”

to which he replied,

“I can’t tell you too much about it. I mean, it looks good, I’m being a little flip. In short it looked extremely clean (*laughs*). We had er, we touched down in conditions that were on the more benign side of our nominal expectation. Our erm, by the way I want to preface everything, this is preliminary data scooped with the sieve in the cacophony of the” ... a colleague then helps him out by feeding him a line “control room”, “control room during the celebration, right. And largely by my good friend Miguel San Martin, who is

somewhere out there, I hope. At any rate erm, very nominal. Remarkably good our navigation error was on the low side of our expectation ...”

A female journalist then asks Steltzner,

“What type of file type and image compression was used to send these very important thumb nails back from Mars”,

after making a joke about her attractiveness, he replies,

“Unfortunately I absolutely cannot”, *laughter*, “If Justin Mackey is in the room or there’s a couple of other people on the team who’d be able to whip that out quickly, that I, I don’t, couldn’t tell you, sorry”.

He is later asked about the landing location, by an audience member who has looked at the published co-ordinates of the landing site, and compared them with the Geography of that part of Mars, and then deduced that the landing site was within 500 metres of the skirt around a mountain, and possibly within striking distance of the phyllosilicate trench.

He replies that he cannot confirm that, and states,

“My estimate, I’m looking for somebody, There is somebody in the audience here that has that in the tip of their noggin, we should have soon that estimate, but I don’t have it to 5 decimal places. We wouldn’t report it to that ...”

He is asked the time that Curiosity touched down, and also, the time the first image came back. Steltzner replies,

“The first of those is 10:39pm, the second of those I don’t have”.

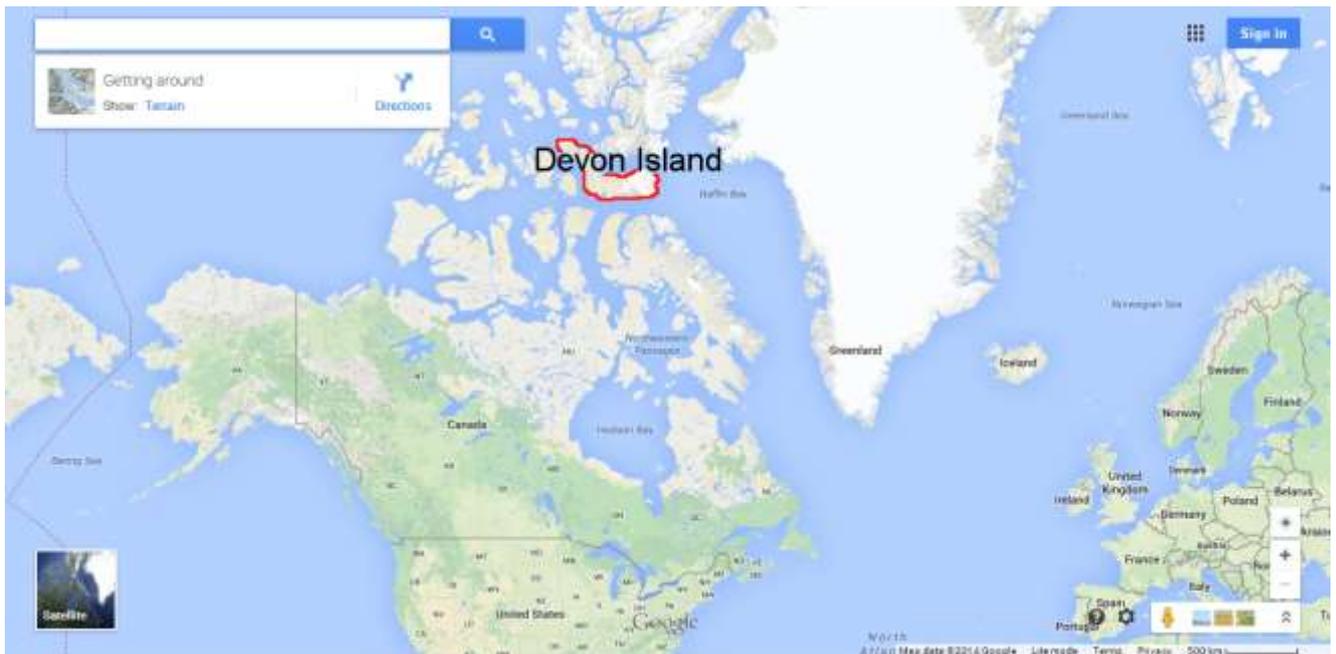
It seems from this briefing that key members of the team do not have knowledge of basic fundamental details of the mission. Steltzner doesn’t know what file format is used for the Curiosity images, nor when the images came back to the Earth. I would expect such experts to have their heads full of facts and figures about the mission, and know every detail about the control, logistics and feedback of the technology. My feeling is that Steltzner probably believes that the rover landed on Mars, and is what one might describe as a “useful idiot”. His ego and lack of genuine knowledge about what would be required to land a rover on Mars is probably the reason why he was picked to lead the team. There may well be plants within the team, lower down the chain, who know what is really going on, whose job is to keep an eye on the figureheads making sure they believe their mission is real, and rooting out anyone who discovers the truth. Therefore those who speak publicly don’t know what is going on, and those who do know what is going on, don’t speak publicly.

## Earth Based Field Testing Sites

Within Mars exploration research, the term “Mars analogue” is often used and is defined as : Mars analogues are defined as locations on Earth where some environmental conditions, geologic features, biological attributes or combinations thereof may approximate in some specific way those thought to be encountered on Mars, either at present or earlier in that planet’s history. Studying such sites leads to new insights into the nature and evolution of Mars, the Earth and life.

The quest to find suitable “mars analogues” has resulted in a number of Mars testing and research sites being located at remote parts of the globe.

### 1.3 9.1 Devon Island Test Site



**Figure 77**  
**Map Showing Location of Devon Island**



**Figure 78**  
**Flashline Mars Arctic Research Station (FMARS)**

The Flashline Mars Arctic research Station (FMARS), is a simulated landed spacecraft and research station, built and operated by the Mars Society. The Mars Society holds competitions for scientists who compete for the prize of living inside this tin can for months at a time. The station is close to an ancient 23km wide impact crater.



**Figure 79**  
**The Haughton Crater on Devon Island**

NASA's Haughton Mars Project (HMP) is part of an international interdisciplinary field research facility located on the world's largest uninhabited island, Devon Island. This project uses the polar desert setting and harsh climate of the Canadian High Arctic to mimic the environmental conditions that crewmembers are likely to encounter on Mars and other planets.

Devon Island's barren terrain, freezing temperatures, isolation, and remoteness offer NASA scientists and personnel a number of unique research opportunities. Other factors, such as the Arctic day and night cycle and restricted logistics and communications capabilities, offer fitting analogues for the challenges that crewmembers will likely face on long-duration space flights.

In addition to ongoing studies that focus on variables such as communications, equipment testing, and vehicular and extra-vehicular operations, Devon Island is also the site of the Exploration program, which aims to develop new technologies, strategies, and operational protocols geared to support the future exploration of the Moon, Mars, and other planets.

The site overlooks the 23km wide Houghton Impact Crater site.

## 1.4 9.2 Hanksville Utah Test Site



**Figure 80**  
**Map Showing Location of Mars Desert Research Station, Utah**



**Figure 81**  
**Mars Desert Research Station, Utah**

This site, like the Devon Island site is owned and run by the Mars Society.

## 1.5 9.3 Spitsbergen Test Site



**Figure 82**  
**Map Showing Location of Spitsbergen**

Another area used for research and testing is Spitsbergen. There is no permanent base and various sites are used on the island on a part time basis. Mars rover components have been tested here, run by Vestfonna Geophysical AS and funded by the Norwegian Space Centre, ESA and NASA. Known as AMASE, Arctic Mars Analog Svalbard Expedition, the site is not under the remit of the Mars Society, which I will discuss briefly later.

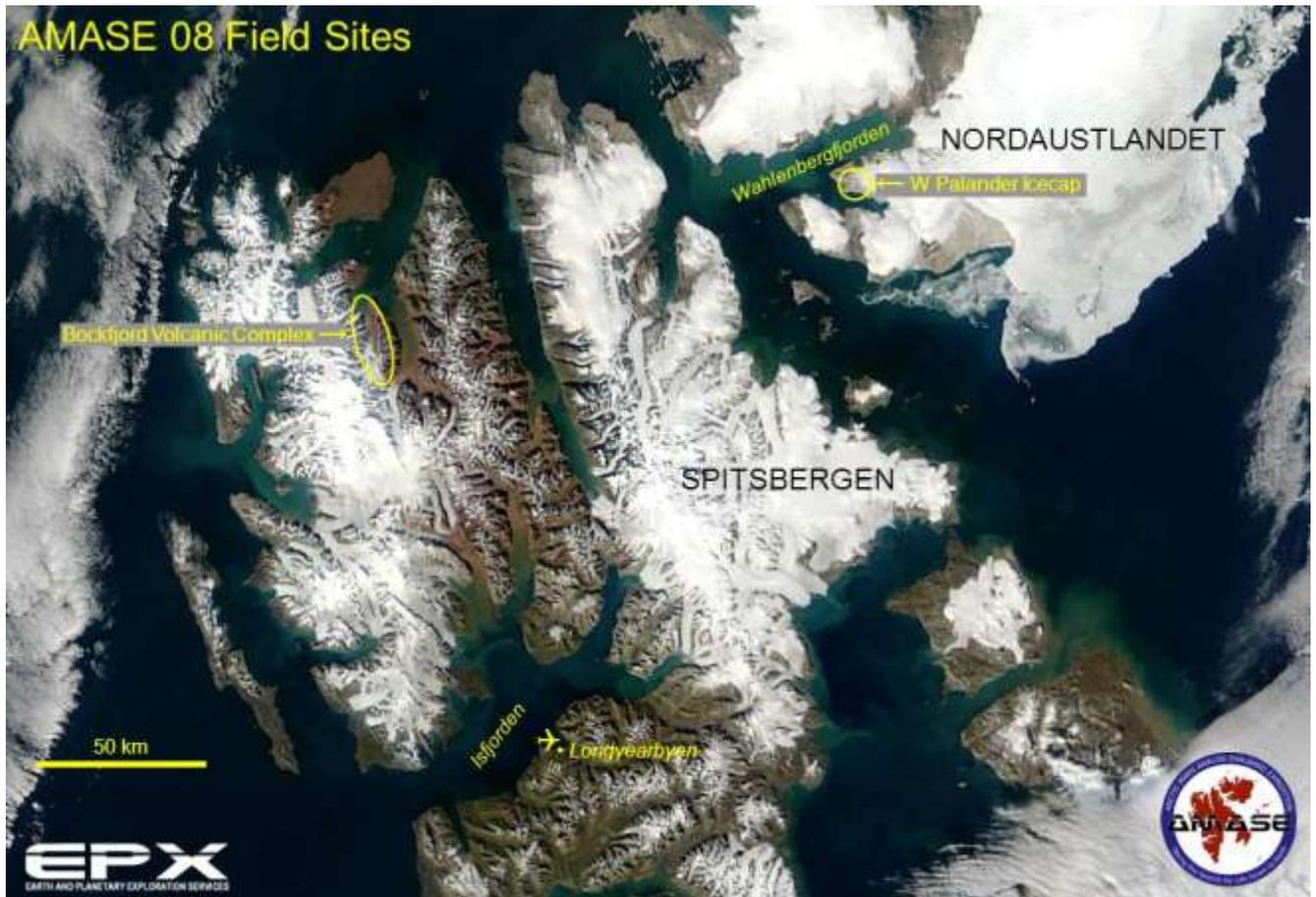
Payload instruments CheMin and SAM onboard NASA's Curiosity rover were deployed here between in 2006 and 2011. Also field deployment of payload instruments onboard ESA's ExoMars rover has been ongoing since 2007.

Only operational in the Arctic summer, in August each year a group of around 20 scientists and engineers travel there to carry out various activities related to space research. Each year the team has different objectives, such as testing components to be used on the Mars rovers or testing space suits.



**Figure 83**  
**Longyearbyen**

The largest town in Spitsbergen is Longyearbyen, with a population of just 2,040.



**Figure 84**  
**AMASE 2008 Field Sites**

The most striking thing about the three Mars analogue test sites described here is just how similar the landscapes are to the images captured by the Mars rovers. There are two ways one might interpret this undeniable fact. Firstly, that the locations were chosen because their landscapes are similar to Mars, or secondly that the rover images are not being taken on Mars and are in fact being taken at the Mars test sites. If our hypothesis is true, it seems likely that the locations used for creating the Mars rover images would be at Mars analogue sites. Another fact we need to consider is the remoteness of the locations of these sites. Most of the sites, especially Devon Island and Spitsbergen would be difficult if not impossible to get to by members of the public. Does this provide the isolation required to carry off this hoax?

## The Mars Society

I have mentioned “The Mars Society” in previous sections, who operate and maintain some of the remote analogue testing sites. It is a not for profit organisation, and is funded “fully by American Organisations”, this presumably includes NASA. It is responsible for building and maintaining the Mars analogue stations, and ostensibly playing a significant role in the research for Mars exploration missions. Questions which arise out of this are as follows: Why does NASA need to prop up a seemingly separate organisation? Why does NASA not conduct the research that the Mars Society is involved with itself? Why does NASA not start its own analogue research wing? Why does this research need to appear to be independent? The Mars Society was founded by Dr Robert Zubrin in 1998, and officially has no owner. Note here that I am talking about research, not detailed product testing. It is necessary for there to be a degree of independence when carrying out performance testing, as explained earlier. I see no practical reason why a separate organisation has been created. The organisation is not a charity nor is it a business, yet it manages to fund very expensive projects in very remote parts of the world costing millions of dollars. Somebody must be giving it huge amounts of money. I would contend that it is possible this organisation is an intelligence agency front. The funding, one would have thought must be coming from government somehow. Creating front organisations such as The Mars Society, would give those running the deception a degree of plausible deniability. It disconnects the government, or the secret part of the government, from the cover up. Is this the real reason why this separate organisation was founded?



Figure 85

### 85 – Dr Robert Zubrin, Founder of the Mars Society

The spokesman and founder of the Mars Society, Dr Robert Zubrin speaks and writes about how manned missions to Mars might be achieved using rocket based propulsion. Zubrin seems to have considered all of the problems associated with transporting human beings to Mars, landing them, then housing them, then at some point returning them to Earth in an REV (Return to Earth Vehicle). He talks about landing “habs”, habitation units, on the surface of Mars where humans can live, and make fuel out of Mars’s atmosphere once they are there. His explanations of how manned Mars missions could be achieved are detailed, with all of the various stages involving different types of spacecraft, he

takes into account things like the motion of Mars relative to the Earth. He suggests means of creating gravity on the way by spinning the craft on a tether. His lectures have the feeling of a pipe dream. A dream which I very much doubt would ever come to fruition. In one of his lectures he makes the following statement,

“The idea that we cannot go to Mars until much more advanced propulsion systems that can get us to Mars in 30 days is erm, is not a valid argument and I believe it’s disingenuous as well”.

This is a very interesting statement and I would ask the question: Does it point to some knowledge he already has about advanced propulsion systems? In a lecture I gave recently, I postulated that the TR3B, a secret spacecraft allegedly developed by the NSA and USAF, which is claimed to use plasma field propulsion could possibly travel to Mars in around 3 weeks. My postulated figure is quite close to the figure stated in Zubrin’s lecture. Does he know more than he is letting on?

Perhaps Zubrin is genuine when he wrestles with the concepts of devising realistic ways of getting people to and from Mars using white world technology, but perhaps by making all the noise he does about all of the problems we need to overcome, he is a good tool to those orchestrating a cover up. Zubrin was a staff engineer at Lockheed Martin for many years, where it is known secret craft and probably secret propulsion systems have been developed. I could not find information on which years Zubrin worked at Lockheed Martin, nor what he actually did there.

## Conclusion

If one considers each piece of evidence in isolation, then the hypothesis would not be a strong one. However, taking into account all of the evidence presented in this document, I would contend the hypothesis is strong.

A way to prove the hypothesis beyond reasonable doubt would be to discover the areas on Earth where the rovers have been taking their photographs and compare the landscape in the NASA images with these locations.

If the hypothesis is true, it does not mean there have been no missions to Mars, or even that Man has not piloted craft to and from Mars. NASA claims to have satellites orbiting Mars, and although outside the scope of this document, we could ask: are the orbiter images really coming from Mars? We might also ask: why did NASA not land any of their rovers at more interesting locations on Mars, such as the “dome” formation or in Cydonia? We have seen clear evidence of image faking in the NASA Apollo images; therefore, should we not be sceptical about images alleged to be taken from much further afield.

There may be secret missions, manned or unmanned powered by undisclosed technology taking place on a regular basis. Deceiving the public by presenting them with fake exploration missions of Mars, could be being done for several reasons. Perhaps a high level decision was made at some point in time, which dictated that the public must not be allowed to see any images taken from the surface of Mars. Perhaps this was done because somebody is trying to conceal what is really there.

The next question which would logically follow would be: What might really be there that some would want kept secret? Below is a list of speculative suggestions, which I put out for further discussion,

### **What might be being hidden on the surface of Mars?**

- Evidence of past advanced civilisations, (human or otherwise)
- Inhabited manmade bases that have already been set up in secret
- Secret spacecraft or spaceports
- The fact that the planet’s makeup might be significantly different to the accepted scientific model
- Alien life exists on Mars

If any of the above were true, is it possible that those in control of this information would prevent it from becoming common knowledge on Earth for reasons of power, control and stability? In order to prevent it from becoming common knowledge, a viable way of keeping it secret would be to present the public with fake exploration programmes. Is this what the Mars rover missions are really all about?

**APPENDIX 1 – SECTIONS REMOVED FROM THE MAIN HYPOTHESIS**



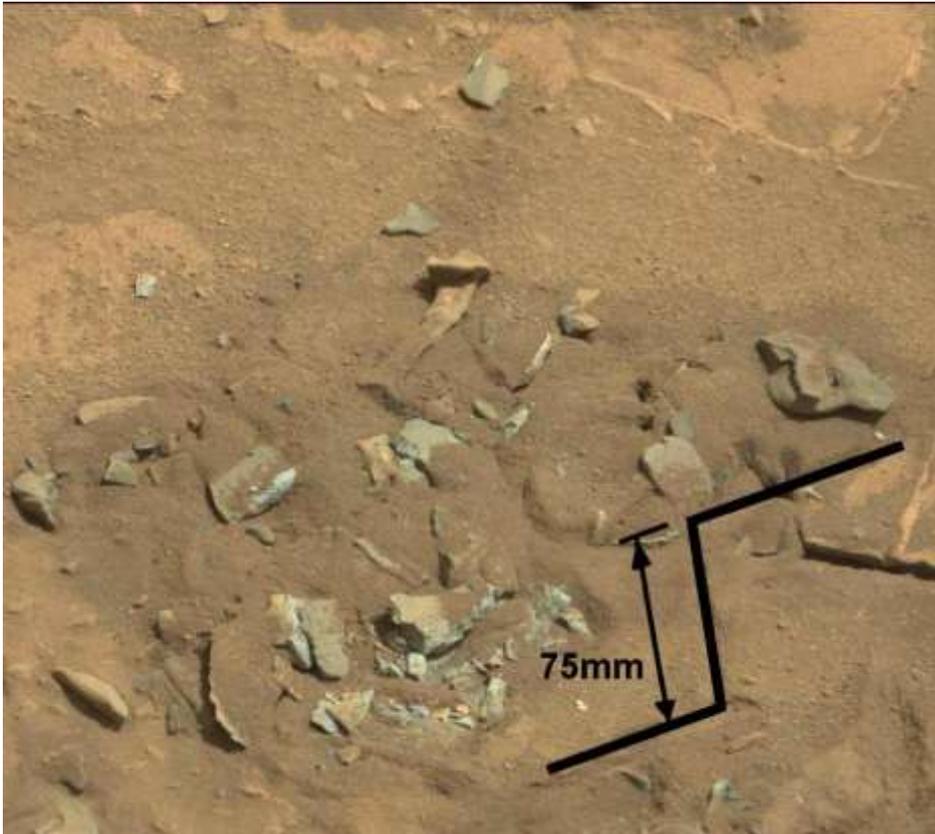
**Figure 86**  
**Curiosity Rover Image 0719MR0030550060402769E01**



**Figure 87**

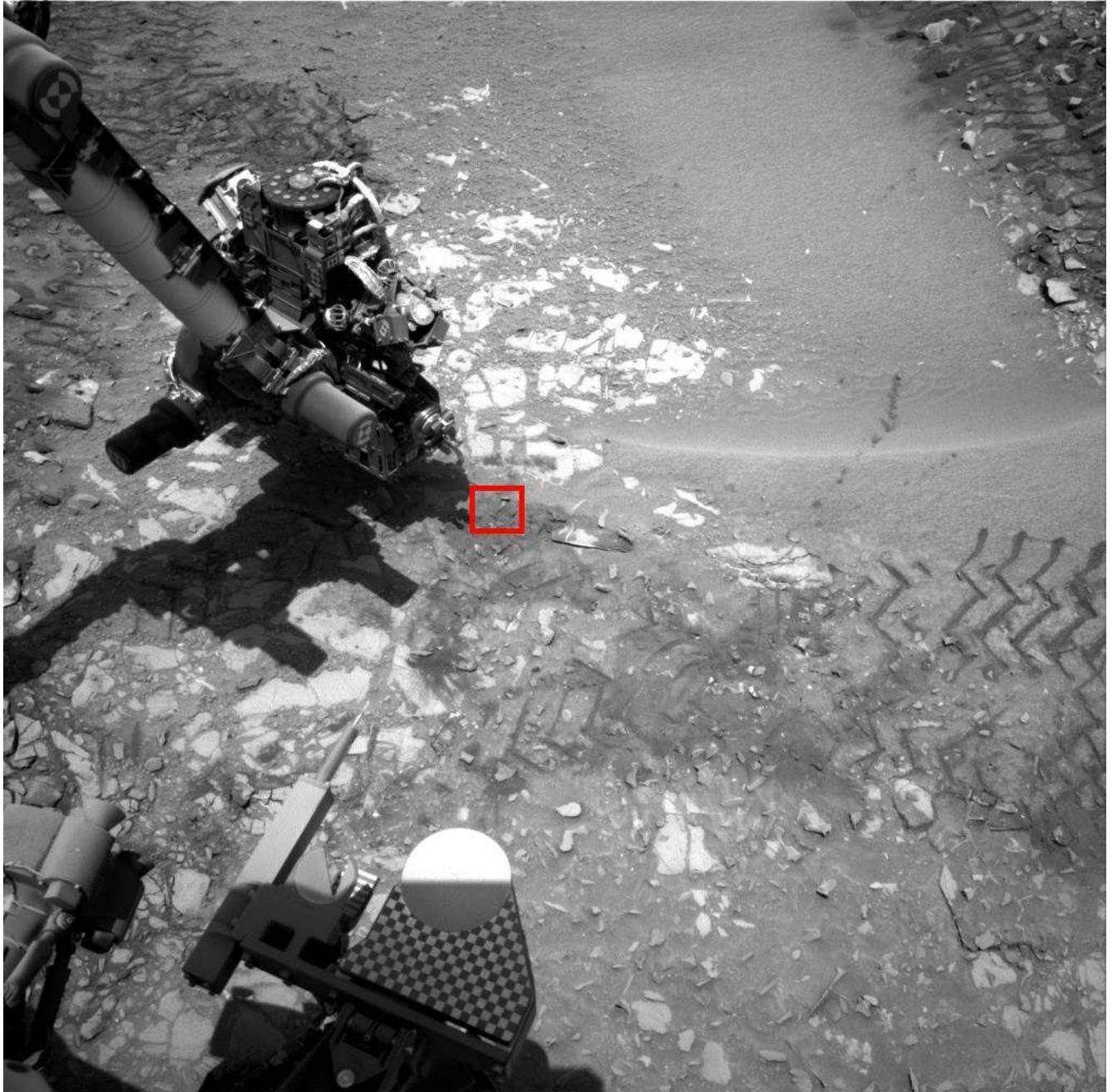
**Curiosity Rover Image 0719MR0030550060402769E01 – Close Up**

The image appears to show a bone, resembling the limb of an animal, or is it just a fragment of rock? It has been possible to determine the size of this object by comparing it to the rover tyre tracks.



**Figure 88**  
**0719MR0030550060402769E01 with tyre track size**

The bone shaped object is in the order of 7cm long. Below is a wider shot showing the object in context with surrounding chips of rocks and the rover arm.



**Figure 89**  
**“bone shaped anomaly” in a wider image**

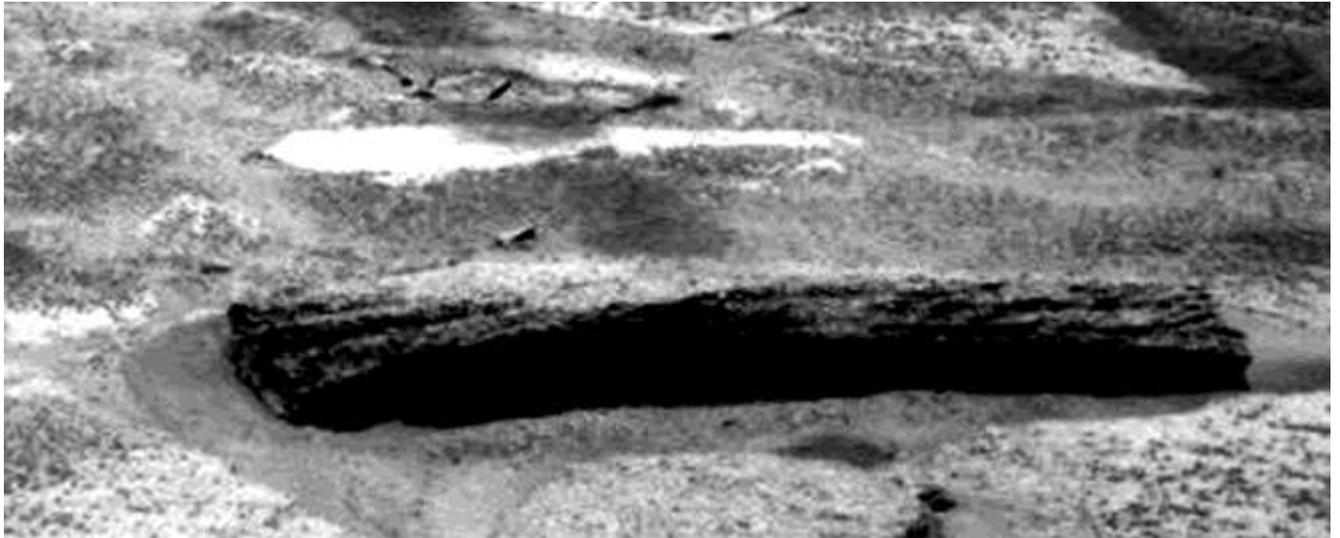


**Figure 90**  
**“bone shaped anomaly” wide image**

There are many other fragments in this image which are clearly not bones, hence it is possible that the fragment in question may also be a rock fragment.



**Figure 91**  
**Opportunity Rover Image 1N138388241EFF2700P1994R0M1**



**Figure 92**  
**Opportunity Rover Image 1N138388241EFF2700P1994R0M1 – Close Up**

This image appears to show a lump of wood.

The image below shows a wider view of this image, in which we see structures (circled) exhibiting the same texture as the “lump of wood”, but with different shape.



**Figure 93**  
**wider image of 1N138388241EFF2700P1994R0M1 showing surrounding geology**

The surface has split into slabs of varying sizes and together with subsidence, has created a pattern of uplifted slabs in undulating terrain.

## **APPENDIX 2 – EMAIL CORRESPONDANCE WITH ROBERT MANNING**

Robert Manning, former MSL chief engineer, Pathfinder Chief Engineer, Mars Exploration rover systems design manager and now parachute chief engineer.

From : "Richard D. Hall" - richard@richplanet.net  
Sent : Wednesday, January 07, 2015 3:51 PM  
To : "Manning, Robert M (6060)" <robert.m.manning@jpl.nasa.gov>

Dear Robert,

I would be grateful if you could watch this TV show which casts a skeptical eye on the Rover Programmes. I would like to know if you can explain away all the evidence in this programme?

[http://www.richplanet.net/starship\\_main.php?ref=192&part=1](http://www.richplanet.net/starship_main.php?ref=192&part=1)

[http://www.richplanet.net/starship\\_main.php?ref=192&part=2](http://www.richplanet.net/starship_main.php?ref=192&part=2)

[http://www.richplanet.net/starship\\_main.php?ref=192&part=3](http://www.richplanet.net/starship_main.php?ref=192&part=3)

[http://www.richplanet.net/starship\\_main.php?ref=192&part=4](http://www.richplanet.net/starship_main.php?ref=192&part=4)

Best Wishes,  
Richard D. Hall

From : "Manning, Robert M (6060)" <robert.m.manning@jpl.nasa.gov>  
Sent : Fri, January 9, 2015 9:31pm  
To : "Richard D. Hall" - <richard@richplanet.net>

Dear Richard,

Thank you for sending me your work. I have been a bit swamped in the last couple of days, so I only had time to watch the first two videos. I have to say at the outside skepticism is a very good thing. As people who are paid via the US taxpayer my team and I have an obligation to answer and explain what it is we do and why (in particular not to lie about it). This form of skepticism happens at all levels. When my friends and I came up with the sky crane landing system (after getting Pathfinder lander/Sojourner rover and the two Mars Exploration rovers to the surface using airbags) we got a lot of skeptical looks and questions even from the NASA headquarters leadership (let alone from my Dad and some of my buds from outside JPL who thought I was daft). Slowly (over years really) we made the technical case why we felt we had to give up the airbags (and legged lander) to land the Curiosity rover in 2012 by lowering it to the ground on ropes. I get very impatient with those people in positions of power who scoff at those who ask rational questions and question everything (especially given that it is a great privilege to do what we do).

I occasionally get letters and email from "goofy" people but you are not in that category. You and you colleagues are very intelligent and (at least so far) the questions you pose are really well thought through. In fact, you all remind me of many of my colleagues! (that is a good thing by the way).

At least for the questions you posed in the first 2 videos, I believe that I can answer most or all of them. I will caveat that by saying that I am short on time in the next couple of weeks (and I am a terribly slow typist) so written answers will not be quick. If you don't mind, would you be able to send me a list of your

technical questions? (In priority order) It would inspire me to be a bit faster and I can do a little at a time.

By the way are you based in Scotland? I thought I saw a picture in your video of the Clyde. (I have relatives in Glasgow and out in Stornoway).

Hope you have a great 2015.

Sincerely (really !! ;)

-Rob

(former MSL chief engineer, Pathfinder Chief Engineer, Mars Exploration rover systems design manager and now silly parachute chief engineer and notorious procrastinator)

PS please use this email .. The one you sent was to the OTHER robert.m.manning in NASA at Cleveland.

From : "Richard D. Hall" - richard@richplanet.net  
Sent : Saturday, January 10, 2015 4:09 AM  
To : "Manning, Robert M (6060)" <robert.m.manning@jpl.nasa.gov>

Dear Robert,

With reference to my previous emails, here is a list of questions I would be very grateful if you could provide answers.

Hardware

- 1) How are/were the batteries kept warm on Spirit and Opportunity?
- 2) Regarding the electrical power distribution system in the Spirit and Opportunity. Can you provide a list of all the devices that the Rovers provide power to and what their power ratings are (nominal and max). Please include everything i.e. the motors on each wheel, the robotics, the cameras, the computer, the radio & comms systems, drills, scientific instruments etc.
- 3) I saw in one video that the Spirit rovers computer crashed. It was stated that the team were just hoping it would come back to life and eventually reboot. Does the rover not have a watchdog electronic circuit which re-boots the computer automatically if it crashes?
- 4) Can you give me the dimensions of the batteries in the spirit, opportunity and curiosity, also how many batteries in each. Can you give me the exact type of battery and the name of the manufacturer, their KWh nominal storage capacity and the voltage rating. Can you give me their estimated life in terms of charge/discharge cycles.
- 5) Spirit and Opportunity, can you give me the specifications of the solar panels in terms of the total surface area and what the solar cell efficiency is. Can you give me the name of the manufacturer of the solar panels.
- 6) Can you provide the calculations based on the intensity of the sunlight on Mars showing the panels can generate 140 watts.
- 7) Can you provide copies of all the test procedures for the spirit, opportunity and curiosity. Please include details of how to set up the tests with any accompanying documentation. Can you include test procedures for the landing equipment as well. This should consist of detailed descriptions of all the tests carried out.
- 8) Can you provide copies of environmental test procedures too, showing

what air pressure, temperature and durations the rovers were tested at, and also what functions were carried out during the environmental testing and soak testing.

9) Can you show me signed off test procedures where you have soak tested the rovers by repeatedly lowering their temperature over several days to minus 80 degrees C, at low pressure.

10) With regards to all the test procedures can you provide the signed off copies so we can see who performed the tests and who witnessed all the tests.

Images

11) Why aren't the close up rock images shown in colour, so that we can see more detail?

12) Has anybody at NASA acknowledged the obvious presence of liquid water on the surface, near the rovers:

<http://mars.nasa.gov/mer/gallery/all/1/f/119/1F138744391EFF2809P1214R0M1.JPG>

<http://mars.nasa.gov/mer/gallery/all/1/p/123/1P139113540EFF2811P2535L7M1.JPG>

13) Has any analysis been done on this "metronome" shaped object

<http://mars.nasa.gov/mer/gallery/all/2/p/1402/2P250825588EFFAW9DP2432R1M1.HTML>

14) Why are the majority of Curiosity images posted still in black and white?

(Isn't this extremely odd, considering most of us have had HD colour cameras in our pockets for the last few years? i.e. tech available to NASA should be able to get photos at least as good as our cell phones in the differing conditions on Mars).

15) Why did University of Arizona "hide" one of the most arresting images from any of the Mars missions - an MRO image from 2008?

[http://web.archive.org/web/20090511150126/http://hirise.lpl.arizona.edu/PSP\\_007230\\_2170](http://web.archive.org/web/20090511150126/http://hirise.lpl.arizona.edu/PSP_007230_2170) (takes a few seconds to load)

[http://hirise.lpl.arizona.edu/PSP\\_007230\\_2170](http://hirise.lpl.arizona.edu/PSP_007230_2170)

16) NASA scientist Richard Hoover and other fossil experts have stated that the following image from Mars is a crinoid fossil, exactly like those found on Earth. Why have NASA not made a formal statement that this life was once on Mars? - Do you think this image could be of an Earth crinoid fossil?

<http://mars.nasa.gov/mer/gallery/all/1/m/034/1M131201538EFF0500P2933M2M1.HTML>

17) This NASA image appears to show growth, possibly lichen on a rock. What is this? Has any analysis been done?

<http://mars.jpl.nasa.gov/mer/gallery/all/2/m/386/2M160631572EFFA2K1P2936M2M1.HTML>

18) Nasa image 0109MR0684022000E1. Mid way down the image on the right hand side shows what looks like the vertebrata of a creature. How do you explain this?

General

19) What is the most compelling single piece of evidence that you can convince me with, that the rovers are actually on Mars?

20) Are the rovers left over night at the "Mars Yard" when they are tested there?

21) What security is in place at the "Mars Yard".

22) Why does NASA use "The Mars Society" to run its Mars Analog sites?

23) Do you believe all the images produced by NASA of the Apollo missions were taken on the Moon? - If so please can you give explanations for the images discussed in the following TV show

[http://www.richplanet.net/starship\\_main.php?ref=145&part=1](http://www.richplanet.net/starship_main.php?ref=145&part=1)

24) How much do you trust NASA and JPL.

25) Would you be prepared to allow me access to any person in JPL & NASA and access to any building at NASA to ask any questions I wanted?

Best Wishes,  
Richard D. Hall

From : "Manning, Robert M (6060)" <robert.m.manning@jpl.nasa.gov>  
Sent : Mon, January 12, 2015 5:54am  
To : "Richard D. Hall" - <richard@richplanet.net>

Hi Richard,

I think I can help answer most of these. (Not at the moment - I have been

Since the first one is easy, I will take a stab right now.

1) How are/were the batteries kept warm on Spirit and Opportunity?

First and foremost, our design was to make sure that we minimized heat leakage to the cold Mars environment. (We used the same design concept on Pathfinder lander and its little Sojourner rover.) Both the batteries (Li Ion) and the electronics were mounted in the warm electronics box (WEB) (which was pretty most of the rover body). To keep the heat inside, the WEB was built a lot like a thermos bottle. The electronics and the batteries were suspended on boron tubes (very low heat transfer rate). (Ever notice how a the innermost glass bottle of a thermos only makes physical contact at the mouth?) We needed to minimize the thermal pathways for heat to escape. Just inside the outer most part of the WEB we filled with small slabs of aerogel insulation. If we were perfectly good at insulating then heating would be a snap, but of course it was not perfect. So we needed to augment the heat loss using heaters. The batteries do have heaters but we try our best not to use them. Instead since the batteries and the electronics share the same WEB volume, we prefer to simply use the heat of the electronics (the computer, the radios etc) as the rover heater.

Ironically, despite the cold of Mars we occasionally found ourselves do TOO good of a job holding on to the heat. On days when the battery was pretty fully charged (we keep the state of charge within a rather narrow range to extend the life go the battery - something like - don't' quote me here - 55%-90% - there are life limiting failure modes to Li ion batteries that cell phone manufacturers don't respect) we might want to pack a full day of activities. But we have to be mindful of not only the batteries state of charge but also the temperature of the WEB. We could find yourself overheating the inside of the rover!

I don't know if you knew this, but we had to design these rovers to sleep a lot. (like your laptop). A typical Sol on Mars might consist of the rover waking up (on

its own) at 10 or 11 am (mars local time) to listen for a new set of "scripts" (we call them sequences) from JPL (sent via the DSN using X-band). The rover gets the script and turns on its radio for a few minutes before going silent while it then does what we asked it to do in the script (talking to earth using the radio would drain the batteries too fast). It might work for 2 hours then take a 2 hour nap then wake again in the late afternoon where it will wait for one of our orbits to fly overhead (7-12 min overflight). The rover then dumps the data it collected as well as a report on its progress to the orbiter which then forwards the data to Earth within the hour. By then the rover puts itself to sleep until 10 or 11 at night. (Yes, its true, our rovers have the work ethic of a 15 yr old mutt).

Does this help?

By the way Curiosity rover is an ENTIRELY different animal. It brings with it its own power supply that is ALSO a source of heat.

2) a list of all the devices ..

Hmmm. I think I might have known this off the top of my head (2003 ish). I need to find out if this is or is not covered by our (sometimes silly) "ITAR" restrictions.

In either case I might be able to give you a rough estimate the next time I have a free moment to type. It is important to remember that the rover runs off of the battery most of the time. Only around high noon will there be enough power from the solar panels to be able to both operate the rover and charge (think "trickle charge") the battery. That is another reason the rover snoozes in the afternoon (Martian siesta). The key in our design is to ensure that the total power (we use amp-hours) used in a Sol is less than the total power we put in the battery in a Sol (1 sol = 24 hr and 39 min). There are certainly many combinations of equipment that can be turned on that will violate this. So we have to be careful. We do have on board fault protection that makes sure that in the event that we goof in our scripts, the rover with notice a low state of charge and will put the rover to sleep autonomously. We try not to test our safety nets on Mars. Embarrassing.

In reading your list below, it really sounds like you are both a sceptic (a good thing) AND that you have already made up your mind. Would that be correct?

I love talking to the public about our work. I am (probably obviously) proud of it. To have played a major role in exploring Mars is my childhood dream come true. I do this in part to provide inspiration in a world often devoid of and often filled with mean-spirited or narrow minded people. I think that you also are looking for inspiration but you have found that the published information and history of space exploration lacking. If your intent is not to listen with an open mind, I would have at the outset no chance to inform your curiosity and legitimate skepticism. What reason do I have to continue typing?

-Rob

The author sent several emails after this email was received from Robert Manning pointing out that my mind is not made up. Robert Manning, to date has not replied to these emails and has not answered the remaining questions.

## **APPENDIX 3 – NASA FIOA REQUEST**

RA000/NMO

May 23, 2016

Mr. Richard D. Hall  
[richard@richplanet.net](mailto:richard@richplanet.net)

Re: FOIA Request 16-JPL-F-00620 (Formerly 16-HQ-F-00614)

Dear Mr. Hall:

Thank you for your Freedom of Information Act (FOIA) dated May 18, 2016 and transferred by NASA Headquarters FOIA Office to the NASA Jet Propulsion Laboratory FOIA Public Liaison Office on May 23, 2016. Your request was assigned Case File Number 16-JPL-F-00620. Your request was for:

test documentation for the following devices,

Opportunity Rover  
Spirit Rover  
Curiosity Rover

In particular I would like to see test procedures which describe how each of the rovers were tested as a whole in a simulated Mars environment over a period of weeks or months. These are sometimes known as soak tests. The intention of the test is to show the devices including all their component parts are fit for purpose in the environment they are designed to operate for a for a period of time which is comparable to the intended life of the technology.

I am requesting detailed test procedures, which should include detailed descriptions of all the test equipment used and the test results. The equipment would include environmental test chambers, monitoring and measuring equipment, test programmes etc. It would include detailed written procedures on how to set up and conduct each tests. After each test has been conducted, a test sheet is normally signed by engineers who carried out the test and independent witnesses who observed the test. I am also requesting the test results sheets.

Please include any failed test result sheets where findings were flagged up and details of any design reviews that were held in relation to failed tests.

NOTE : I am not asking for component testing. I am only interested in tests for the whole rovers.

A requester submitting a request for records must include his/her name and mailing address, a description of the record(s) sought 14-CFR §1206.301, and must address fees or provide justification for a fee waiver see 14 CFR §1206.302 as well as address the fee category in accordance with 14 CFR §1206.507. It is also helpful to provide a telephone number and email address in case the FOIA office needs to contact you regarding your request; however, this information is optional when submitting a written request. If a requester chooses to submit a request online via the NASA FOIA Web site, the required information must be completed. Please respond with your full postal mailing address, fee agreement and fee category so we may proceed in processing your request. Until you respond with this required information, we cannot process your request.

NASA processes all FOIA requests in a multi-track processing system, based upon the date of receipt and the amount of work and time involved in processing the request.

In accordance with 14 CFR § 1206.400, your request has been placed in the complex queue and it will generally take up to 20 working days once a requester has identified specific records they are seeking. Issues concerning processing,

fees, fee status, clarification of request, etc., may be addressed below and/or in a separate letter, if necessary, now and once we begin processing your request.

Based on the information provided in your letter, we are unable to process your request at this time. The FOIA is a record retrieval statute, and based on the information provided in your request, it is unclear what specific records you are requesting. In accordance with the National Aeronautics and Space Administration's (NASA) FOIA regulations (14 CFR §1206.301), the requester must describe the records sought in sufficient detail to enable Agency personnel who are familiar with the subject area of the request to identify and locate the record with a reasonable amount of effort. To the extent possible, the requester should include specific information that may assist a FOIA office in identifying the requested records, such as the date, title or name, author, recipient, subject matter of the record, case number, file designation, or reference number. In general, the requester should include as much detail as possible about the specific records or the types of records sought.

(i) Category I is file-related and includes information such as type of record, title, index citation, subject area, date the record was created, or its originator.

(ii) Category II is event-related and includes the circumstances that resulted in the record being created or the date and circumstances surrounding the event the record covers.

In accordance with 14 CFR § 1206.301, we will not proceed further with your request until we receive further clarification. NASA is not equipped or required to conduct a search for, "...test documentation..." or "...test procedures..." throughout all files (including contract files) that are associated with a host of procurement-related topics and functions in the Agency that will produce a list of responsive records. Again, in accordance with 14 CFR § 1206.301, we will not proceed further with your request until we receive further clarification. Please be advised the FOIA is not intended to reduce government agencies to full-time investigators on behalf of requesters, or to allow requesters to conduct fishing expeditions through agency files.

We are placing you in the 'other use' category for fee purposes. You will be afforded two hours of search and 100 pages of copy/scan without charge once you identify the specific records you are seeking. In accordance with 14 CFR § 1206.301(e), NASA need not comply with a blanket or categorical request (such as "...test documentation...", "...test procedures..." or "all matters relating to" a general subject) where it is not reasonably feasible to determine what record is sought.

In accordance with 14 CFR § 1206.300 (a), 14 CFR § 1206.301 and 14 CFR §1206.302(c), if we do not hear from you within 20 working days (June 21, 2016) from the date of this letter, we will consider that you are no longer interested in this request and we will close our file without further notification. You may submit a new request for the same information; however you will need to provide your mailing address, the clarifying information, fee agreement and fee category information as indicated above.

Please see our FOIA regulations at the following website for more information and specific information relating to describing records sought, fees and requester category:

<http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=97fb51c6e62b667333b7f1645d203f11&rgn=div5&view=text&node=14:5.0.1.1.8&idno=14>

Additionally, as you appear to be in the information gathering stage of a request, you may consider contacting the JPL Library to assist you in your research and help you identify specific records you may be interested in requesting with this or a future FOIA request. Please visit the JPL Library publicly available website, at: <http://beacon.jpl.nasa.gov>. You may also contact the library

reference information desk by phone, at 818-354-4200 or by email, at [library@jpl.nasa.gov](mailto:library@jpl.nasa.gov). Although the JPL Library does not operate under the statutory time requirements like the FOIA, I am certain that they will assist you in a timely manner.

There is an abundance of publicly available information regarding NASA and JPL on NASA ([www.nasa.gov](http://www.nasa.gov)) and JPL ([www.jpl.nasa.gov](http://www.jpl.nasa.gov)) web pages which you may find useful.

Questions regarding this action should be in writing to this center at the address shown on the letterhead. You may also e-mail correspondence to [jpl-foia@nasa.gov](mailto:jpl-foia@nasa.gov) or reach me by telephone at 818-393-6779 and fax at 818-393-3160. Thank you.

Sincerely,

//SIGNED ORIGINAL ATTACHED//

Dennis B. Mahon  
Freedom of Information Act  
Public Liaison Officer

Dennis B. Mahon  
Freedom of Information Act  
Public Liaison Officer,  
Records Manager,  
Privacy Act Manager and  
Audit Liaison Representative  
National Aeronautics and Space Administration  
Jet Propulsion Laboratory  
Suite RA000  
NASA Management Office  
4800 Oak Grove Drive, MS 180-200K  
Pasadena, CA 91109-8001  
<http://www.hq.nasa.gov/office/pao/FOIA/jpl/index.htm>  
Phone: (818) 393-6779  
Fax: (818) 393-3160

## APPENDIX 4 EVIDENCE OF FAKED PHOTOGRAPHY OF PREVIOUS NASA MISSIONS

Much has been written about the moon landings and it is widely contended, although not accepted by governments and scientific institutions, that most if not all images publicised by NASA appearing to be taken from the surface of the moon, were in fact taken on Earth in studios. This is a huge subject, and I will include just a few compelling examples which strongly suggest that the images could not have been taken on the moon.

What you see below are photographs from the Apollo 17 mission. The two images have each been constructed by stitching 4 NASA images together. In the first image we see an astronaut and in the background on the right hand side of the image is the LEM, the lunar excursion module. Once the LEM has landed on the surface, it then has no means of moving on the surface of the Moon, it stays at a fixed location.

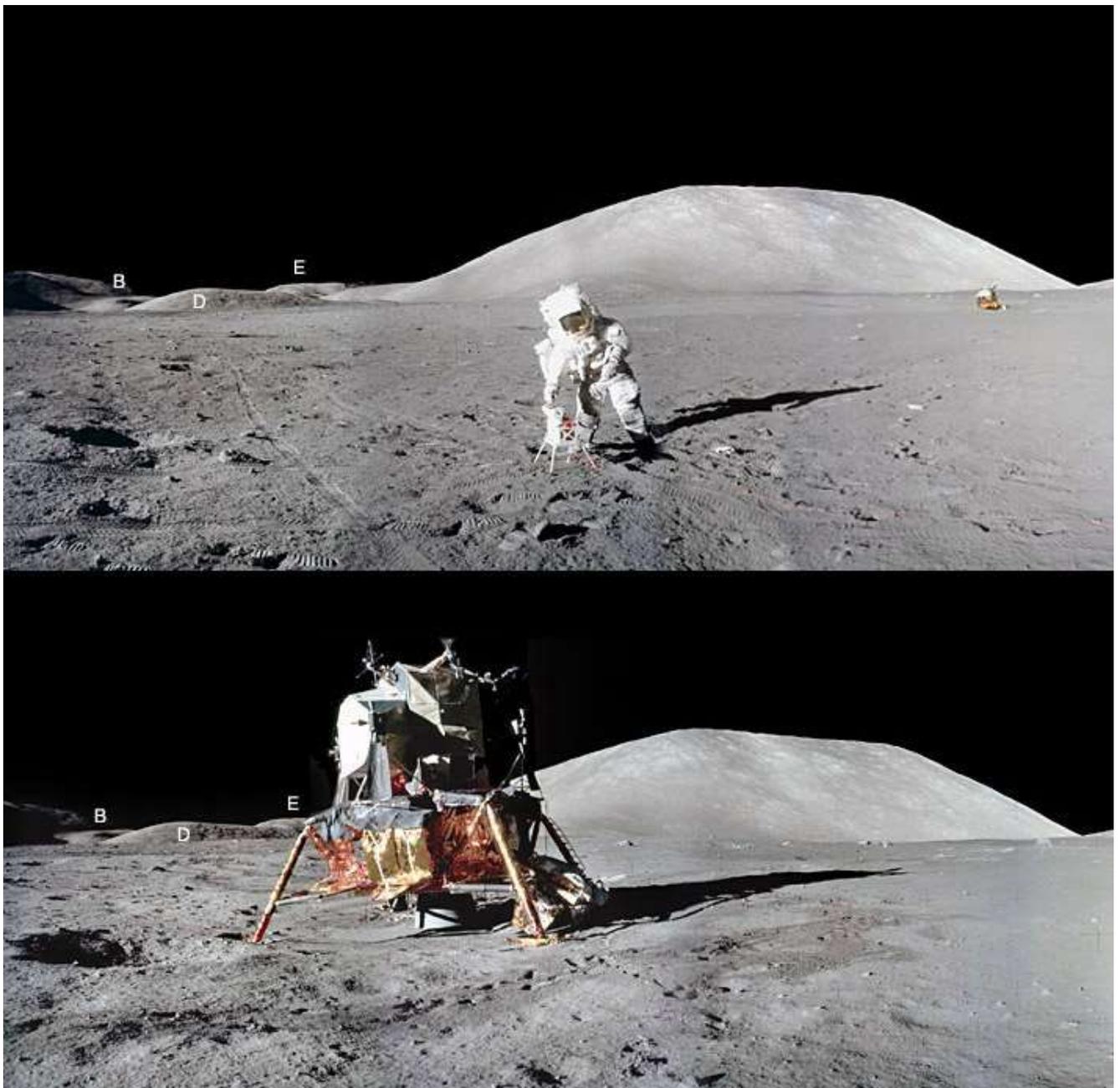


Figure 94

**First Image is a Composite of images from NASA AS17-134-20437 to 20443**  
**Second Image is a Composite of images from NASA AS17-147-22494 to 22521**

When the astronauts leave the moon, they board the top part of the LEM, which then ejects from the lower part leaving it behind on the surface. Therefore it is only possible for the LEM to appear in one position on the surface of the Moon. In the second image we see the LEM in the foreground, but the background is almost identical to the first composite. It is physically impossible for the LEM to move whilst on the surface of the moon. Consider the astronaut and his distance from the LEM. If he was to walk back to the LEM and be photographed near the LEM, would the background not be much less similar than what we see in these two images. It seems from the backgrounds that the LEM and the astronaut images were taken in approximately the same place. This suggests the images may have been taken on a stage set, and the background was being generated using a front projection system, which was widely used by filmmakers at that time.



**Figure 95**  
**NASA Image AS16-117-18841**

This image is a photograph of a family photograph resting on the surface of the Moon allegedly placed there by Apollo 16 astronaut Charlie Duke. We can see that the image is well lit indicating the sun was shining when the image was taken. The surface temperature of the moon is over 100 degrees centigrade during the day. We know that a photograph on Earth if placed in an oven at 100 degrees immediately curls up. Would something very similar not happen if the photograph was placed on the surface of the moon which is over 100 degrees centigrade? Could this suggest the image is not an image of the surface of the moon, and has been taken somewhere much cooler? On the moon there is no air, therefore the photograph might behave differently, but would the conduction of heat from the lunar surface not also cause the photograph to curl up?