

SHAH DAROBA

ALIEN STONE

PREVIEW

Bernard Paul Badham

An Ancient Egyptian Wish

Shahdaroba

‘The future not the past, a love found that lasts.’

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‘A signal emanating from Mars begins a search for its source and links two worlds which are further apart in reality than we first thought.’

Earth Time: 5895 BC

Ta Weben, son of Nakhet Mer, Elder of the Great Council of Pa Mua, lay helpless in the darkness as the mists of death fell over his heavy eyes like a smothering fog. The vile stench of burnt flesh from the high energy plasma wound to his belly filled his nostrils and his limp body began to numb as his precious life blood drained away staining his royal white robe a crimson red.

He was dying, and the last of his kind, on this once beautiful world, now a dead and forsaken planet. An insatiable sorrow tore his heart as he held his wife's blood stained hand, one last kiss he thought. In her death sleep she looked serene and beautiful, her hair hung in wavelets of gold across her soft pale face and her malachite green eyes still had the same sparkle he remembered when they first met in their youth. Now her life force had gone, but soon he would join her in the afterlife and together once more they would run bare foot upon the silky green grass amidst the scented rain valleys of Pa Mua. The loss of his home world welled up within him like burning hot lava fountains and the tears of sorrow ran down his bloodied face, dripping like a sacred burial ointment upon his wife's still rosy cheeks; he kissed her gently on the lips, then tenderly closed her eyes.

Ta Weben defeated and drained of the will to live slumped back heavily against the wall to die. There was one chance he thought, to secure what little remained, one hope to save The Legacy and the distant future of mankind. With a last desperate attempt he reached out his trembling hand to find the butt of the weapon at his side, he wrapped his fingers around the timing trigger and squeezed until the flashing neon of the charging cylinder illuminated his sweat drenched face. Struggling against the excruciating pain of his fatal injury he pulled his knees towards his frail body and rested the barrel of his high energy plasma rifle between his legs. He aimed it at the entrance doorway, trusting the infra red sensor would discharge the gun should he die before his vile and merciless assailant returned.

With the light in his eyes fading and his body as cold as the ice topped purple mountains of *Akhan Major*, he lay in waiting, comforted only by the distant memories of his ancient home world, and so, with a final breath of defiance he flicked off the safety catch and closed his eyes to sleep.

CHAPTER 1

A Strange Encounter

In space, a lonely voice calls, and a sleeping stone awakes.

‘Every thing’s fine here Mission Control we have locked into parking orbit and will be go for touchdown. This is Mars Red Phoenix-1 out.’ The radio crackled to silence as Commander Verdon E. Taylor flicked off the *Live Transmission* toggle switch and stared wide eyed at the beadlets of condensation forming on the Command Module control console, he swivelled gracefully around in his pilot’s seat to his second in command. ‘Bomber, check the Life Support Systems, my instrument panel is as wet as a baby’s diaper.’

Co-pilot Martin *Bomber* Davies scanned his keen eyes across the multitude of digital readouts on his LSS panel.

‘Humidity *is* rising Commander, it’s now at twenty five percent!’ He said screwing his face in curiosity.

‘Strange? It was okay before we parked into orbit.’ Taylor commented while switching the Magnetic Plasma Engine over to LTC, Low Temperature Containment, idling mode. ‘Switch the de-humidifier over to manual, and set it at nominal.’

‘Ay sir, switching to ten percent.’

Commander Verdon E. Taylor grabbed a disposable from the tissue dispenser and wiped the perspiration from his forehead before slipping it into the Zero G Waste shoot. ‘It seems to be getting a little warm in here?’ He said rubbing his fingers around the neck of his red flight suit.

‘All other life support parameters are nominal Commander, only the humidity is out. We will need to do a diagnostic.’ Bomber chirped.

‘No time for that now, log it for later.’

‘Aye, aye, sir.’ Bomber Davis reached for his clipboard and recorded it as number twenty two on his *to do* list. He used ‘good old fashion

pencil and paper,' as he was apt to say and do, his personal palm top computer was still wrapped up in his flight pack.

'It's just nerves commander, mine are on edge too. I feel as clammy as a bug in a sweat box.'

Verdon gave a wry smile, Bomber his long time friend and fellow astronaut was a reassuring presence at his side.

'Natalya, what's the exact ETA for horizon of Valles Marineris Gamma?' Taylor asked, with his eyes screwed tight by the responsibility of his position, he checked the main engine plasma temperature as he waited for Natalya Nikolayev, the Flight Navigations Officer and Electronics Engineer to respond. With her usual efficiency Natalya leaned forward and adjusted the cross-hair display on her navigations computer, which displayed a Mars Orbiter Laser Altimeter map of the Martian surface, she adjusted the fine tuning until the cross hairs were directly placed over the northern high plains of the east end of Mars' great river valley.

'Valles Marineris will not be in daylight at the eastern horizon for another six point five zero hours sir, at that time we will be go for descent.'

'Great, that gives us time for a little sight seeing before nailing *that* sucker.' Happy that the Magnetic Plasma Containment Cells were now running at their idling minimum of one thousand degrees, he turned to his Flight Engineer, Yuri Ivanovich Malenchenko.

'Yuri, ignite port attitude thrusters and let's get this baby round.' This would be the first opportunity for the crew of Mars Red Phoenix-1 to get a close look at the Martian surface, on account they had entered into parking orbit with the Command Module viewing bay doors shut and the mother ship belly down and backside in at full braking thrust.

'That's a loud aye, commander!' Yuri said excited.

On board Mars Red Phoenix making up a full complement of six astronauts were the civilian scientists, Dr Miranda S. Collins, an

Exobiologist and the Geologist and Chemical Engineer, Dr Stanley Creighton.

The Mars Red Phoenix was a space ship in a class of its own and the first of its kind of a new design of spacecraft, a compact and powerful VASMIR: a Variable Specific Magneto Plasma Rocket built by NASA with hardware contributions from the main space agencies, the revolutionary plasma propulsion system reduced the flight time to Mars from nine months to a mere twenty days at nominal flight speed. The Magneto Plasma engine was developed at the Johnson Space Centre under Dr Franklin Chang-Diaz and used electrically produced high energy radio waves to ionise hydrogen to super hot temperatures of millions of degrees. At the aft of Mars Red Phoenix were the three plasma thrusters, the high energy plasma mixture of charged hydrogen electrons and protons was contained and ejected using three SMC's, Superconducting Magnetic Cells. Magnetic fields were used for containment as no other substance known to man could withstand such extremely high temperatures. The high wattage of electrical power needed to power the Magnetic Containment Cells came from a Compact Nuclear Core, the CNC, which was safely housed aft of the main body of the mother ship well away from the crew's living quarters.

The high powered variable thrust of the plasma engine allowed the crew of Mars Red Phoenix-1 to enter directly into an equatorial parking orbit around Mars without going into the usual time consuming aero braking manoeuvre, where high entry speed dictates an elliptical orbit before braking using Mars' atmosphere to enter a less energetic circular orbit. They were now soaring majestically in an equatorial parking orbit at an altitude of almost three hundred kilometres above the Martian surface and at a speed of twelve point nine thousand kilometres an hour giving them an orbital time of one point eight hours.

The main body of the mother ship, housed the Storage Bay, aft were the Hydrogen Storage Tanks, and forward were two Mars Rovers ready for parachute deployment. Between the Storage Bay and the Command Module came the AGM, the Artificial Gravity Module, which consisted of two spinning arms at the ends of which were the AG Pods, the living quarters of the crew during their long flight to Mars, these AGP arms rotated like a giant fair ground wheel around the axis of the mother ship creating the necessary g-fields for exercise, rest and relaxation. During their long journey the rotational speed of the AG Pods was gradually reduced to simulate a reduction in gravity from Earth's nine point eight g's to Mars' three point eight, this was done in order to acclimatise the crew to the low Martian gravity.

Attached to the rotating arms of the AGM and above the AG Pods, were two landing craft, Mars Lander Red Phoenix 1 and 2. These were revolutionary delta-winged, orbit to surface manned Landers fitted with powerful Compact Magneto Plasma engines. After the AGM module, which remained locked during Mars orbit insertion, came the Command Module, this housed the Flight Control Cockpit and the main Life Support and Guidance Systems. The Command Module was home for the six man crew during all flight operations. Adjacent and aft of the cockpit cabin was housed the Mars Observation Room, fitted with a glass-diamond Observation Dome.

Like the Landers, Mars Red Phoenix was unique as an interplanetary space ship in that it was fitted with delta wings and tail plane, essential for low flight orbit dipping over Mars to disengage the landing craft, to deploy the Mars Rovers and for the return journey re-entry through Earth's atmosphere. She had the sleek appearance of a hybrid cross between a conventional space rocket and a shuttle. When the AGP module was locked in place with its two Landers, Mars Red Phoenix, enamelled in red with its gold insignia markings took on the appearance of a majestic mother hawk ready to drop its young from its outstretched talons

It had been decided well before the launch date to give a British astronaut command of the Mars mission, a diplomatic move on behalf of the covert *Federation of Mars Exploration* committee, now ironically nicknamed *Fame* for the sake of avoiding protracted arguments between the Russians and the Americans, it was a unanimous decision made easy by Verdon E. Taylor's exemplary qualifications and experience, and in any case, and perhaps most importantly of all, it was a British amateur radio astronomer, Dr Clive Jenkins, who first discovered the alien transmissions from Mars just over two years ago.

Since *their* first discovery the Extremely High Frequency radio signals had been tracked by ESA's Mars Express and NASA's Mars Reconnaissance Orbiters as emanating from the inhospitable uplands between Vallis Marineris and Chryse Planitia. Having trained the high definition cameras aboard NASA's Reconnaissance Orbiter, which can resolve objects down to the size of a kitchen table, they had failed to capture any worthwhile images of what was sending the alien transmissions or to identify the exact transmission coordinates due to the local interference of a spectrum of bizarre background radiation emanating from the general area of the plateau.

The strange thing, Dr Clive Jenkins pointed out to the NASA scientists, was that because of the extremely high frequency of the radio signals, over three hundred Giga Hertz, they were very difficult to detect using conventional radio tuners, it just so happened that this was the radio wave band that the doctor was deliberately investigating. His self built radio telescope had been purposely designed and constructed to search the depths of space for such signals. The presence of these strange emissions from Mars wasn't the only thing which astounded the NASA scientists, the signals were highly directional, and were only present when Mars' Valles Marineris northern uplands region was pointing directly Earthward.

It had taken the last two years for the world players in space exploration, the Americans at NASA, the Europeans at ESA, and the

Russians at RSA, to mass together the resources to mount a manned mission to Mars under the joint name of EMSA, the Exploration of Mars Space Agency. This was a joint exercise under the auspices of the covert federation *Fame* to first build and equip the EMSA Space Station in order to assemble the mother ship Mars Red Phoenix-1. For the sake of public interest the *Fame Committee* decided, the mission had to be undertaken covertly.

As the mother ship effortlessly rolled over her axis in the weightlessness of space like a barnacled whale on the ocean, Bomber unlocked the Mars Observation Room hatch. In excited anticipation the crew unbuckled in the zero gravity environment of the flight cabin and in turn drifted weightlessly through the adjoining hatch and poised themselves expectantly beneath the glass-diamond Observation Dome as Verdon E. Taylor activated the dome's leaf doors.

Immediately the fiery glow from the Martian surface burst through into the dim cabin interior illuminating the look of awe and wonder on the faces of the crew. Below them lay a spectacular sight of the imposing dark basaltic cratered uplands of Syrtis Major, the first of Mars' features to be identified by the seventeenth century astronomer Christian Huygens, and south lay the immense, four hundred kilometre diameter, double ringed Huygens impact crater. Barely in view lay the north rim of the vast, one thousand seven hundred kilometre impact basin of Hellas Planitia, which stood over eight kilometres below the surrounding cratered uplands, covered by wisps of fine white clouds of frozen carbon dioxide it looked inviting, begging exploration of its mysterious interior. To the north east of Syrtis Major lay the yellow-orange flat plains of another impact basin, Isidis Planitia. The geologist, Dr Stanley Creighton with particular interest in the features of these impact craters, reached for one of the high definitions cameras mounted into the viewing dome and immediately directed the camera towards the low basin of Hellas Planitia.

‘I believe Dr Creighton, that Hellas Planitia is your personal nemesis.’ Verdon commented seeing his look of intrigue. Creighton answered with a knowing smile and without taking his eyes from the camera eyepiece he zoomed in to the wind swept layered surface of the vast basin before explaining his personal vexations with Mars’ strange topography.

‘You are right Commander, Hellas is an enigma, standard theory suggests it was caused by the impact of a giant, one and a half thousand kilometre diameter asteroid, almost four thousand million years ago, but the thing about Hellas which puzzles me is the absence of the usual crater ring, most planetary geologists argue that this is because it has long since eroded, but I’m not so sure, I believe that somehow Hellas Planitia, is the key to Mars’ strange topography.’

Commander Verdon shrugged his shoulders.

‘Well my dear friend, you are the expert, who am I to argue.’ He said bowing to Dr Creighton’s superior knowledge of the Martian topography. Verdon returned his attention to the awe inspiring sight of the cratered Martian surface. ‘Perhaps on this trip, you may be able to finally put your nemesis to rest.’

‘I surely hope so Commander.’ He sighed.

The astronauts took it in turn to gaze through the camera mounted in the dome, enthusiastically snapping detailed images which were automatically encoded by the communications computer and transmitted back to Earth. As the red globe of Mars rolled gently beneath them like a carousel of delights, the enthused astronauts engaged themselves in animated conversation, each one contributing from their own field of expertise. They thought the wonderful sights afforded by the unique Martian topographic features had already made their long and dangerous journey a worthwhile and memorable one.

Mars Red Phoenix’s orbit over the planet’s equator, with the added eastward rotational movement of the planet, ensured that the mother ship covered ten degrees of its spectacular surface every three minutes.

The crew looked on with interest as the eastern horizon brought new marvels to wonder at. At last, and one of the sights they had all been waiting for came into view on the north eastern horizon, the white topped summit of Elysium Mons, sitting proud and prominent in the hazy pink atmosphere of Mars amidst the triple volcano system of Elysium Planitia. This massive extinct volcano rose nine kilometres high, its caldera summit was laced white with ground ice and frozen carbon dioxide high altitude clouds. The gentle curve of its lava flow slopes spread outwards as far south as its smaller neighbouring volcano Albo Tholus. Within minutes it lazily swept below sitting regally within the surrounding flat orange plains of Elysium Planitia. Dr Miranda S. Collins pointed the camera directly into its collapsed caldera and observed it was pitted with numerous impact craters suggesting it had been some time since it was last active.

As an Exobiologist Miranda was well aware that volcanic activity on Mars was life's only hope, the topography of the planet provided evidence that in its remote and geologically recent past it had been periodically active, at these times the heat generated by the volcanic eruptions melted the subsurface water ice and caused glacial like mud flows and torrential rivers to run down ancient river beds and gulleys. Recent images from ESA's Mars Express, and NASA Mars Global Surveyor and Reconnaissance Orbiter had proved that Mars was still active, if only in a minor way. Liquid water was copious on planet Earth because of its ambient temperatures, but with an average surface temperature of minus fifty five degrees Celsius, liquid water was a rare commodity on this distant and remote planet. In her heart Miranda hoped to find evidence of life on Mars, even if only in its simplest form, bacteria and primitive algae.

'It's strange,' she said glancing across at the others, 'all my life I have been fascinated with the prospect of finding life on Mars, hoping above all that even the scant traces of primordial life may exist somewhere down there amongst the ice and slush, and now for the last eighteen

months I have been faced with the shock and incongruity that intelligent alien life may exist on Mars. It's as if deep down inside, I hope we are wrong, and that the signals are just some unknown natural phenomenon, so that we can get back to exploring Mars in the cosy knowledge that we are still the superior life form in the universe. I would feel more comfortable with that, discovering bacteria on Mars I can cope with, but sentient beings?' The others remained silent, surprised by her remarks, but on reflection, understood her reasons.

'I know what you mean doctor,' Commander Verdon Taylor chirped to break the uncomfortable silence. 'I have the same mixed emotions, but that's the very reason we are here, if there is a remote chance that we are not alone in this universe, its better we find them, before they us.'

With Verdon's sobering thought the crew immediately returned to their observations of the incredible Martian surface, it was not long before Martin *Bomber* Davies, hanging uncomfortable with the crew's mood, infused a little humour and with childlike playfulness propelled himself across the cabin to float weightless at Miranda's side under the illuminated dome. Miranda, anchored to the wall by a waist strap, ignored his presence as she studied the dark parallel fractures of Cerberus Fossae. A glazed stare of deep thought hung in her eyes as she wondered about the origins of the name. The fissures in the light reddish dust plains of Elysium Planitia which cut through the dark basalt beneath were named by the nineteenth astronomer Schiaparelli after the ferocious three headed beast that guarded the entrance to Hades in Greek Mythology.

'I too Miranda have pondered the question about alien life forms for many a night while trying to get to sleep, the possibility of sentient alien life intrigues me, but in the end I drift off with one happy thought.'

Miranda expectant that Bomber was about to impart some words of wisdom pricked her ears and swivelled to face him, she gave her full attention. Bomber paused before replying, milking the moment.

‘Go on,’ Miranda said impatiently.

‘The one happy thought which never fails to send me to sleep is always the same: *I wonder what their women are like?*’

‘Bomber, you’re incorrigible,’ she said sending him flying like a rag doll. The crew laughed, knowing that Miranda had once again been lured by his innate sense of humour.

As joviality subsided to dutiful silence the mother ship headed for the dark side of Mars, below them lay the bright and dusty volcanic desert region of Amazonis Planitia, the desert plains of which were crossed by fresh lava flows, signifying a relatively young surface in Mars’ geological history and knowing what was about to come next over the eastern horizon, the crew huddled together excitedly on the aft side of the viewing dome, each jostling for position. The keen young eyes of the Russian Natalya Nikolayev spotted their quarry.

‘There!’ She said pointing to a faint white wisp of a feature nestled in the shimmering dust laden pink Martian atmosphere. ‘Olympus Mons!’ The animated crew strained their eyes in the direction Natalya pointed, just north of the equator, sat in the ink black Martian night and compounded by the refraction effects of the atmosphere, the ice frosted peak of the enormous Tharsis volcano was just visible, but before it set into the night they were afforded a dramatic view of one of Mars’ most prominent features. Almost three times as high as Mount Everest and catching the last rays of the sun, Olympus Mons rose from Tharsis Planitia like a defiant giant refusing to sleep.

Once on the dark side of Mars the crew returned to the flight cockpit to resume their respective duties. Commander Verdon E. Taylor transmitted a coded update on the mission status to EMSA, Natalya sat at her navigation console and computed the necessary orbital corrections in order to perfectly align Mars Red Phoenix for the upcoming landing, while Flight Engineer Yuri Ivanovich Nikolayev started a full diagnostic of the ship’s main engines, tuning the systems of the Magnetic Plasma Containment Cells to peak performance. The

two on board scientists, Miranda S. Collins and Dr Stanley Creighton, very much aware of the unpredictability and strange nature of this mission, discussed the priorities for sampling the Martian soil as Co-pilot Martin *Bomber* Davies, worked his way through his *to do* list while simultaneously running over in his mind the tricky and dangerous landing manoeuvres which were now only hours away.

Predictably it was Bomber Davies who first broke the pensive mood of the crew. He swivelled around in his co-pilot's seat and leaned back casually with his hands clasped at the back of his head.

'It's really strange not having the live cameras, it must frustrate the hell out of the controllers back at EMSA, not being able to watch our every move.' A short silence followed his interruptive comments. Yuri chipped in first.

'I agree with you there British, I always imagined this would be one of the most publicised events in human history.'

'The hard part about this mission,' Dr Creighton added, 'is that not even our own families and friends know we are up here.'

'Yes, that was difficult, every time I talked to my parents on the phone, I just wanted to blurt everything out, it was so frustrating,' said Natalya.

'EMSA made the training camp like a prison, the intensive training and isolation for eighteen months with only one monitored phone call a week, got to me a bit in the end.'

'That's because, like me Miranda, you're a civilian scientist,' commented Dr Creighton. .

'What's your opinion Commander, should EMSA and our respective governments have made this operation covert?' Miranda asked, drawing Commander Verdon E. Taylor reluctantly into the conversation. Verdon swivelled around in his pilot seat; nonchalantly placed his clipboard on his lap and responded with a sigh.

'Look, all of you, the rights and wrongs of that decision, do not concern me, all I know is that we have a job to do, and since we don't

know what we are dealing with, what really concerns me is that this mission could cost one or all of our lives, it's the not knowing what we are up against which bothers me.'

'That's understandable Commander, but you must have a personal opinion?'

'Well Bomber, since you asked,' Verdon said leaning back with his hands behind his head mimicking Bomber's relaxed posture. I personally believe it was a wrong decision, if there *is* alien life out here, then the public have a right to know.'

'You surprise me Commander; I thought all you military types were not allowed to have an opinion.' Dr Creighton said tongue in cheek. Miranda quickly came to Verdon's defence.

'You're right Commander; this mission should have been made public. It goads me when governments hide under the all excusing banner; *it is not in the public interest.*'

'Come on Miranda,' said Bomber with a hint of sarcasm in his voice, 'you've been through the training, heard all the lectures, the public are not all of sound mind, there are some crazy religious nutters out there, and the very idea of little green men would cause riots. It's a difficult pill to swallow knowing that mankind does not have sole dominion in the universe.' Having discussed what was on everyone's mind, the crew returned to their duties. Verdon was only too aware that the covert nature of the mission was the root of the crew's frustration, he too wished that the Mars landing, like the Apollo 11 Moon mission, was being transmitted live back to Earth, it would be one of mankind's greatest achievements.

In a little over an hour orbiting the dark side of the planet, the crew of Mars Red Phoenix returned to the MOR with baited breath to witness their first Martian sunrise. Like a radiant fireball the sun's rays burst through the pink cloud layered atmosphere over the great arc of the Martian surface. The crew shielded their eyes as the sun's shimmering golden disk encircled by concentric blue refraction rings

rose majestically through Mars' rarefied atmosphere flaring magenta and turquoise rays of light into the blackness of empty space.

'Wow!' Bomber sighed, 'Now *that* was worth waiting for.' Miranda squeezed a little closer to Verdon and strained over his shoulders to get a better view. Her physical proximity mixed with the sweet perfumed scent of her dark auburn hair and her fresh womanly body odour caught him off guard, instinctively he moved aside to allow her room. Miranda acknowledged his gentlemanly behaviour with a teasing smile and lifted her head to the camera, she adjusted its focus for a perfect shot and as she took in the wonderful display, she understood why a number of Apollo astronauts, moved by their experiences in space, turned to God.

Over the last few months the relationship between Verdon and Miranda had developed into one of friendship, which was understandable, he felt at ease with all of the crew and knew them well, after all, as Commander of the mission that was his job. Verdon reminded himself of the necessary dutiful distance he had to maintain in his position, for the first time Miranda had broken through his self imposed barrier of command. Reluctantly he pulled his gaze away from the awe inspiring view of the sun blazed summit of Olympus Mons and snatched a look at her. Her thick wavy hair straddled her long slender neck revealing the tanned complexion of her soft skin, for the first time, he noticed a beauty spot erotically placed at the tender kissing zone, just below her left ear. As he contemplated her vulnerable beauty, a sparkle of light flashed in the watery cornea of her deep blue eyes and tiny beadlets of perspiration ran down her rosy cheeks. Her ruby lips were full and in profile and a hint of a childlike smile hung in the corner of her seductive mouth. He traced his eyes down her feminine outline, her body was firm and athletic and the fullness of her breasts and womanly curves accentuated by her body hugging flight suit added to his pleasure of her, but feeling a pang of

voyeuristic guilt he returned his attention back to the Martian sunrise, hoping that none of the crew had noticed his indulgence.

‘This alone was worth the trip,’ Verdon said in an authoritative tone to restore his composure. Miranda turned to him and looked him straight in the eyes.

‘Nothing prepares you for this,’ she replied in a seductive soft whisper, with her hair sparkling golden in the back light. He hung on to her every word entrapped by her ruby lips and like Cupid’s erotic arrow a sensual shiver shot through his tingling body, like a warrior without amour he was struck, immobilised by the fatal love arrow. He opened his mouth, grappling for the words to speak, but it was too late, her attention had already gone.

The sun cleared the pink dust laden Martian atmosphere and they were treated to another awe inspiring view, the rise of a solitary blue star, Mother Earth. Miranda was moved by the sight of Earth rise and immediately grabbed the camera again and snapped away furiously, catching every stage of its transient passage.

Within minutes Mars Red Phoenix was orbiting over the old cratered uplands of Arabia Terra and Syrtis Major, directly underneath was Pollack Crater, at the base of which lay the ‘White Rock,’ a striated plateau-like mass resting on the crater floor. Dr Creighton zoomed in using the high definition camera.

‘Its definitely not white,’ he said emphatically, ‘more of a light reddish brown.’

‘Why is it called White Rock, Dr Creighton, if it’s not white at all?’ Natalya asked before taking a look for herself.

‘It’s white appearance is an optical illusion, the surrounding terrain is very dark, therefore when it was first photographed by Mariner-9, the camera overexposed that region and it therefore appeared as a white mass. It had the NASA scientists mystified for sometime.’

On the second orbit of Mars, Commander Verdon E. Taylor aware that it was fast approaching time for disengagement of the Landers,

allowed the crew a little more observation time before instructing them to make their way back through the body of the mothers ship to the communal area of AGM Pod-1, for a pre-landing pep talk. While Mars Red Phoenix orbited the dark side of Mars, with the AGM still locked in Zero-G position, the crew floated along the ambient lit starboard AGM arm corridor and down through the hatches of the upper Control & Observation Room and the second Exercise & Fitness Room to the lower R&R room. This was a spacious and comfortable cabin situated at the far end of the AGM arm. It was lined around three quarters of its perimeter with sofas and reclining chairs, the seating faced a large entertainment screen for viewing DVDs from the ship's library, which included movies, documentaries and classical TV soaps. In the centre stood a low round table surrounded by soft floor cushions. When ready, Commander Verdon activated the thrusters of the two AGM arms which gently accelerated the AGM pod to simulate a gravity of three point eight g's, finally the crew slumped into their favourite seats under the new found gravity, it was always good to feel the effects of one's own weight.

Verdon addressed the astronauts in turn, giving each a nod of acknowledgement as he reminded them of their position of authority and expertise on man's first mission to Mars. Aware that they were a little on edge with the mixed emotions of nerves and excitement of the imminent landing he talked deliberately in a caring fatherly manner. Their lives were in danger, and he suspected from more than the normal risks associated with space travel.

'In less than five hours, we will be making another giant leap for mankind, the pinnacle so far of human exploration, a manned landing on Mars. I need not remind you of the importance of this mission or the possible dangers ahead. This will be like no other, for we will not be doing this under the admiring and watchful eye of the whole world, but only our colleagues back home, at EMSA. We will be alone down there and our very survival will depend on quick thinking, our

individual expertise and team effort. Make no mistake, our fame may come, and perhaps sooner than we expect, but also maybe at a price.'

He looked first at his co-pilot and second in command, Martin *Bomber* Davis, as a fellow Brit, he was pleased to have him on board.

'Bomber, you have already far exceeded my expectations, you were the right choice for this mission. In the last nine months I have come to know you as a trusted friend and colleague, and a man I would want at my side in times of trouble. You are an excellent pilot, and your command of Lander Red Phoenix-2, I am sure will be a memorable one.'

'Thank you, sir.' He said feigning to wipe a tear from his eye. The crew giggled nervously, and Commander Taylor forced a smile. Though, the joker in the pack, they knew that Martin *Bomber* Davies was one of the best, an experienced test fighter pilot and astronaut, with five successful missions into space, he was as serious as serious needs be, and therefore he was afforded a little joviality, especially at times like this.

'On this landing, you will take Dr Creighton and Natalya in Lander-2, and Dr Collins will accompany me in Lander-1.'

'But I thought...?' Miranda quizzed, puzzled at the change of plan.

'I have made my decision Miranda, you will be with me.' The crew were a little taken back by his decision, and his reasoning, for originally it had been planned that Miranda would be making the decent with Bomber, the Commander did not attempt to explain his change of mind, for he simply wanted the responsibility for her life in his own hands. The two civilian scientists would make the descent in separate landing vehicles owing to the nature of the risks involved, if the unthinkable should happen, and one team should fail to land safely, then the mission would still have a scientist and pilot on the ground. EMSA planned from the start to have civilian scientists on board, even though the crew were trained in all aspects of the mission, a lifetime of study in a particular field of expertise could not be easily substituted.

The Mars Red Phoenix Landers, powered by compact Vasmir engines, were designed and fuelled for a total of three landings, although at this stage only two were planned. The high voltage supply for the plasma containment in the Superconducting Magnetic Cells came from four High Voltage Storage Electrolytic Capacitors which could be recharged on the Martian surface using deployable solar panels. Once recharged the crew could make an ascent back into orbit to dock with the mother ship.

‘As planned, Yuri will remain on board the mother ship keeping a watchful eye on us below. He will have his chance for immortal glory on the second landing and as pilot of Mars Red Phoenix he will have the responsibility of performing the tricky and untried MBD deployment manoeuvre, in order to disengage the Landers.’ The MBD manoeuvre was named after its inventor, Martin *Bomber* Davies, who came up with the idea during the many landing simulations back on Earth. It involved taking the Mars Red Phoenix mother ship inverted and backside first into a low attitude aero braking orbit. The powerful Vasmir engines would reduce the craft’s speed to a few thousand kilometres an hour, high in the Martian atmosphere, and then at the last moment when hovering above the Martian clouds the pilot would flip the craft over on its right side to deploy the Landers before immediately accelerating back into space using the powerful thrust of its engines, aided by the aerodynamic lift of its wings in the rare Martian atmosphere. Having mastered the manoeuvre himself, Bomber had spent many hours training Yuri in the flight simulator until the manoeuvre became second nature. He only wished that he would be the first to try it out for real.

As they listened to their Commander the crew remained silent holding their questions till the end.

‘Dr Creighton, I know that you are impatient to get your sticky fingers on those little Martian rocks, and will be tempted to run off here, there and everywhere, sampling this and that, but I must remind

you that foremost this is a military operation, so please contain your enthusiasm, at least until we know what we are up against.’ Dr Creighton nodded with a smile. The commander had read him right, he was a brilliant scientist, but still lacked the self-discipline imparted by the rigours of military training. Verdon had noticed during the long months of training at the secret military space centre and launch site in the Great Central Plains of the state of Kansas, that he was sometimes erratic in his behaviour and also prone to a little emotionalism, the personal traits which could get him killed down there in the unpredictable climate of the Martian surface.

‘Miranda, what can I say,’ he said with an involuntary smile, ‘this must be a dream come true for you.’ Miranda clasped her hands in her lap and tilted her head to one side smiling. He was right, her enthusiasm for the Mars Mission was contagious and evident to all, the joy she felt inside had bubbled over in everything thing she did. This was *her* chance, and *she* would be the first biologist on Mars, a much envied position by all her colleagues back at EMSA, and if anyone could identify the subtle signs of life, it was Miranda S. Collins. During her career as an Exobiologist, first at Princeton University and then attached to NASA, she had isolated, cultured and identified living organisms from the most extreme of environments on Earth, from the depths of the oceans, where the pressures are enormous and dissolved oxygen is present in only residual amounts, to the low pressure, high altitude mountain tops at subzero temperatures, then there were the anaerobic slime bacteria she had found deep in hot volcanic muds and the thermophilic algae in boiling spring waters. On one occasion she even managed to isolate bacteria happy living in a bottle of strong sulphuric acid in her laboratory. Commander Verdon wanted to curb her enthusiasm a little, for her own sake.

‘I want to be absolutely clear on this, I want you at my side at all times Miranda, no running off on your own, no matter how tempting it may be, if something catches your eye, check with me first.’

‘Yes, Commander, I understand.’ she replied with a naughty school girl grin.

‘And you likewise Natalya. I don’t want anyone wandering off; the first perimeter search will be limited to one hundred metres. Do I make myself clear everybody?’ A chorus of ayes was their reply.

‘Now are there any questions, before we initiate the pre-landing operations.’

‘Only two, Commander,’ Bomber said reclining in his easy chair with his arms folded. ‘Under what circumstances would you abort this mission?’ The others were taken back by the timing of his question, but not its content.

As a military man Bomber was uncomfortable with the mission being under the sole and direct authority of the elected *Fame* committee, a mix match of scientists, politicians and the military, one man in particular had been given complete authority over the Mars Exploration Mission, *Fame*’s President, Dr Alan Feinberg, a man he instinctively did not like or trust. Bomber recalled their first encounter back on Earth at EMSA; the astronauts had been summoned one by one to address the committee, to give their personal allegiance to its authority. He remembers it was in a large austere room, the *Fame* insignia plaque hung on the wall above a large oak table around which were *Fame*’s nine Superior Committee members seated for the interview. Dr Feinberg took prime position in the middle with his hands clasped in front of him as he severely grilled Bomber about his personal competence and dedication for the Mars mission before proceeding to remind him of its covert nature.

As if uncomfortable with the question, Commander Verdon adjusted his seating position before answering.

‘I understand your concerns Bomber, we have all made our allegiances to *Fame* and its prime mission statement, and I will remind you of it: *at all costs ensure the success of the Mars Exploration Mission and make first contact with alien life, hostile or friendly.*’

‘It’s the bit *at all costs* which niggles me too Commander,’ Dr Creighton added.

‘Let me be honest with you, all of you,’ Verdon added, ‘for all we know, and there is a high probability according to a number of scientists, that the signals Dr Clive Jenkins discovered are a natural phenomenon to do with the crystalline structure of magnetised rocks resonant with Mars’ surface to atmosphere electric field. This electric field is peculiar to Mars and is generated by the charged solar wind which is able to penetrate the thin Martian atmosphere. I am not a scientist; I only repeat to you what you have already been told.’

‘The first time I heard that explanation from *Fame* I thought it a load of baloney, and I still do. If the *Fame* committee believed that, they would not have sent us or have been so belligerent about the covert nature of this operation, *they* are convinced it’s alien, and to be honest so am I.’ Bomber said sarcastically.

Miranda chipped in: ‘I tend to go along with what Bomber is saying Commander, before we left Earth I heard a rumour that Dr Jenkins and his team at EMSA had detected an intelligent code buried in the signal, is that true?’

‘I know as little about that as you Miranda.’

‘Well if you want my opinion and not even as a Planetary Geologist, the presence of a subliminal code rules out natural phenomenon.’ Dr Creighton added. Verdon turned to Yuri and Natalya.

‘Do any of you have anything to add to this conversation? If you do, now is the time.’

Yuri spoke.

‘Not really Commander I have heard all this before, I am just happy to be along for the ride.’ Natalya nodded in agreement. They were both military trained Russian Cosmonaut’s and were used to following orders without questioning.

‘In answer to your question Bomber, and I want all of you to listen to this, yes, my main concern and obligation is to achieve the prime

objective, but it is also my responsibility as Commander of this mission to ensure the safety of the crew. Our lives *are* at risk, but that is the nature of space exploration, and if it comes to a point where to continue means failure, then I will abort to save the lives of the crew and to salvage from this expedition whatever we can. That is why at the first opportunity, one of the Landers will return to the mother ship with any initial samples we have acquired.'

'I am relieved to hear that Commander, but now for my second question.' A series of audible sighs went around the room.

'Go on Bomber, I'm listening.'

'Well Commander, my second question is this, at what point in this mission have you been instructed to open the sealed orders?'

Commander Verdon E. Taylor instructed the crew that the sealed orders which were locked in a safe on board Mars Phoenix Lander-1, were scheduled to be opened when both Landers were safely down on the Martian surface.

Having dismissed the crew to their respective duties in preparation for deployment and landing, Verdon returned to his personal console in the Command Module to transmit an update on the mission. Bomber suspected he was informing EMSA of his little *tete a tete* with the crew. During the third orbit there was no time for observations of the planet surface, the whole crew were busy at their stations running through pre-landing systems checks. Using the updated data from the ship's Laser Altimeter, Natalya had re-programmed the ships navigational computers for the aero braking descent. The landing sight was not yet visible for daylight observation, but NASA's Orbiters had already pinpointed sight *Gamma* on the north eastern plateau above Valles Marineris, the source of the alien transmissions. They were about to enter the forth orbit of Mars and while still on the dark side they would begin their descent exactly seven hours after Mars orbit insertion.

With the AGM arms locked into position for the decent the astronauts strapped themselves in the cockpits of their respective Landers. Lander 1 and 2's Magnetic Plasma Containment Cells had been fired up and charged and Yuri Nikolayev, Natalya's father, was now alone at the flight controls of the command module of the mother ship ready to ignite the powerful Vasmir engines. The responsibility of the lives of the crew weighed heavy on his mind. Earlier in Lander-2 he helped his daughter Natalya suit up, he remembered his last words to her before kissing her on the forehead and locking her helmet in place.

'I am proud of you, my daughter.' he said giving her a fatherly hug, a reluctant tear welled in the corner of his military blue eyes.

Yuri brought the Magnetic Plasma Cells up to the pre-burn ignition temperature of one hundred thousand degrees, concentrated his focus on the Flight Trajectory Display screen and poised himself ready with his right hand on the Vasmir variable thrust control awaiting Commander Verdon's *go for descent*.

At the port side in Lander-2, Martin Bomber Davies had just completed his final systems check and brought the Compact Vasmir engine of the Lander up to idling temperature. He radioed: 'All systems go, Lander-2 ready for deployment.' Natalya was at his right side at the Navigation Console, if anything went wrong she had been trained to take over the flight controls to make the descent herself once disengagement had been completed. Seated in the rear of the cockpit Dr Creighton tightened his seat belt and closed his eyes tight.

Commander Verdon E. Taylor once satisfied that the Magnetic Plasma containment in both Landers and the mother ship were stable and that all systems were go and operational turned to Miranda at his side and nodded with a smile.

'All systems ready,' he said while staring at the red flashing dot on the screen of the Navigation Console which indicated the Vasmir Mars Red Phoenix's orbital position. It was fast approaching the green

trajectory line which would take them out of orbit and through the dangerous and complex MBD deployment manoeuvre. The instant Mars Red Phoenix hit its mark he opened his mouth to give the long desired command. 'We are go for descent.' His words echoed around the mother ship like the voice of a heralding arc angel, stirring the hearts and minds of his crew with the mixed emotions of fear and joy as at last they were about to land on the infamous Red Planet.

Yuri pulled pushed on the plasma variable thrust control lever sending the three powerful Vasmir engines into High Temperature Thruster Mode, immediately the engines responded and roared into life like an unleashed lion, blasting fluorescent blue and red cones of charged hydrogen particles out into the blackness of space. The huge inertia of the thousand ton mother ship, orbiting the Red Planet at twelve point nine thousand kilometres an hour, groaned into submission under the reverse thrust of the mighty engines. Yuri watched as the ship's tangential velocity dropped at a rate of one hundred kilometres an hour per second and synchronous with the mother ship's reduction in speed the Laser Altimeter recorded its reduction in altitude.

The 'g' forces wrenched on the astronauts and ship as Yuri skilfully manipulated the firing of the attitude thrusters, which kept the orientation of the mother ship tangential with the green trajectory arc on the Navigation Console. The reduction in orbital speed and altitude gradually increased the Red Planet's gravitational pull on the ship, Yuri compensated by increasing the engine thrust proportionally as the ship dropped like a stone, nose up, in parabolic flight, until the angle of the mother ship's descent approached vertical in the thin Martian upper atmosphere. The trajectory had been calculated to reduce the ship's speed sufficiently to avoid burn up, but high enough to use maximum aero braking; it was a tricky but majestic manoeuvre, and one which would allow low speed and low altitude deployment of the Landers saving their fuel for ascent back into orbit.

For several tense minutes the crew in both the mother ship and the Landers were severely buffeted by the vibrations of the mighty plasma engines as Yuri increased the thrust to nearly eighty percent, the last twenty he was saving for the MBD flip. Finally as the ship hit the Martian atmosphere, decelerating into almost vertical flight, the g-forces on the crew reached intolerable levels. Dr Creighton squeezed his eyes tight as the g-force effects threatened to send him unconscious, none of the training, he thought, prepared him for this.

In Lander-2 Bomber and Natalya, squashed like dead weights into their seats, scanned the control systems and eagerly watched the flight trajectory on the Navigational control console, though the agony of rapid deceleration they were relieved that all systems were still go and that Yuri had managed to maintain the planned trajectory of a controlled descent

Commander Verdon reached out and squeezed Miranda's hand with a consoling grip as the blue flare of the plasma thrusters out of the cockpit window gave way to a bright orange glow of atmospheric burn.

'Engage full engines Yuri and go for MBD flip.' He cried over the noise of the thundering engines. The astronauts held on tight in anticipation of the 'g' forces of the final manoeuvre, as Yuri engaged the engines to maximum thrust and simultaneously adjusted the attitude to brake the mother ship in mid flight and swing it vertical, within seconds at a g-force which reduced them to tears, the mighty rocket decelerated to a zero vertical velocity twenty kilometres high above the Martian surface, poised ready for an accelerated climb back up into orbit. At the exact moment Yuri hit the attitude thrusters and flipped the ship right side up at an angle of twenty four degrees and at maximum thrust, aided by the aerodynamic lift of the mother ship's wings, she began her ascent.

'Go deployment!' Verdon yelled.

Immediately, Yuri unlocked the disengage controls and hit the deployment switches for Lander 1 and 2. On board the Landers the

astronauts felt the jolt of the deployment pistons releasing the Landers to continue their descent in free fall, accelerating down from a height of twenty kilometres through the thin Martian atmosphere at a rate of three point seven six metres per second per second. Commander Verdon in Lander-1 and Bomber in Lander-2 simultaneously engaged the Compact Plasma Engines to control their descent velocity. At an altitude of ten kilometres above the Martian cloud layer with another ten to go before touch down, Verdon and Bomber struggled with the joystick and thrusters to gain control of their attitude and flight speed. With a residual forward velocity of one hundred and twenty kilometres an hour imparted to them by disengagement from the mother ship they skilfully brought the Landers under control to cruise inverted with a downward vertical velocity of forty kilometres an hour along their planned flight trajectory high over the Martian surface.

Commander Verdon satisfied that all was well gave the command to swing the Landers over belly side down. 'Okay Bomber, roll her over and go for free flight!'

With ease and excitement both astronauts swung the Landers round to the loud applause of the rest of the crew. All were relieved they were now disengaged and safely cruising their way to an historical landing on Mars.

The Landers' Compact Plasma engine had three thrusters, one at the rear for forward thrust and two amidships below each wing. These mid ships plasma thrusters had been specially designed along the lines of the British Harrier Jump Jet and could rotate through an angle of one hundred and eighty degrees, allowing vertical landing and take-off.

As the mother ship elegantly soared back into orbit, the two Landers cruised side by side like a pair of falcons over the blue water ice clouds high above the bright red orange lava uplands of Tharsis Planitia. Commander Verdon increased the power of the plasma thrusters to launch his Lander-1 spacecraft forwards at a speed of five hundred kilometres an hour, Bomber followed behind as they headed

downwards through the thin ice clouds towards the landing site, Valles Marineris Gamma, just seven minutes away.

The entire crew, except Dr Creighton who had fainted under the g-forces, gave a huge sigh of relief as they unlocked their helmets to grab a better view of the Martian terrain a few kilometres below. The sights were breathtaking, the mother ship in its deployment manoeuvre had dropped them at a latitude fourteen degrees south of their target and they were now gliding eastwards under minimal thrust of the engines over the edge of the northern plateau of Valles Marineris, a vast equatorial rift valley several kilometres wide and almost a thousand kilometres long, created during Mars' geological history by plate fracture and water erosion. The probable cause of the fault, scientists suspected was the evolution of the huge Tharsis volcanic system. To the starboard side Miranda could see directly down into the four kilometre deep gorge, the dark red depths of which were covered by dust dunes and the early morning wisps of ice mist. The cliffs of the huge rift valley showed evidence of recent collapse with huge hummocky landslide deposits covering the canyon floor at the foot of the cliffs.

'Oh, Commander, it's wonderful.' She said staring down and gasping at the view.

Commander Verdon smiled in acknowledgement.

'Yes, it is Miranda, it really is,' he said staring port side at the bright cratered plains of the vast open uplands, it was a dream come true, cruising his Lander at speed above the Martian surface.

'Give Creighton a kick will you Natalya, otherwise he's going to miss all this.' Natalya grinned and unclipped her harness to shake Dr Creighton by the shoulders. He came to with a start and seeing Natalya's smiling face, he was relieved he was still alive. Creighton immediately removed his helmet and gawped down into the depths of Valles Marineris, a planetary geologist's heaven, grinning from ear to ear at the prospect that he would soon have one of the little red

Martian rocks in his hands. Natalya strapped herself back in the co-pilot's seat happy that the worst was over.

'Well done Bomber,' she said kissing him on the cheeks, 'You're an ace pilot.'

'Don't thank me,' he laughed, 'Thank that father of yours.' He paused to take a deep breath. 'He did it! The bloody hot headed Russian did it!' He yelled. Natalya's eyes sparkled with tears as she thought about her father alone in the mother ship, she was proud of him.

As they trailed Lander-1, the Navigation console audibly beeped, showing the exact position of the landing site just a few hundred kilometres ahead. Bomber kept his hands on the joy stick and thruster controls as he turned around to face Dr Creighton.

'Well my dear geologist, are we happy?'

'Ecstatic!' Dr Creighton said still grinning. 'We've done it! We are on our way down to Mars.' He said hardly believing his own words and eyes. Bomber laughed, and unable to contain his excitement any longer, raised his arms in the air, as if riding a tamed wild stallion, and gave a victory cry.

Commander Verdon smiled joyously.

'Okay you lot, let's hold back on the celebrations, we're not down yet!'

'Aye, aye Commander!' came a giggling chorus of acknowledgement over the radio.

'Follow me in Bomber, and stick close.' Verdon Commanded as he reduced the Lander's altitude and speed until they were soaring a few hundred metres above the bright red dust covered plains of Mars, travelling at a mere two hundred and forty kilometres an hour. To the north rose two huge rimmed craters which were littered around their perimeters with large dark basaltic rocks the size of houses, to the south lay another similar sized crater at the edge of the plateau cliff. Verdon adjusted the mouth piece of his headset.

‘All systems are nominal Bomber, we are go for touchdown!’

‘Aye, aye, Commander,’ the radio crackled. Within seconds they were approaching the landing site, the two pilots swivelled the amid-ships plasma thrusters braking their spacecraft to hover fifty metres over the ground. The powerful thrusters blasted down onto the red surface which swirled up dense pink clouds of dust around them, as they finally dropped vertically downwards.

‘Touch down! This is Lander One, mother ship Mars Red Phoenix, Lander-1, we have touch down on planet Mars!’ The Commander yelled over the radio. A split second later Bomber joined in with his victory cry.

‘Touch down! Lander Two is touchdown, on planet Mars!’

CHAPTER 2

Mars Base Gamma

A revelation of red becomes a mystery of black.

The loud roar of the powerful Compact Plasma engines of the Mars Red Phoenix Landers slowly whined down to a hum as the dense magenta clouds settled gently under the low Martian gravity. Relieved at their successful landing and enthralled by the thought that they were the first humans on the infamous red planet the crew stared enchanted at the surrounding rock strewn red terrain of Mars.

This was the moment they had long been waiting for.

‘Am I dreaming Commander? Are we really here?’ Miranda whispered not taking her eyes of the red dust laden plains. Verdon remained understandably silent, equally overawed by the experience.

The Landers were neatly parked on the red rock and sand covered plateau of Valles Marineris Gamma, with not more than forty metres between them. Verdon scanned the rocky perimeter, his eyes agog, simultaneously in awe and yet, understanding the danger of this distant wonderful world. To his starboard he caught sight of Bomber in the cockpit of Lander-2 waving furiously to grab his attention.

‘Commander, we did it, we bloody did it!’ He said beaming with thumbs up. Verdon waved back in acknowledgement and spoke over the radio.

‘Well done Bomber, congratulations everybody, and *welcome* to Mars!’

The whole crew were overwhelmed by the achievement, they were finally on another world, a strange and eerie silent planet, a world which for countless centuries, fired the imagination, and the hearts and minds of men, explorers, scientists, artists and poets, she was the planet of mythology, the ancient Red Wanderer, the Roman god of War, the Red of Anger and the Red of Blood, she was Mars. For countless generations, she was watched, wondered at, and desired, a goal, a dream, a second Earth, and now she was within their grasp.

It took the crew time in still contemplative mood to take her in, Mars was a friendly, welcoming, and hopefully a habitable world, but she was also deadly and could cruelly take a man's life in one moment of human carelessness.

The astronauts were presented with a view which fired the heart and intellect, the red planet was magnificent, awe inspiring and magical. All around, the blazing red orange landscape glowed like a savannah of fire and its vast mysterious expanse was littered with inviting black basaltic boulders of an infinite range of size and shape, mostly smooth, but some jagged. High above, their own star Sol, surrounded by a halo of hazy blue turquoise, burned brightly in the flamingo pink, dust laden, dawn sky. White wisps of stretched cotton wool clouds layered the atmosphere and on the horizon, the steep slopes of a five kilometre wide crater ring rose majestically into the rarefied atmosphere, the undulating crest of its heights was tipped with flashes of sparkling white water ice.

Not more than twenty metres away, directly in front of the Landers, lay several car sized deep lapis blue basaltic boulders, thrown there an untold time ago from the impact of an asteroid which was now buried in the depths of the crater's basin. Creighton straight away noticed that each of the Martian rocks were encrusted on their north west face, from where the predominant Martian winds blew, with flakes of mineral red iron oxide and at their base, downwind, lay crescent shaped soft scoops of fine dune sand. He could hardly contain his excitement, within hours, with hammer in hand he would be the first to chip away at their virgin delights.

'Well Miranda. What do you think?' It was a question that didn't really beg an answer, her face beaming in the red glowing light of the Martian dawn was enough.

'It's wonderful Commander, truly wonderful,' she said captivated by the flickering iridescent colours of the distant horizon. 'Nothing prepares you for this.'

‘I agree,’ he said enchanted by the innate beauty of the Martian landscape, ‘none of the Orbiter photographs do it justice, the colours are more vibrant and the light is absolutely ephemeral!’

Miranda leaned over to her right to stare at the rock pebbled ground below. She wondered how deep she would have to sample before hopefully finding the first signs of life, the thought of soil sterility she pushed to the back of her mind, there must be life here, she thought, and no matter how simple or primitive, she was determined to find it.

‘I expect by now, Yuri has contacted EMSA Mission Control and given them the good news and I bet their going crazy.’ He said breathing a satisfied sigh.

‘I can hear the champagne corks,’ Miranda laughed.

‘Let’s give them a treat then shall we?’ He switched on the external camera and set it to automatic scan mode. The encrypted images were transmitted directly to the mother ship and from there relayed live back to Earth. Instantly the internal monitor lit up with a panoramic view of Red Phoenix Lander-2 sat regally to the south. ‘I bet Yuri is looking at this wishing he was already down here.’ Miranda made no comment, happy in the thought that soon his time would come.

‘How’s our geologist Bomber?’ The sound of laughter came down the radio before Bomber answered.

‘He’s about to wet himself I think Commander, he’s visibly drooling at the mouth.’

‘I bet he is,’ Verdon laughed.

Back at the secret launch base, at Mission Control Nevada, the Flight Control team after the tension of many months of exacting and demanding work were emotionally relieved and ecstatic with the news of the successful landing, the live images being relayed from the Martian surface was a welcoming sight. Commander Verdon was right, it was champagne all round and Fame’s Superior Committee were standing agog at the viewing window overlooking the Flight Control

room studying and discussing enthusiastically the wonderful images which were being played on a large wall screen.

‘Well done, and congratulations gentlemen,’ Fame’s President Dr Alan Feinberg said raising his glass, ‘but before we get too excited, there is a very important matter which we need to discuss.’ He called the group to order and led them into an adjacent meeting room.

‘Sit down please.’ The other eight suited Superior Committee members still chatting with excitement of the Mars landing sat in their respective places around a large circular table, in front of each lay gold nameplates inscribed with their names and positions of authority beneath the Fame insignia of a fiery red phoenix with outstretched wings in an act of protection of the two planets Earth and Mars. He stood up to address the eight with his champagne glass still in hand.

‘A few minutes ago, while we were all celebrating, I had a call from the President of the United States.’ A hush immediately went around the table. ‘And as you may have guessed, he first gave his personal thanks and congratulations for the successful Mars landing.’ Dr Feinberg took a sip of his champagne as the committee members congratulated each other again. Then in unexpected solemn mood he placed his champagne glass down and started to pace around the table. The room went quiet again.

‘Is there a problem?’ One asked nervously not knowing what answer to expect. Dr Feinberg stopped in his tracks and straightened his tie and waistcoat as he was apt to do when troubled; he was clearly reluctant to give the rest of the President’s message.

He turned to the one who asked and stared him straight in the eye as if avoiding the penetrating looks of the rest of his team.

‘Unfortunately,’ he said leaning over the table on his knuckles, ‘there is some unexpected news from the top that many of you will find unsettling to the point of utter disagreement.’ He paused and stood up straight to carry on. ‘Under extreme political pressure from our own

government, the President has been forced to make an important and perhaps an inevitable decision, the Mars mission is to go public.'

Immediately the room burst into uproar.

Feinberg furiously banged on the table and finally brought everyone to order.

'But why? This is insane!' A senior military aid burst out unable to contain his fury. 'In the public interest, it was agreed that this whole operation should be kept covert.'

A Russian general rose to his feet, his unconstrained annoyance clearly written across his unshaven red face.

'If we announce to the general public the true significance of this mission, it will get absolutely crazy out there, in my country and yours, public order and security will be at risk.' The rest of the Fame Committee, except for a few pure scientists and politicians who had more to gain than loose, joined in agreement with loud 'ayes' and by a nodding of heads.

'What about our respective governments?' said one of the Russian scientists.

'Apparently, the President has been in personal contact with the Russian and British Prime Ministers and they are all agreed, they want this made public.'

'All of it?' another asked.

'Ah! Now that's the very point which we need to discuss, even our own astronauts have been working on a need to know basis.'

'But when sir? At what point in the mission do they want us to let the cat out of the bag?' asked Ian Strangeways, Dr Feinberg's security advisor.

'Almost immediately, in fact, as soon as the astronauts have confirmed the nature of Valles Marineris Gamma and the source of the alien transmissions.'

Back on Mars the excited crew of the Red Phoenix Landers were busy shutting down redundant flight systems, checking External Environment Sensors, and initiating the Life Support in the living quarters of the two Landers, the LS Cabins were housed in the main body of the fuselage, aft of the cockpit. Both pilots, after shutting down the ship's plasma engines, ran a systems check on the Lander's Primary Solar Panels. The black heat resistant solar cells were part of the ship's super structure and as such covered most of the surface area of the upper wings and fuselage. The Primary Solar Panels were designed to recharge the engine's drained High Voltage Storage Electrolytic Capacitors, which were necessary for the return flight back into orbit. The black superstructure of the Mars Landers combined with the flashes of red and gold colour of their underbellies and pointed noses, gave them the appearance of a pair of birds of prey basking in the morning sun on the Martian surface. The ground based Secondary Solar Panel Units, which would assist the charging of the engines capacitors, would be deployed later by the crew during their first walk on Mars.

Later, on Mars Red Phoenix's fifth orbit of the planet, Yuri would take the mother ship into another descent of the Martian atmosphere, this time to drop the two Rover Pods and the MPH, the Mobile Pressurised Habitat. He was in constant communication with EMSA Mission Control and the Landers using EHF encrypted radio transmissions. Every one point eight hours he would orbit directly overhead Martian Base Gamma.

'Bomber, what readings do you have on the EES?' Commander Verdon enquired while checking his own monitor.

'It all appears more or less nominal Commander, just as we expected. Air temperature at three metres above surface is minus fifteen Celsius, atmospheric pressure is varying somewhat between ten point two six and ten point three one millibars.'

‘Same here, I suspect the variation is due to the mixing of the stratified density layers of the atmosphere by the early morning winds, I have a South-East wind speed of three point two metres per second and it seems to be rising.’

‘Aye, Commander I agree, Dr Creighton just confirmed that when we landed it was only one point two, it *is* rising sir.’ Bomber said with a worried tone in his voice.

‘What does he think is the probable cause?’

Bomber nodded to Dr Creighton who was sat at the EES panel. Dr Creighton fiddled with his communications head set and switched on the microphone.

‘This is Dr Creighton here Commander.’

‘Go ahead, Dr Creighton.’

‘Well, as you know Commander, the early morning sun generates thermals by heating the Martian surface and thus producing the equatorial winds, but since we are well into the Martian summer, things can get a bit unpredictable.’ Dr Creighton was telling the Commander nothing new, one of the problems for EMSA was the timing of the mission, landing during the near mid Martian summer produced more amiable conditions on the surface, but also endangered the crew to the unpredictable Martian dust storms, the driving mechanisms of which were not yet fully understood.

‘Just keep an eye on it will you Dr Creighton, a bloody dust storm is the last thing we need right now.’

‘Will do Commander, Creighton out.’

Commander Verdon although exhilarated by the landing was a little edgy, it had been eighteen hours since his last scheduled sleep and the furrows of the strain of command ran across his forehead, he was relieved at the crew’s safe landing, but the uncertainty of what lay ahead troubled him.

‘Do you think its anything to worry about Commander?’ Miranda asked.

‘Na, it’s probably just an early morning gust.’ Miranda was not convinced by his apparent lack of concern, she already knew him too well.

‘Right, everything seems tight here; let’s get ready for the EVA.’ He said undoing his belt and jumping to his feet in the confined space of the cockpit.

‘Fancy a morning stroll Miranda?’

‘I thought you would never ask!’ She said standing to face him with a cheeky smile.

After giving the command to Lander-2 to prepare for the EVA both crews crawled through the cockpit hatch into the LS Cabins. These would be their main living and experimentation quarters while at Mars Base *Gamma*. In the far corner of each cabin, under the wings of the Lander, lay four curtained sleeping chambers, each with its own bunk bed. On the starboard wall was the Microbiology Workstation, complete with a complex array of testing and culturing equipment and sample storage facilities. The port side wall was kitted out similarly with a Geo-Chemical Analysis Workstation. Forward and port side, and in the corner of the cabin stood the high technology kitchen which could dispense and heat a wide range of pre-cooked meals. It also had a vented oven and hob for preparing the occasional freshly cooked meal from the limited supply of raw ingredients, opposite this and on the port side stood the Bio-Suit Electro-Spraying Booth.

The Bio-Suit had been specially designed for EMSA by NASA’s Institute for Advanced Concepts. The traditional, multi layered and pressurised soft spacesuits used in the weightless environment of space were too bulky for use in the Martian gravity, and the pressurised hard shell EMU suits already developed by NASA were also thought unsuitable for this mission. The new and revolutionary Bio-Suit, acted like a second-skin, and allowed the astronaut’s enhanced extravehicular activity (EVA) locomotion, the downside of the new technology was that the inner layer of the suit, the ‘second skin,’ which was composed

of electro spun laced micro-fibres, had to be electro-statically sprayed on to the bare skin of the astronaut. This tight fitting polymer matrix skin counterbalanced the internal pressures of the body enabling the astronaut to breathe normally on Mars, much like breathing under Earth's higher atmospheric pressure of one thousand millibars.

On entering the LS Cabin, still in their flight suits, Miranda caught sight of the Bio-Suit Spraying Booth and it suddenly dawned on her that it would now be Commander Verdon who would have the privilege of spraying her naked body. She gave him a curious stare, wondering if this was the reason he ordered her to make the descent in Lander-1.

'Commander!' She said standing in his way with her hands on her hips. Verdon stopped in his tracks at the entrance hatch, and looked at her curiously; he seemed surprised by the sudden change in her tone of voice.

'Yes, Miranda, what is it?'

Looking at his genuine puzzled look, Miranda immediately chastised herself for thinking the obvious. He was a trained and experienced astronaut, and had never before displayed an interest in her, much less the innate carnal emotions of a typical male, he was a professional.

'Oh, it's nothing,' She said sighing to herself before heading towards the Microbiology station to check on her equipment. 'Just ignore me.'

Commander Verdon was slightly perplexed, but did not pursue the matter and went to check the LS systems module. Miranda, still annoyed with herself switched on the Microbiology Incubation Module in preparation to receive the first Martian soil samples, much of the testing equipment was automatic and required little input from her, but at her request, EMSA had fitted her workstation with a traditional Inoculation Culture Cabinet. Here she would duplicate the results manually by culturing the soil samples on nutrient agar plates. A high power microscope was also installed as an integral part of the unit. The reason she said was that: 'In most of the results from previous Martian

Landers, the soil biological analysis results were ambiguous, the tests on previous missions used automatic culturing, relying on the fact that microbes if present would produce radioactively labelled gases, but as many scientists had pointed out these gases could have been a result of natural chemical reactions in the soil and therefore no proof of life.'

There was no substitute in Miranda's mind for examining the cultures under a microscope, a trained and experienced eye can easily recognise the microscopic forms of life, and if living organisms were present in the soil they would produce visible growth and cell division under the microscope and visible colonies on the agar plates. The unit was hermetically sealed and would operate under the same environmental conditions as on the Martian surface on a fine summer's day, when the temperatures were at least high enough for liquid water to exist.

Inwardly Miranda was disappointed that Verdon had not thus far shown any interest in her, perhaps she thought, her jumping to conclusions about his motives, was out of hope and nothing more. She remembered how Commander Verdon had caught her eye on the first day of training camp, and how he had welcomed her to the team, his eyes sparkled with that innate sexiness that only women could define. His strong military air masked well his inner warmth which occasionally broke through by a tender smile in the corner of his mouth. In whatever company she found him in, he had an air of presence which immediately gained him respect, his imposing authority was borne out by his sound judgements made during the many demanding training trials, and his decisions were always perfectly balanced in respect of the needs of the mission and the safety of his crew. This was a man who cared, she thought, and one in whom she could trust.

When Verdon finished his systems checks he came over and stood at her side.

'Everything okay here Miranda?' Before answering she closed and locked down the sliding glass door of the incubation chamber and

switched on the ultra-violet irradiation unit to sterilize the cabinet. She looked up at him while placing her hands inside the access gloves.

‘Yes, fine Commander,’ she said as she fiddled with the culturing equipment inside the unit.

‘Good, it won’t be long now before you get your hands on those little Martian bugs. I just hope they are not virulent, that’s the last thing this crew needs is to go down with a dose of Martian flu!’ He laughed and Miranda responded with a feminine smile.

Inside Lander-2, Bomber, Natalya and Dr Creighton were ready to suit up for the EVA.

‘Okay who’s first into the shrink-wrap,’ Bomber joked, referring to Bio-Suit Spraying Booth.

Natalya didn’t hesitate to answer,

‘I’ll go first Commander,’ she said in her dulcet military tone, ‘...with Dr Creighton.’ She quickly added.

Bomber was a little taken back by her remark, for he had joyfully anticipated that on this occasion she would choose to suit up with him and not Creighton. He remembered fondly their time at training camp when he and Natalya had playfully practised the procedure together, on that occasion she had given him a glimmer of hope that the young Russian ice maiden was beginning to melt, obviously he had misjudged her.

‘Once you two have done, you can help me Dr Creighton.’ Bomber said pretending to ignore her rebuff.

Natalya without flinching at his comment nonchalantly began to unzip her flight suit. The delighted Dr Creighton hastily started to undress, this was no time for modesty, he thought. With a tantalising and ceremonious air Natalya pulled on the shoulders of her unzipped suit and slipped it down slowly around her body as far as her abdomen. Then with teasing audacity, she gave an audible sigh as she shook her ample pert white breasts, feigning a shiver. Without taking her eyes off Bomber’s, who was stood watching her with his arms folded daring her

on, she with one cheeky move dropped the flight suit to her ankles, then promptly slipped her pink cotton panties to the floor. She stood there, defiant of any modesty, allowing Bomber to admire her naked slim tanned body.

'You tease!' Bomber thought, hoping that the bulge in his groin was not obvious. 'Okay get in you two, and don't use up all the hot water.' He said joking while making for the spraying booth's main control panel. He switched on the noisy electro-spraying compressor, opened the folding doors and waved his hand invitingly. Dr Creighton went in first followed by Natalya. Her teasing finale was a wiggle of her firm round buttocks before she closed the door behind her with a smile.

'I need a cold shower,' Bomber sighed before stripping down himself. In Lander-1 Commander Verdon tapped in the access code and opened the ship's safe, inside lay a flat brown envelope marked:

F.A.M.E.

SEALED ORDERS

Commander Verdon E. Taylor's Eyes Only.

Miranda, knowing what the Commander was up to busied her self at her workstation. She wondered whether he would be allowed to communicate to the crew the contents of *Fame's* sealed orders. The crew were aware that *they* had kept certain details from them, but if they were to be successful on this mission, Fame would sooner, rather than later have to reveal all. Commander Verdon closed the safe door and with the sealed brown envelope in hand retired to his private bunk and closed the curtains. He lay back comfortably and switched on the overhead light before breaking the wax seal of the envelope. Inside was a single hand written letter, signed by the president of Fame's Superior Committee and a computer disk labelled

Alien Transmission Data.

He sat up straight and poised himself ready to read the sealed orders.

Commander Verdon E. Taylor,

At the opening of these orders it is clear that you and your team have made a successful landing on Mars. First, our personal congratulations, from myself and the Fame Committee, and all here back home at EMSA, from the many who have worked so hard to accomplish man's first mission to Mars.

I suspect you probably still have many questions about the covert nature of EMSA's operations and the alien transmissions, and although much has already been explained to you, there are some new important revelations about the alien signals that you need to be aware of before entering the second phase of your mission.

Before leaving Earth you no doubt heard the rumours that Dr Clive Jenkins had detected a subliminal coded message hidden atop the high frequency carrier wave of the alien transmissions, what I can report to you is that after many hours working on the complex wave form patterns with a select team of EMSA scientists, he says it translates as a complex number sequence. Although this is inconclusive, we suspect that the transmissions from Mars are not generated by a natural phenomenon, but are of intelligent alien origin.

(Please view the accompanying data disk)'

'So the rumors were right!' Verdon exclaimed dropping the letter to his lap. 'And all this time the buggers knew.' He wiped the perspiration from his brow with his sleeve and placed the disk into the computer console. The screen lit up with a three register display. The top register showed a sequential wave analysis of the alien carrier signal, the second the carried encoded wave, and the third, the decoded number sequence, after a few minutes the pattern repeated itself. Commander Verdon made a note of the decoded number sequence in his flight suit pocket notebook and then read the rest of the letter.

‘Dr Jenkins and his team believe that the number sequence may be some kind of key. The enclosed data disk contains a copy of the coded hidden pattern, the number sequence, and Dr Clive Jenkins’ interpretation of the data, a key sequence of eight pairs of numbers. The fact that the source transmissions are highly directional and are only transmitted when Valles Marineris Gamma is pointed directly Earthward, leads us to only one possible and uncomfortable conclusion, if the code originates from an intelligent source then they want no other alien life form but mankind to detect them.

I therefore remind you of the Fame’s prime directive: at all costs make alien contact, friendly or hostile. If this intelligent alien life poses a threat to our own existence then we need to be prepared for any eventuality. It is right and proper at this stage of the mission, that you inform the crew about the contents of this letter and Fame’s conclusions.

Regards,

Dr Alan Feinberg.’

Before he had time to contemplate the importance of the letter Miranda called.

‘I’m ready Commander!’ Verdon placed the letter and disc back in the safe.

‘Coming Miranda,’ he called out while shutting the safe door. He opened the sleeping quarter’s curtain to see Miranda standing stark naked next to the spraying booth.

‘It’s time to suit up.’ She said with her arms held out and a glint in her eye. Commander Verdon was taken back by her matter of fact manner and in response stuttered out a few words in reply.

‘Uh? Yes Miranda, I’ll be with you in a minute.’ Verdon said hastily disappearing back behind the curtains. ‘The brazen little ...!’ He said beaming, amused by her immodest playfulness. Undressing, he

remembered how coy and somewhat embarrassed she had been when they were in training for the ‘the second skin’ Bio-Suit spraying back at EMSA, he wondered why her change in attitude?

Back in Lander-2 Dr Creighton having donned his Bios EVA suit while waiting for the other two to finish suiting up used the ships navigation computer to scan the updated Laser Altimeter images of the Martian surface. He uploaded a compilation global map of Mars and scanned it from west to east. The high peaks of the Tharsis volcanoes showed up as white, while other altitudes were represented in a spectrum of colours down to the deep blue basin of the enormous impact crater of Hellas Planitia. Something caught his eye.

‘My god! I’ve never seen that before!’ He said his heart racing.

‘What is it Dr Creighton?’ Bomber asked while struggling to pull on one of his space boots. Dr Creighton with a look of sheer delight beckoned him over.

‘Come, come and have a look at this Bomber.’ He said waving his hand. Intrigued, Bomber hopped over to his side with one boot half on and dragging across the floor. Natalya who was about to climb in to the hard outer shell of her Bio-Suit put it to one side and joined them.

‘What have you seen Dr Creighton, it just looks like another altimeter map of Mars?’ Bomber said frowning.

‘That’s the point, that’s exactly what it is.’ Dr Creighton said fidgeting in his chair with excitement.

‘I don’t get it, what is so special about this map, other than the fact it is updated?’ Natalya asked.

‘Look!’ he said, pointing to the screen, ‘Here is Hellas in the south, the largest impact basin on Mars, and over here to the north is the enormous volcanic region of Tharsis.’ The other two looked at each other and shrugged their shoulders.

‘Don’t you see?’ He said looking up.

‘Not a bloody thing Creighton.’ Bomber said impatiently.

‘That is the astounding thing Bomber, until now neither did I, but it is as clear as day.’

‘What is as clear as day?’ Bomber said, growing increasingly impatient.

‘When I think of the number of hours I have spent studying these altimeter maps, puzzling over Mars’ unusual topography and there it is, staring me in the face for all this time, the answer to my nemesis.’

‘Come on Creighton, we haven’t go all day, spit it out, man.’ Natalya said grabbing his shoulders and giving them a little shake. He responded heartily, yet milking the moment.

‘How many degrees Natalya is there between Tharsis and Hellas?’ He said with a huge satisfied grin. She counted.

‘About one eighty,’ she said.

‘Why is that significant?’ Bomber asked. Before he answered Dr Creighton then pointed to the northern volcanic region of Elysium Planitia, Elysium Mons and then to the southern impact crater of Argyre Planitia.

‘Right, now tell me Bomber, how many degrees between Elysium Mons and Argyre?’ Dr Creighton sat back in his seat with a smirk across his face and his hands folded across his chest waiting for Bomber’s reply.

‘Bloody hell, one eighty!’ Bomber said standing up straight in surprise. ‘That can’t be just a coincidence’

‘It’s not.’ Dr Creighton replied.

‘What exactly *is* the significance of it then, Dr Creighton?’ Natalya asked.

‘Well listen to this,’ he said swivelling around in his chair to face them. ‘I believe that the large impact meteorites which struck, first Hellas and then Argyre, were the cause of the Tharsis and Elysium volcanoes.’ He paused for a moment with child like wonder in his eyes.

‘When these massive meteorites struck Mars, imagine the enormous internal pressures that would have been generated, when they penetrated the crust, and then into the mantle. The pressure shock waves would have gone straight through the whole planet and then broke out at Tharsis, like wise for the Argyre impact meteorite mantle pressure waves broke out at Elysium. The extra mass of rock and iron beneath the Martian crust must have created enormous internal pressures within the planet, raising the internal temperatures and making the mantle rock molten. It was probably the release of this pressure by the outflow of molten lava which built up the enormous Tharsis and Elysium plateaus.’

‘That’s an astounding theory Dr Creighton,’ Natalya said, ‘it seems so obvious, now you’ve pointed it out.’

‘It is Natalya, but there’s more, look what runs west-east from Tharsis.’

‘The rift valley of Valles Marineris!’ Bomber said realising the connection.

‘Yes, I believe that the pressures inside the planet caused by the extra internal mass sometime soon after the impact of Hellas, finally split the planet.’ Dr Creighton swivelled around in his chair again and brought up a map of Valles Marineris. Bomber and Natalya realising he had not yet finished edged in a little closer.

‘Go on Dr Creighton, I can tell by the look on your face that you have kept the best bit till last.’ Bomber said smiling.

‘That I have, Bomber, if my theory is correct, then these two impacts not only changed the Martian topography but also destroyed Mars’ atmosphere, and here is the crunch, the huge volcanic uplands of Mars did not build up periodically over millions of years, but just a few millennia ago.’

‘Hell, that’s a bit of a profound statement doctor.’

‘Yes, I know Bomber, but it is supported by the fact that all the young, poorly cratered regions of Mars, the upland lava flows, overlies the older cratered southern regions.’

‘You know what this means?’ Natalya said startled by her own conclusion. ‘That it is quite possible then, that not so long ago, an intelligent civilisation could have once thrived on Mars.’

‘Yes, Natalya, exactly, and what’s more if there was an advanced civilisation living on Mars, the impact of the Hellas and Elysium meteors would have almost certainly destroyed it.’

‘This theory of yours Dr Creighton, may explain these alien transmissions.’ Bomber said now pacing the floor.

‘The part that puzzles me Bomber is why would a race, which was on the verge of extinction, try and communicate with Earth?’ Dr Creighton mused leaning back in his chair with his finger on his mouth.

‘Perhaps the alien transmissions were some kind of distress call?’ Natalya added.

‘They may be Natalya, but if that is the case, why send them thousands of years later, and why only to Earth?’

‘We must update the Commander Dr Creighton.’ Bomber said heading for the communication console while pulling up his boots.

Clad in only his dog tag, Commander Verdon emerged from his cramped quarters. Miranda was pleasantly reminded of his masculine physique as he walked up to her. Like a Greek Adonis, Verdon stood in all his manly glory, with a tanned and athletic body, broad chest with curls of dark hair and abdominal ripples of muscle. His arms were thick set and powerful and his hands were large and manly. She threw a glance at his firm muscular thighs and the size of his manhood, she was not displeased, his daily workout in the Low-G gym on board the mother ship had been well spent she thought. The Commander was aware of her appraisal of his physique and in response gave her a knowing smile.

‘If she can be brazen, so can I.’ He thought.

The commander walked straight up to her and stared into her inviting blue eyes. ‘My god she *is* beautiful,’ he thought to himself. He wondered why it had taken him so long to notice, and so did she.

‘Ready to be shrink-wrapped?’ He said standing a head taller than her.

‘Yes, of course Commander, shall I do you first?’

‘Ah, I think I’ll use the old adage, ladies first.’

‘Oh, you’re such a gentleman Commander,’ she squeaked as she turned on her heels to enter the Bios Spraying Booth.

Commander Verdon unlatched the spraying nozzle from its housing and set its stream to level one, the first polymer matrix density, and then faced Miranda to spray the first polymer layer over her naked body. In readiness Miranda placed the Bios-helmet locking neck down over her head and on to her shoulders. The locking neck was trimmed with a pre-woven material and would act as a seamless joint between the sprayed polymer skin and the helmet neck. As the Commander waited patiently with nozzle in hand Miranda put on her Bios Suit socks and inner gloves which would likewise act as a joint less seam with the second skin, she then held her arms out high ready for the first layer.

‘I’m ready Commander, spray me!’ she said with a glint in her eyes.

Surprised by her comment, Verdon screwed up his right eye and smiled back at her, wondering if her sexual innuendo was deliberate or purely coincidental. He was beginning to see a side of her which he liked.

As in training, the Commander first sprayed her upper body; this was done in order to build up a polymer matrix layer between her skin and the helmet neck trim. He aimed the nozzle between her well formed breasts, and squeezed the trigger, the shock of the stream of cool creamy white spray on to her warm flesh caused Miranda to flinch with a joyous yelp. Her act of playfulness intrigued him, adding to his

enjoyment. While deliberately not looking into her eyes, which were fixed on his, he worked his way over her pert round breasts, spraying from side to side with a gentle sweeping motion. As he built up the layers of glistening white polymer, her distinct arousal to the erotic experience showed unashamedly in the erection of her nipples. He continued spraying until he had built up several layers over her chest and as far down as the pit of her stomach. At this point Verdon snatched a look at Miranda before he dropped to his knees, her eyes were closed in anticipation for he was about to spray around her groin. Verdon switched the nozzle to the porous matrix setting and waited expectantly for Miranda to change her posture, she responded immediately with an undisguised smile and slowly opened her legs to stand with her feet wide apart.

The cool milky spray layered evenly between her legs at the apex of her firm thighs and instantly tightened as a second skin over her groin, stimulating her to give a faint but audible squeak. Verdon, pleased with his handiwork, stared with his head held to one side. She opened her eyes knowing the worst, or best, was over. He then trained the spray over her legs, arms and back, saving her buttocks till last.

‘There, finished,’ he said pleased with his work.

‘My turn!’ Miranda said with a wide smile.

Once the sprayed second-skin had stretch dried Verdon and Miranda donned their Life-Support Suits, these were extremely flexible and consisted of a sandwiched layer of a thermal-matrix which would maintain their bodies at ambient temperatures on the Martian surface. Next they donned the hard torso outer layer, which acted as added protection against cosmic radiation and micro-meteorites, and to which was attached the Life-Support and Communications back pack unit. The white breast torso and back plates, which carried the Mars Red Phoenix insignia, locked at the sides and was tailor fitted for their respective bodies. This Mechanical Counter Pressure shell provided

the atmospheric pressure necessary for breathing in the thin Martian atmosphere and would prevent the blood from boiling.

Once the outer shells were fitted they pulled on their walking boots, the soles of which were sandwiched with layers composed of air pockets and E-lastic, the same type of rubbery material used in a child's super bouncy ball. The boots would enable the astronauts to stride with ease over the rough Martian surface and in theory help them jump over large rocky obstacles. They had practised the tricky manoeuvre of jumping, somersaulting and landing in low gravity simulations back on the mother ship. In fact on their long journey through space, leaping around in the low-g chamber with E-lastic boots was a popular pastime with the crew to overcome boredom and aid stress relief.

Exercising in pairs, Miranda's favourite partner was Bomber, who used these R&R occasions as an opportunity to demonstrate his child-like nature. Very often Miranda would have to finish her session prematurely on account of her uncontrollable fits of laughter and her aching ribs. As Miranda slipped on her second boot the images of Bomber jumping and flying through the air like a demented cat brought a smile to her face.

Around the waist and groin were fitted the enamel hard hermetically sealed space suit pants. These were specially designed to allow the astronauts to relieve themselves during the planned walk on the Martian surface. 'Hard Nappies' Bomber nicknamed them. Verdon pulled on his gloves and then lifted the Life Support and Communications Unit onto Miranda's back and locked it in place. He then connected the unit's sensor and control leads to the second layer suit junction box at Miranda's waist and switched on the unit's Bio-Control. Immediately Miranda felt the warmth of the heating matrix.

'All readings normal!' Verdon said, patting her on the back.

'Body temperature, 37.4 degrees, pulse 84, external body pressure 1.02 atmospheres and blood pressure 100 over 80!'

He inspected the spaceship's control console to check that they were giving the same readings as the Bio-Suit Life Support Display.

'Right my lady, now that you are plugged in and ready to go, help me strap up.'

Miranda smiled graciously and leaned over carefully to lift the Life Support Unit onto Verdon's back.

'Don't get any funny ideas about us Commander,' she said in a matter of fact way, thinking about their interplay in the Spraying Booth. Verdon was surprised by her comment, but nevertheless answered her right back.

'You know me Miranda, I regard everything as an obligation to duty, nothing more,' he said smiling to himself. Miranda chuckled as she thumped the locking clips in place with a little more force than necessary. Verdon flinched at her heavy handedness and turned to see her giving him a cat-like grin.

'Hmm, duty hey, it seems to me Commander that back there, you were more than enjoying your sense of duty!'

Verdon laughed.

Miranda connected the Bio-Sensor control leads and then spun him around to face her.

'If *I am* just a necessary and unavoidable part of this mission, then we had better get on with it Commander.' She said with her arms on her hips. Verdon wanted to reply, explain his reasons why he insisted that she came with him in Lander-1, but was reluctant to giving away his feelings so easily.

'That's what I like about you Miranda, a professional to the last, just like me,' he said reaching for his helmet.

On board Lander-2 Bomber, Natalya and Dr Creighton were suited up and completing a pre-EVA systems check. The crew of both Landers had the mixed emotions of excitement and fear, they were about to face, the extreme and unpredictable conditions on Mars and the terrible

prospect of confronting intelligent and perhaps hostile alien life. Dr Creighton was naturally excited at the imminent privilege of being the first scientist to examine the Martian rocks, there were many unanswered questions concerning Mars' recent geological history and now finally, he had the opportunity to set the records straight. Natalya was efficiently occupying her mind with last minute systems checks, while Bomber was fired up by the adrenalin rush of facing the unknown, he was minutes away from the accomplishment of a life time's ambition and was impatient for Commander Verdon's, 'Go for walk.'

Verdon locked his helmet in place with a single twist and switched on the Life-Support System back pack to the Bio-Suit which routed the life giving oxygen and nitrogen mix to his helmet and Bio-Suit micro tubule matrix - it was set at one atmosphere and an ambient temperature of 20 degrees. Verdon took several deep breaths to check the pressure response and looked across at Miranda who was stood waiting at the air-lock exit hatch clasping her Exo-Bio-Life instrument bag.

'Ready?' He said with a grin that illuminated the cabin like a warm Martian dawn.

'Aye, Commander, as ready as I'll ever be!'

With a rush of adrenalin setting his heart pounding with anticipation of the EVA, Verdon flicked on his helmet ship-to-ship radio. Crackling into life it caught over the air waves the excited conversation of the crew in the second Lander.

The Mars walk was precisely timed to allow the mother ship Mars Red Phoenix to be in position directly overhead in order to relay communications back to Earth. The flight team at Mission Control were ecstatic at the prospect of man's first walk on Mars and were buzzing with excitement more so than on any other manned mission into space, a digital countdown clock displayed the time to EVA and

already medical diagnostic readings of the crew's Bio-Suit Life Support conditions were coming in. The Flight Commander, Geoff Bridges, raised his thumbs to his team at their consoles.

'It seems ladies and gentlemen, we are go for EVA.' He said grinning like a Cheshire cat, immediately the room burst into spontaneous applause.

Overlooking the large operations room the assembled Fame committee were captivated by the live images displayed on the far wall from the Lander's cameras. Dr Feinberg puffed nervously on his fat cigar and turned to his assistant the Head of Fame's Security Division, Steward Miller, to share his pleasure, this man's bony features and nimble frame Feinberg thought always reminded him of a tawny weasel, he stood one head shorter than the heavily framed Dr Feinberg, but his powerful position within Fame more that made up for his small physical stature. It was Miller's responsibility to ensure full anonymity of EMSA's and Fame's activities and he personally vetted any communications with the press and government officials, in his position of power he was only answerable to Dr Feinberg. Miller gave a responsive nod in acknowledgement of Feinberg's unspoken gratitude and immediately returned his gaze back to the screens, pleased that under his watchful eye the Mars Mission had been kept covert and out of public knowledge, a wide smirk ran across his thin mouth. 'Hell!' he thought, 'Only top government officials directly under the countries respective leaders were aware of Fame and its covert operations.'

'Well sir, we did it!' Miller said without turning.

Dr Feinberg puffed the embers hot on his cigar and inhaled a lungful of smoke before answering.

'Yes, Miller, we did,' he said exhaling a narrow jet of smoke vertically into the air with a curl of his bottom lip, 'and after almost two years of bending the ears of officialdom, first to come up with the funding and then to keep the whole operation covert, it was a major international

effort and through this we have made enormous leaps in space technology, but there were many who said that this mission would inevitably fail.’ Before continuing Feinberg flicked a long slither of ash into a brass tray stand and wedged the cigar back into the corner of his mouth. ‘And where are they now?’ He said puffing heavily again. ‘Let them eat dirt I say.’

‘Yes sir, let them eat dirt!’

‘Lander-2, this is Commander Verdon E. Taylor of Mars Red Phoenix-1, at Valleris Marineris Gamma. All systems ready.’

In Verdon’s helmet Bomber’s chirpy voice came through loud and clear.

‘Aye Commander, Mars Red Phoenix Lander-2 is ready and waiting for your command.’ Verdon gave Miranda a reassuring smile and held his right hand over the exit hatch unlocking lever.

‘Then we are go for walk!’

With glistening beadlets of perspiration forming across his forehead Verdon, to the sound of his own breathing, ceremoniously pulled down the air-lock chamber lever, with a loud audible hiss the hatch door slid open. Verdon stepped into the airlock and Miranda followed to stand immediately opposite, she was laden in both hands with her Bio-Kit packs while Verdon carried a video camera and the EMSA Flag. With the door behind them now closed and the air-lock pressure equalised with the Martian atmosphere, Verdon poised himself ready at the exit hatch. His eyes sparkled in anticipation.

One veil, a single door, now lay between them and Mars. He grabbed a mouthful of air and pulled down on the red exit hatch lever. Immediately the door slid open allowing a blaze of red Martian ambient light to fill the air-lock chamber and illuminate Verdon’s and Miranda’s gaze of wonder.

Through the open doorway lay a spectacular view of the Martian landscape. The bouldered gradient of the soft red soil kissed the pink iridescent dust laden sky which shimmered in layers of silver-white clouds touching the turquoise blue sky overhead. In the distance sparkled the enamelled red and gold chassis of the recumbent Mars Red Phoenix Lander-2, sitting regally in the pink dust haze of the Martian morning.

Commander Verdon paused at the ladder, waiting for his second crew to emerge. With awe he looked down at the virgin red soil beneath his feet and the blue-black igneous pebbles iced with flashes of red oxide, moments away, he thought. Miranda came quietly to his side equally aghast at the wondrous sight. Seconds later, the hatch door of Lander-2 opened.

First Bomber, then Natalya and lastly Creighton came out to stand motionless at the air lock entrance, equally enchanted by the magic of Mars. Verdon lifted his arm and made a single wave of acknowledgement of their presence. Long ago, it had been decided at Mission Control that Verdon E. Taylor as Commander of Mars Red Phoenix should be the first to step on to the surface of Mars, and so the rest of the crew waited patiently for their Commander to descend the ladder.

'This is your moment Commander,' Bomber's voice crackled over the radio. Verdon gave a little surreptitious smile before slowly descending the ladder. At the last and seventh rung, at 11:05 Mars time exactly, he stopped with his right foot poised over the virgin soil.

'This is the first step of a few, in honour of the bold steps of the many.'

At that he touched his foot down on Mars.

Some twelve minutes later on Earth, the loud ring of applause echoed loudly around EMSA's Mission Control Room, while the respective

presidential leaders and their aides, government and military officials and those who were allowed to watch the live transmissions, celebrated with ecclesiastical enthusiasm and the popping of champagne corks at mankind's first steps on Mars.

Meanwhile, Commander Verdon was already making his historical steps across the soft red soil of Mars. At a distance of twenty metres he turned on his heels to survey his own footprints leading back to Mars Red Phoenix Lander-1, she looked wonderful. The bright flashes of sunlight sparkled off the red and gold enamel chassis and she looked like a precious jewel amidst the florescent Martian terrain. His body trembled and shivers of excitement ran down his spine as he lifted the EMSA flag ready to plunge it down into the Martian soil. 'For the whole of humankind,' he said emphatically as he struck the ground with the point of the flag pole. Immediately, loud cheers of celebration rang in his ears from the rest of the excited crew. Relieved that he had finally achieved a primary objective he raised his head to train the camera on Miranda who was now making her descent. In the distance, Bomber had already touched down and was signalling Natalya and Dr Creighton to follow.

Miranda gave a squeak of excitement as she touched her foot on the fresh Martian soil. Then, in the low Martian gravity like a nimble gazelle she bounced over to Commander Verdon.

'Oh, Commander, this is wonderful!'

Verdon understood her display of emotion, he felt the same, the experience was overwhelming.

'Miranda, I can't think of anyone more qualified I would want to share this moment with.'

Verdon's comment took her by surprise, but she was grateful for it, the awkward silence between the two was soon broken.

'Hey! You two lovers, we have a mission to complete, remember!' Verdon and Miranda looked up to see Bomber striding over to Lander-1, leaving Natalya and Dr Creighton kneeling in the red soil filling

sample containers, their first priority should any unforeseen event force an emergency take-off. Verdon left Miranda to do her own sampling and joined Bomber at an angular car sized black basaltic boulder situated some ten metres from the nose of Lander-1. Bomber held out his hand to congratulate his Commander. Verdon took it and they shook hands with the usual competitive strong grip.

‘Well done Commander. We finally made it.’ Bomber said patting Verdon heartily on the shoulder.

‘Yes, we did, at last we are here.’ Verdon said patting him back on the arm with the same enthusiasm. Bomber was about to continue when Dr Creighton yelled over the radio.

‘Commander, come over here and take a look at this!’

Everyone, including Miranda came and gathered around Dr Creighton and Natalya who were crouched examining some Martian rocks. Dr Creighton stood up and held out one of the specimens to the Commander.

‘What do you make of this commander?’ He said excitedly. Verdon swivelled the smooth black stone in his gloved hand, the stone was blunt at one end and tapered to a point at the other.

‘Well it’s heavy, too heavy to be basaltic. Is it metallic?’ He said while looking up at Dr Creighton.

‘Yes Commander, its meteoric iron, and what’s more, this plateau is littered with them!’

‘Do you think they are fragments from the meteorite which caused that impact crater?’ Miranda said pointing to the large crater on the eastern horizon. Before answering, Dr Creighton knelt to the floor and pointed to another meteoric rock sample of the same colour and form embedded in the thick layer of red dust. He faced each one of them in turn as he answered.

‘Probably Miranda, this specimen I have left undisturbed and as you can see by its almost vertical alignment, from blunt to tapered end, it points away from that large impact crater over there - due east. The

topography of the impact crater also suggests that it was struck from an easterly direction.'

'Have any iron meteorites like these shown up on any of the Mars Landers photographs?' Natalya quizzed.

'No Natalya, there's something significant here, I have a hunch as to what it is, but to be sure I will have to photograph and sample the whole site, then analyse the data.'

'It seems Dr Creighton that you already have your work cut out.'

Verdon said.

'Okay everybody, let's get back to work.'

Miranda returned to her Micro-Bio kit to sample the virgin Martian soil at various depths and marked positions around the two Landers, while Natalya and the Commander busied themselves working together to deploy the large solar arrays stored in the fuselage mid ships instrument bays in each of the Landers. This left Bomber alone to scan the area for the source of the alien transmissions. The initial walk had been timed by EMSA to coincide with the landing site of Mars to be in an exact Earth facing position.

Bomber started with a fifty metre radial sweep of the area, which he increased by 25 metres on each run, successively scanning for signals and photographing the terrain. After one hour into the survey he paused due east of the Landers at the base of the large impact crater. He held out the High Frequency Signal Probe at arms length and spun around three sixty degrees. The tell tale neon on the instrument's face remained a dull red. Frustrated with a null result, he tapped the side of the little black box to check for malfunction.

'Commander?' Bomber called over the radio. At this time, Verdon and Natalya were making some last minute adjustments to the second solar array before plugging its power lead input into the fuselage of Lander-1. Verdon dropped his wrench into the work box and turned to see Bomber some two hundred metres away in the distance. His

white latex and enamel space suit gleamed against the dark red slopes of the large impact crater giving away his position.

‘Yes, Bomber, anything?’

‘Not a bloody thing Commander, maybe the HF Probe is dud?’

‘Try a control test on Lander-1.’

Bomber removed a small IR Transmitter from his utility belt and aimed it to actuate the HF Control Transmitter, a small dinner sized transparent dome atop of the fuselage of Lander-1.

Immediately, the red neon on the HF Probe started flashing.

‘Control test positive Commander.’ He said as he de-activated the Transmitter. Disappointed in his failure to find any signal he returned to his perimeter sweep.

Verdon acknowledged him with a wave of the arm and resumed work with Natalya to power up the first Solar Array. Charging of the Landers would take a few days under the limited solar flux of distant Mars.

Each of the advanced Solar Arrays were winched out of the storage bays and driven by remote control to their respective positions some one hundred metres east of the Landers. The caterpillar tracks left in the soft red Martian dust by the mobile units were compacted much like that of driven snow. Once unlocked, Verdon and Natalya mechanically unwound the four large windmill arrays on each unit. Each array unfolded concertina like and glided over the rough surface upon inflated rubber tyres. Verdon worked at the winding winch as Natalya ran ahead of the unfolding array to remove any large boulders from its path. The long power leads took the effort of both astronauts to uncoil back to the Landers.

In the distance Miranda was now sampling the soil in the shade of a large basaltic boulder having concluded that the soil at the base of the boulder received no direct sunlight. Without an ozone layer in the Martian atmosphere biological life, however simple, had little chance of surviving the intense energy of the ultra-violet radiation. She dug down

with her trowel to a depth of one metre, sampling the soil at consecutive layers as she worked. The colour of the soil changed from a bright fluorescent red to a dull lamp black, the two colours represented the different oxides of iron. The upper levels, had been chemically exposed over the millennia to molecular oxygen, while the lower levels were deprived of this powerful sterilising and oxidising agent

Her Bio-Kit was filled with an array of instruments; mostly hand held Bio-Sensor Data Loggers. At each level she took readings of temperature and pH and soil samples for analysis of gaseous and chemically bound nitrogen, carbon dioxide and oxygen and most importantly of all for the presence of molecular water. To her pleasant surprise she found that the deeper she dug the higher the temperature of the soil. The soil surface was a cool twenty degrees below zero, but lower down at half a metre it had risen to an ambient two degrees below. The more she dug the higher the temperature until finally at a depth of one metre the temperature had risen to an 'ambient' five Celsius.

Miranda assumed that somehow volcanic heat was permeating the whole plateau. She loaded the Molecular Water Analyser with her labelled soil samples and then the Bio-Life Molecular Analyser, which would search for the tell-tale organic molecules of life. She waited patiently, trying to contain her excitement as the two instruments did their work. After a tentative few minutes the little electronic meter spat out a printed card with the results. It had detected traces of gaseous, liquid and frozen molecular water. Excited by the results, she resisted informing the others until she had checked the samples using the Bio-Life Molecular Analyser, which took longer to process the samples. First, the machine would automatically wash each sample with sterile buffered water, at the same pH as the soil, and then pass the wash samples through a highly sophisticated gas chromatograph and mass spectrometer each looking for organic molecules such as complex

carbohydrates, simple sugars, amino and nucleic acids. A wide range of nutrients known to support microbial life would then be injected with the soil water and incubated at a range of temperatures and pressures. Miranda knew that a single positive result from any of these tests would not be sufficient to confirm the presence of life since some results could be chemically and not biologically produced. She wanted absolute proof of life, this would come by a visual microscopic examination should she get a positive result.

Twenty painful minutes went by, during which she passed the time by further sampling around the large boulder, finally the machine began to whirl into action printing out its readings. Miranda instantly dropped her sample tray and ran back to the Bio-Life Analyser and snatched the print out from its delivery mouth. She cast her eyes down the consecutive readings and couldn't believe her eyes, she read it again and again, and each time the same conclusion, all of the tests between a depth of zero and twenty centimetres were negative, but the rest incubated under the exact same conditions of temperature and pressure of the Martian soil between twenty five and one hundred centimetres were positive for the presence of microbial life. With her heart pounding and her hands visibly shaking she held up the printout and screamed.

'Commander!'

Immediately the rest of the crew, except for Bomber who was now out of sight, came bounding up. Miranda was leaping about like a puppet on a spring, bouncing around in the low Martian gravity waving the readout in her hand. Verdon got there first and grabbed her by the shoulders to constrain her excitement. She stared at him through the pink of her sun visor, her eyes were on stalks and a look of pure ecstasy beamed in her face.

'What is it Miranda?' Verdon said finally calming her down. Breathless from excitement, Miranda could hardly spit out the words

she had always wanted to speak. She took one large gulp of air and spoke in a loud whisper.

‘Commander, there is life on Mars!’

Her words echoed around in his head like a noisy fair-ground carousel wheel. Without waiting for his response Miranda pulled herself away from the Commander and ran leaping again though the thin Martian air kicking up clouds of fine dust on each landing. Natalya strode after her and grabbed her with both arms, filled with joy at her friend’s discovery she gave her a hearty bear hug. Miranda then ran to Dr Creighton, who voluntarily joined in her celebrations by taking her by the hands to leap him around in a circular dance.

Reluctant to spoil her moment, but finding it necessary Verdon grabbed Miranda and pulled her aside. He needed confirmation, and so would EMSA who were watching everything live.

‘Miranda! Are you sure?’ Miranda still beaming held out the printout in front of him.

‘Every test below a depth of twenty centimetres was positive Commander for the organic chemicals of life, amino acids, proteins, carbohydrates, nucleic acids...it’s all there Commander, every sign of proof, no doubt at all.’

Verdon gave an unconvincing smile, as Mission Commander he wanted absolute proof and he knew Miranda did too.

‘Hold on the celebrations Miranda until you have done a visual confirmation, but still, brilliant, well done.’

‘Sorry Commander, it was that just with so many positive results, I thought...’

‘Do the visual Miranda, and then we will celebrate.’ He said smiling at her and patting her on the back.

The crew quickly returned to dutiful solemn mood, and followed Miranda back to her instrument pack and stood around her as she knelt to the ground to perform the last and vital check for life. She unpacked and activated the High Definition Microscope and in sober silence, one

by one, examined the cultured samples visually, when finished she lifted her eyes from the microscope and gave Verdon an icy stare.

‘What? What is it Miranda? What have you found?’

‘I have checked every vial Commander, including the samples taken immediately from below the soil surface, and they all give the same result.’

‘Yes?’ He said impatiently.

‘Life confirmed Commander!’ Miranda said, beaming wildly.

At Miranda’s declaration of life on Mars, they all joined in her celebration with the shaking of hands and ceremonial chatter and laughter. They were happy that so far the mission, their mission, was a success.

After instructing Yuri in the mother ship to relay the results of the tests back to EMSA they all took it in turns to view the microscopic single celled organisms flourishing in the incubation media of the Bio-Life Molecular Analyser. Miranda explained that the organisms were reproducing at the highest rate under the conditions of near Earth atmospheric pressure and with an oxygen level of eighteen percent. This she, as did the rest, found difficult to believe, why would Martian micro-organisms flourish better under near Earth conditions? They discussed the results while sat around the Bio-Analyser.

‘It seems Commander that the micro-organisms are able to survive and grow beneath the Martian soil at a range of temperatures from minus 24 to 32 degrees above.’

‘How then can they reproduce at such low temperatures and pressures?’

‘That puzzled me as first Commander, but one of the organic readouts shows the organism produces a cellular chemical that is similar in structure to anti-freeze.’

‘The clever little buggers!’ Dr Creighton chirped.

‘What about their low atmospheric pressure tolerance?’ Natalya asked.

‘The cellular coat of the egg shaped organisms is very thick, I suspect that both characteristics maintain normal internal cellular pressures and to obtain external nutrients there must be an active cell wall biochemical pump.’

‘Interesting, cleverly adapted to any environment between Mars and Earth’s.’ Creighton mused.

‘A more detailed analysis of the organism’s cellular structure and metabolic functions will have to wait until we are back on board.’

‘Commander? Where’s Bomber?’ Natalya interrupted, ‘He should have been back by now, and after all we have been making enough noise over the radio about Miranda’s discovery.’

Verdon became immediately concerned, in all the excitement they had forgotten about Bomber.

‘He may be out of communication range,’ he said hoping a simple explanation was the answer. ‘I’ll go and check.’ Verdon left the others musing over Miranda’s find and its implications and straight away made for the impact crater.

On reaching the base of the crater’s gentle slope Verdon stopped and scanned the terrain, Bomber was still no where in sight. He called over the radio.

‘Bomber, where are you?’ He waited for a response, but the radio only returned crackles of interference. He walked further northwards awhile then called again, still no response. ‘Dam it Bomber, where the hell are you, you know the protocol, stay in visual and radio contact.’ He said more to himself than whoever may have been listening. After walking another few hundred metres to reach the north face of the crater he called again.

‘Bomber, its Commander Verdon here, are you there?’ Suddenly the radio burst into life.

‘I am over here Commander, about a hundred metres east of you, I am fine, don’t worry.’ The Commander strained his eyes against the bright Martian sun and in the distance made out Bomber’s faint profile within the shadow of a house sized boulder, Bomber was busy scanning the area with his HF Probe and on reaching him he offered his apologies.

‘Sorry Commander, I was just about to return and join in the celebrations when I picked up an intermittent high frequency pulse.’

‘Have you located its source?’ Verdon enquired restraining himself from giving him a good telling off.

‘No Commander, it comes and then it goes. Just when I think I have locked on to it the signal disappears again. It’s really weird; if I didn’t know better I would say someone’s playing games with me.’ Verdon smiled and slapped his hand on Bomber’s shoulder. ‘Well at least you’ve found something, let’s get back to the Landers, we’ll do a combined search later, after the drop.’ The drop the Commander was referring to was the Mother ship’s low altitude deployment of the Martian Rovers and the experimental Mobile Living Unit. ‘Any way, with a few of us out here we will be better able to triangulate the source position.’

‘Aye, aye Commander, besides I want to give that sweet girl of yours a big hug. Who would have believed it, hey? Life on Mars!’

In the high altitude Martian sun, the pair strode back to base in excited discussion about Miranda’s discovery. There was only one thing on Verdon’s mind, Bomber’s reference to Miranda as *his girl*, ‘were their little interplays that obvious?’ he thought.

Verdon and Bomber had just reached Solar Array 2 when Yuri opened up a ship to ground communication channel.

‘Yes Yuri, what is it?’ Verdon said stopping to talk.

‘Commander, first congratulations, the images of Mars being relayed back to Earth are wonderful. I can’t wait to get down there myself. I have been in constant encoded communication with EMSA, the team

are absolutely ecstatic about Miranda's results, the last communication is from *Fame* at Mission Control, it's an urgent message.' Verdon's heart sank; any communication from the Fame Committee usually meant new orders.

'Go on Yuri, what does it say?'

'I'll read it to you Commander, it says:

'Alien transmissions from Valleris Marineris Gamma have stopped - at Mars Time 11.05 am exactly.'

'What!' Verdon stared at Bomber and by the look on his face; they had both come to the same conclusion. 'Mars time 11:05 am? Can you confirm that Yuri?'

'Yes, Commander, the exact time you placed your foot on Mars!'

'I assume EMSA have come to the same conclusion. Is there any more?'

'Yes, Commander, it finishes with:

'Continue with Prime Directive...'

Verdon was about to call the team together, when something on the distant horizon caught Bomber's eyes.

'Commander!' he shouted, 'Did you see that?' Verdon strained his eyes in the direction Bomber was pointing, south, towards the cliff top edge of the vast rift valley of Valleris Marineris.

'What Bomber? What did you see?'

'A flash of light Commander!'

Verdon lifted his binoculars to the point where Bomber had pointed to see a distant crater with a central black peak.

'According to the range finder it's just over two kilometres away.' Verdon said zooming in.

The steep slopes of the crater wall were streaked with vertical columns of red rock and loose drift dust, it looked climbable. On maximum zoom Verdon trained the field of view on the central coal black peak which was shrouded in a layer of low lying ice cloud enough to mask a clear view.

‘It may be nothing Bomber, just the sun’s reflection, perhaps off that central peak, which could simply be highly reflective crystalline rock.’

‘Perhaps you’re right commander, but I think it’s worth investigating.’

‘There’s no time now Bomber, we have to set up the Guiding Beacons for the drop. We can inspect it after the deployment of the Rovers and the MLQ Unit.’

‘I have plenty of air left in the tanks Commander, enough to walk that distance four times over, besides without a HF signal, visual is all we have.’ The Commander was about to insist when Creighton and Natalya arrived.

‘We saw it too Commander,’ Creighton said, ‘It was in the direction of that distant impact crater.’

Verdon went to rub his chin, as he was in apt to do when making a tough command decision, but realising his helmet was in the way he placed his hands on his hips and stared intently in the direction of the crater.

‘I suppose we could let one of the team go, we don’t need everybody to deploy the beacons, but I don’t like it.’ Verdon was very much aware that due to the nature of this mission, there could be many more surprises in store for them, space exploration was a natural risky business, and this was no time for caution, every possible avenue had to be explored if they were going to accomplish the prime directive.

In the meantime, Miranda having heard the communication from Yuri had dropped her tools and came over to join them.

‘Commander,’ she said slightly out of breath, ‘I agree with Bomber. One of us should go and investigate, that thing down here, wherever and whatever it is, has been transmitting Earth wise for goodness

knows how long, and now when we're here, it decides to shut down? It gives me the creeps just thinking about it.'

'Also Commander, without a HF signal, a visual search may be our only way of finding the source.' Bomber added. 'They waited for Verdon's decision.'

'Okay Bomber, go and investigate, but I insist that this time you stay in radio contact and as soon as we have unloaded the Beacons from the Landers, one of us will come and join you.' Bomber held back the smile from his face, but his heart raced at the prospect of exploring the crater on his own.

'Dr Creighton, start loading Lander-2 with whatever soil samples you have collected and Miranda you load Lander-1. Natalya and I will start unpacking the beacons. Let's get to it!' he said glancing at his watch, 'We don't have much time before Yuri makes his descent.'

Bomber left the team with gusto in his step and headed straight for the distant crater at the edge of the plateau, he scurried across the boulder strewn Martian surface with the ease of a pounding African leopard, leaping in the low Martian gravity over any obstacle that he surmised was surmountable, as his confidence and agility grew so did his pleasure. About halfway across he stopped to rest, seated himself upon a chair sized red oxide encrusted rock and looked back at the two Landers which were their only way home.

The midday sun was at its highest and glared like an inflamed red quartz jewel with radiating streamers of gold and turquoise penetrating through the pink high altitude dust. He checked his Bio-Support readout watch strapped to his left wrist, the air temperature was now fourteen below freezing, the atmospheric pressure was just over one hundredth that of Earth's, but he felt as comfortable as a baby in a teddy suit. In the distance through his digital binoculars he could see that Commander Verdon and Natalya had already unloaded the Beacons and were in the process of laying them along an east-west

approach to the two Landers where Yuri would make his parachute drop, first the MLQ Unit and then the two Rovers. The descent and final drop would be timed to allow Mars Rover-1 to make the closest approach, about two kilometres from the Landers, once on board Rover-1 the team could retrieve the other two deployments.

While resting, Bomber dropped his head and stared analytically at the red Martian soil at his feet. He grabbed a handful in his gloves and lifted it up to his gold tinted visor to get a better look at the weird stuff astronomers and scientists had only dreamed of holding in their hands. It was as fine and powdery as icing sugar, and now thanks to Miranda, he was aware that within its tiny grains thrived a resilient microscopic life form, Martian bacteria. Hypnotised by its enchanting properties, he allowed the fine dust to sift through his fingers and fall to the ground at one third-g it was like watching a movie in slow motion. Suddenly, in his helmet the radio crackled and the sound of Verdon's voice broke his contemplative mood.

'Bomber? Are you okay?' Like a soldier on drill he jumped to his feet and gave a salutary wave.

'Yes Commander, I'm fine.'

'Well don't take too long about it; the mother ship has just entered the dark side and Yuri is preparing for the upcoming drop.'

'Acknowledged Commander, I'm on my way.'

Back at Base Camp, Dr Creighton and Miranda had finished loading their respective soil samples into the bays of the Landers and were now on their way to help Natalya and Commander Verdon. A total of eight Infra-Red Laser Beacons had to be laid along the approach line with a spacing of half a kilometre. Each beacon weighed the equivalent of a sack of potatoes and had to be carried one at a time from the Landers. Verdon and Natalya had just activated the fourth beacon when the others arrived with two more. The low altitude aero braking descent of the mother ship would require last minute trajectory compensation to allow for changes in wind speed and direction, these fine course

corrections would come using the on board guidance computer and a visual line up with the Infra-Red Laser Beacons.

Yuri after entering the dark side of Mars had plenty of time to prepare for descent before firing the powerful Vasmir engines into an aero breaking orbit. For this deployment manoeuvre, timing was absolutely crucial, too soon and the astronaut's would have a long walk for retrieval, if too late there was the danger of hitting one of the Landers with the payload or even the astronauts themselves. Yuri had practised this deployment trajectory many times with Bomber back at EMSA, but still, while orbiting on the dark side of Mars he chose to practice it once more on the simulator. One thing was sure, the drop would take all the skill and nerve of a well trained astronaut and if anyone could bring this off it was Yuri.

As Bomber approached the rim of the crater, a strong gust of wind caught his body almost knocking him to the ground; regaining his balance he immediately radioed the Commander.

'Did you feel that Commander?'

'Yes, we did, it swept across the whole plateau and knocked some of the beacons over. Let's just hope it was a random gust. We will have to reset the beacons, so I will be delayed in joining you, Commander out.'

The crater rose before him at a steep but climbable angle of twenty six degrees, he approached its north face, which was strewn with football sized black basaltic rocks encrusted with red iron oxide. As he began his ascent in the corner of his eyes he caught a flash of light coming from the crater's eastern edge, on arriving to investigate the area he found a quartz-like rock half embedded in the dust and rubble, it was conical in shape and its rounded visible base sparkled in a myriad of colours with the reflected light of the overhead sun. Curious, he knelt down gently at its side, levered it free and lifted its heavy mass with both hands to inspect its full shape and texture. Its tapered end was as sharp as a needle and as he rotated the strange sparkling crystal

in the bright sunlight, he could hear through the thin Martian atmosphere and over his radio, audible and transmitted melodic resonant tones which he surmised emanated from its internal crystalline lattice.

‘Fascinating, the energy of the sunlight must be causing some kind of piezoelectric effect,’ he said as he rotated the rock in the sunlight to play its enchanting music. ‘Perhaps the flash of light I we saw came from this rock or another like it.’ He was about to place the rock back to the ground and search for more when he noticed the red neon of his HF Probe was flashing in tune with the crystal’s melodic tones. Immediately his heart sank, the thought that the HF signals first picked up by Dr Clive Jenkins two years ago may have come from what appeared to be naturally formed rocks filled his mind, and so he searched the rim of the crater with his HF probe to look for more, to his delight and disappointment the whole rim of the crater was littered with the strange crystalline rocks. He radioed back to base and informed Commander Verdon of his find.

‘The whole crater is littered with them Commander and many of these crystalline rocks are transmitting at similar frequencies to the alien transmissions, it seems to be a natural phenomenon.’

‘What about their orientation?’ Dr Creighton said chipping in to the conversation.

‘Well that’s the strange thing Dr Creighton, the ones resonating at the HF frequencies of the alien transmissions are pointing directly skyward, but the others are randomly placed.’

‘Curious?’ Creighton muttered. ‘It seems Commander we have what appears to be a natural phenomenon of randomly orientated crystals, transmitting at a range of frequencies, but within this we have a group of specifically orientated crystals transmitting at specific frequencies space ward.’

‘Interpretation of the facts Dr Creighton?’ Verdon asked with a sense of urgency in his voice.

‘It seems Commander that we have specific space bound transmissions masked by random emissions from the natural terrain.’

‘And your conclusion?’

‘Inconclusive Commander, this could still be a natural phenomenon.’

‘That’s what I was afraid you’d say,’ Verdon said in reply. ‘Bomber carry on into the crater and investigate the central peak, you may find something there, but remember time is getting short.’

‘Aye, aye sir, I understand, Bomber out.’

Bomber made his precarious ascent up the steep slopes of the kilometre wide crater; its rim was over one hundred meters high and was iced with a thick layer of crimson iron oxide dust. On reaching its summit he paused to take in the spectacular view, it was awe inspiring, standing majestically in the centre of the vast basin and rising from the wind swept sand dunes stood a massive black crystalline rock. The four sided black monolithic stone rose out of a mound of yellow drift sand and gradually tapered to a point at its summit. Excited by its strange form and presence Bomber immediately scrambled down into the crater’s interior, as he approached he studied its form and size, he estimated it to be one hundred and twenty metres high and twenty metres across at its base, its surface appeared highly polished like that of black obsidian and it looked as hard as iron. On arriving at its north face he touched its icy smooth surface.

‘Amazing, truly amazing!’ He said to himself admiring its perfectly formed shape. There were no signs of any wind or sand erosion on its glassy flat surface and no traces of the usual red oxidation associated with the basaltic rocks of Mars. Excited by his find he traced his hand across its surface as he walked around its huge base, each face of the black monolithic stone was as flat as the first, and each angular edge was rounded and perfectly smooth, it appeared natural and yet its exactness of form raised doubts in his mind.

‘What on Earth is this?’ He said immediately recognising the incongruity of his own words. Whatever substance it was composed

of, it showed no granular structure and in its glass-like polished surface he saw only his own reflection and wondered if this was responsible for the flash of light which caught his eye. Intrigued, Bomber unclipped his HF Probe from his belt and scanned the black rock, detecting only the intermittent signals from the quartzite rocks scattered along the craters perimeter, he decided it was time to return to base. He checked his utility watch to see that even at an amble stroll he had sufficient time to return to base before the scheduled drop, but then to his surprise he noticed that the needle of his wrist compass was oscillating in the direction of the strange black monolith.

‘It must be magnetic!’ He exclaimed, delighted with the discovery. Investigating a little further he circumnavigated the large stone to find that at all times the compass needle pointed in the direction of the stone. Intrigued by its magnetic properties he radioed in and related his observations to Commander Verdon.

‘Any ideas Commander?’ he said hopefully.

‘Not a clue Bomber,’ Verdon answered while helping Miranda with the erection of the last toppled beacon. ‘What about you Dr Creighton are you getting this?’

Creighton and Natalya having finished setting up one of the beacons were making their way over to Miranda and Verdon at Beacon-4.

‘Yes Commander, I am and I have an idea as to what this stone is.’

‘I thought you might, please enlighten us.’

‘Bomber, can you hear me?’ Dr Creighton asked.

‘Yes, Creighton, loud and clear.’

‘Do you have a geological hammer with you?’

‘Why, yes?’ He said perplexed at his question.

‘I want you to give that black rock of yours a single hard tap with the blunt end of the hammer.’

‘Why?’

‘Just trust me and do it.’

‘Whatever you say Doc,’ Bomber said removing the hammer from his belt and poised it a little way from the rock’s polished black surface.

‘Here we go!’ He said raising the hammer to bring it down hard on its surface, immediately through the thin Martian air a loud metallic resonant ringing emanated from the stone.’

‘Wow, that was bloody weird,’ he said with his hand still tingling from the blow. The resonant ringing of the stone continued, alternating with high and low amplitude beats. It took a full minute to stop its melodic hum.

‘Did you hear that Creighton?’ He said excitedly.

‘Yes, I did Bomber, and the resonant ring confirms my suspicions.’

Commander Verdon immediately butted in the conversation.

‘What the hell is it Creighton, don’t keep us guessing,’ as your apt to do.’ Verdon snapped, the tension in his voice was obvious to the rest of the crew.

‘It is simple Commander, by its shape and its properties of colour, hardness, magnetism and resonance I would say its meteoric iron, it’s a meteorite Commander.’

‘Really?’ Bomber asked fascinated.

‘Yes, Bomber, this type of meteorite is pretty rare and my guess it’s probably the mother of the tiny meteorites I have been collecting all around the plateau.

‘Amazing!’ Bomber said looking up at its full height, ‘But this stone is just sitting here, if it is indeed the meteorite which caused this impact crater shouldn’t it be buried...’

But before Bomber could finish his sentence, the HF Probe attached to his belt suddenly started flashing and beeping, surprised, Bomber removed the probe from his belt and straight away aimed it at the face of the stone. The digital read out on the probe’s panel was off the scale.

‘It has started transmitting, Commander, this *Alien Stone* is giving off high energy radio emission bursts at the same frequencies detected

back on Earth by Dr Clive Jenkins, this is it Commander, *this* is the source of the alien transmissions!’

In the knowledge and excitement of the discovery of the source of the transmission Bomber eagerly set about taking numerous photographs and measurements. Once done he returned to Lander-1 where he found the rest of the crew sat inside in lively discussion about his findings. After studying the data it was clear that the Alien Stone was set at an ecliptic angle, towards the Earth’s orbital axis around the sun, this meant the Alien Stone’s transmissions were pointing Earthward at certain times during the Martian day and year. What perplexed Dr Creighton was why, if the stone was a natural meteorite and the radio emissions were a natural phenomenon, it was only transmitting when directly in line with the Earth.

‘Is it possible that the Alien Stone acts in a similar way to the crystalline rocks that Bomber found?’ Natalya asked.

‘What are you getting at Natalya?’ Verdon asked leaning forward with his hands clasped.

‘I mean that the stone only becomes active when the sun is directly overhead, acting as an energy source.’

‘You may have something there Natalya, it does make sense Commander.’ Creighton chirped.

‘But that would suggest that the Alien Stone is a natural phenomenon.’ Bomber added reclining back in his seat with his hands behind his head.

‘Not exactly Bomber, remember, as you pointed out, as an impact meteorite it should be buried deep below the basin of the impact crater, then there is the fact of its sun ward ecliptic alignment, which may be coincidental, but I am not so sure.’ Creighton added. ‘It is clear Commander we need to investigate it further, we need more information.’

‘I agree with you Creighton, we do not have enough to go on.’ Verdon said before dismissing the crew for a little R&R before the scheduled drop.

Having showered and changed, everyone, except the Commander who was still in his private cabin, were back around the table of the living quarters drinking fresh hot tea and eating toasted crumpets.

‘Here’s to our success so far,’ Creighton said raising his mug, ‘for Miranda having found evidence of microbial life in the Martian soil, for the successful landing and walk on Mars and most importantly of all for Bomber’s discovery of the source of those most elusive and mysterious transmissions, the Alien Stone.’ Before the crew had chance to raise their mugs Commander Verdon came in with a bottle of vintage champagne.

‘If we are going to celebrate, let’s do it properly,’ he said uncorking the bottle. He brought out the glasses and poured them all an ample portion.

‘Here’s to the best team any commander of a mission like this could wish for, cheers everybody and well done.’

After raising their glasses in toast Verdon sat down next to Dr Creighton, avoiding eye contact with Miranda, not wanting to give Bomber the opportunity of making any more suggestive comments. Bomber leaned back in the sofa and took another sip of his champagne.

‘I’m surprised by the champagne Commander; I would not have taken you as one who breaks the rules.’

‘Ah! There is a lot about me that would surprise you Bomber.’ He said taking a gulp of his own.

‘A dark horse, hey Commander? I like that!’ Bomber added.

Miranda caught Verdon’s eyes and gave him a smile. ‘A dark horse indeed,’ she thought thinking about their time together in the Bio-Suit Spraying Booth.

‘We still do not know, whether the Alien Stone transmissions are a natural phenomenon or not.’ He said trying to restore some purposeful structure to the conversation. ‘Have you thought any more about those mini meteorites you found Dr Creighton?’

‘Yes Commander, I have just finished some preliminary calculations about their alignment, I have yet to confirm this by chemical analysis, but because of their similar chemical composition, meteoric iron, I believe that they and the Alien Stone, are from the same meteorite which caused the large impact crater due east of here and the smaller Alien Stone crater at the edge of Valles Marineris, on entry to Mars’ atmosphere the meteor must have broke up into two.’

‘That makes some sense Dr Creighton, but how can you explain the fact that the Alien Stone is not buried deep below the ground?’ Verdon asked.

‘Ah! Now there in lies the mystery, Commander.’ Creighton replied. I have a theory on that, let me explain....’

END OF PREVIEW

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