

[2]: Blackstone Bay Station

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**** Prologue ****

Blackstone Bay is situated 943 miles north-north-west of America's principal station (McMurdo) on the Antarctic mainland. Unlike the other scientific stations, its main research output tends not to influence climate science nor does it tend to assess the native wild species. Blackstone is one of the first Antarctic nature reserves and is thus excluded from all future human colonisation in terms of new research stations, other than the existing Blackstone Bay Station, or oil prospecting endeavours. It covers an area of 100,000 square miles, with roughly quarter of that area covering the nearby oceanic McMurray trench and the associated subsea St James ridge. The reserve is home to 300,000 native penguins and a military-sanctioned contingent of civilian research personnel. Access to the Blackstone Bay, a natural harbour formed by historic volcanic activity, is restricted to short-range helicopter during the autumn and spring months, and is restricted to military spec snow cat during the winter months due to the severe subsea currents, and correlated high-speed winds that circulate off shore.

Blackstone Bay harbour is large enough for three civilian scientific research vessels (approx. 30 people each) along with one military defence vessel (approx. 125 people), however during the coldest periods of the Antarctic winter, the station's harbour and human populations are reduced to skeleton crews to ensure minimal risk to human life and equipment. Research activity naturally slows; however, this is often a chance for the skeleton crews to follow research ideas not ready for full scale funding, or to write up the research of the previous season. It is also a significant period of large scale cryogenic experiments that are either too large for Helium-3 cooling systems, or require cooling but only to temperatures near -90 Celsius.

Each year approximately four of the remaining thirty-two skeleton crew staff are related. While this tends to be couples who happen to be research professionals, at times the station has been host to researcher's families. While this can often be tough, it is a chance for the teenage and undergraduate age children of middle and senior researchers to experience research out in the field and is thus treated as a superb work-experience for all those wishing to pursue science at university levels. Over the last ten years, while perhaps not the focus of the station, the winter solitude has produced two early A-level biology dissertations (penguin population stability studies), three first class undergraduate with honours dissertations (mostly relating to the local geology), two masters dissertations (both within climate science) and one very early Ph.D. from the son of Blackstone Bay's previous principal scientist (studying results from the Ice Cube 2 Neutrino Observatory's sister experiment, the W Boson Liquid Xenon Early-Universe Experiment).

The year of 2031 was particularly harsh. This was a product of unusual El Nino patterns and a decrease in solar activity following an unusually long sun active cycle. While the warmer continents suffered floods or an increase in tornado formation, Antarctica suffered a particularly unusual dip in sea, land and wind temperatures. Regions usually accessible by snow cat were restricted by the Military due to the high risk of engine seizure, while short-range helicopter became too short-range to reach the Blackstone station from any off-shore moored vessel. Further, owing to the reduction in surface waves and currents, indicative of any harbour, any sea access was quickly curtailed by sea ice. In a significant knock to the stability of the reserves Penguin population, the usually strong population crashed to 90,000 as average continental temperatures dipped below -90 centigrade. While this was unfortunate, the severity of the 2031 winter boosted the region in terms of its long term sea ice coverage, alleviating some of the issues of long terms sea-ice melting in the region.

Two, very human, issues caused administration issues for the station in 2031. Firstly, the unusual winter forced the dates for the winter shutdown and switch to skeleton running, to be brought forward three weeks. Secondly, political instability in the middle east, principally terrorist activity, forced the American military to prioritise the placement of its vessels and personnel. In all, this reduced the standard winter-season station skeleton personnel level

to twenty-six rather than thirty-two, and extended the no-travel period from three months to five months. Other stations on Antarctica, including those of British, French, German and Canadian research institutes were similarly forced to reduce their complement of staff and had comparable issues with travel to mainland Chile or Argentina.

Twenty-seven years prior to this, the entirety of Blackstone Bay Station had been lost in a tragic accident, later blamed on the storage of research chemicals close to the main harbour fuel depot. All research data had been lost and there had been no survivors in terms of the serving skeleton crew. The chemical fire had been hot enough to cause severe local ice melting along with the destruction of the station. It was evident that the accident had occurred shortly after the start of the travel embargo as winter winds, encroaching sea ice and the re-freezing of the fire's melt water had effectively erased the station from the landscape. A number of remnants had been found, however other than a trail of human blood leading away from the site, all of these indicated the presence of Diethyl Ether stocks near to the Military's usual stocks of Thermite and naval fuel. A complete shutdown of research activities had resulted for approximately three seasons; however, the geography of the area had allowed the research institutes to effectively petition the US government for a lift in the settlement ban and the funding of a new Blackstone Bay Station

The station is jointly run by the US Antarctic Program (USAP) and the US military.

The below relates to periodic report/transmit records (PRTRs) by Prof. Iain Glover, senior research experimentalist for the Ice Cube 2 and Liquid Zenon experiments, along with those from Col. Dr. Harry Anderson, the 2030 to 2031 deputy military administrator for US stations on the continent. Emergency report/transmit records (ERTRs) are also included below.

PRTR: 01.05.31 19:00 Iain Glover BlackStone Stn:

RESEARCH: Ice Cube 2 data collection issue has been partially resolved with a maximum throughput test showing complete data record for all nodes. Automated acquisition still presenting an intermittent issue. This is possibly due to periodic loss of a Tx/Rx node buffer somewhere within the 3rd level of the network. Critical issue is remote fix for this buffer as melt-ice re-sealing of the last 1000m deep bore hole was completed on 28.04.31. Lt Dr Richard Duncan man-power requested, notification ASAP, proposal is for a 20/80% split of his time for the next two weeks on this buffer issue while maintaining priority on winter readiness of the Liquid Zenon experiment.

RESEARCH: MIT research staff (3 post docs) have arrived and finalised equipment transfer, however research focus has not yet been disclosed to all in the skeleton crew management team, please advise ASAP. Stanford Ice Cube 2 research staff (1 Ph.D. and 2 post docs) have arrived and have prepared amendments to the pre-winter automation schedule. This is projected to require two further weeks. Please advise Ice Cube 2 collaborators of this delay to their automated data feeds.

RESEARCH: Dr Lilly Glover (nee Bradley) requests the following research specimens (see attachment) prior to the winter ship out date. Please advise as to availability.

RESEARCH: University of Atlanta research complement (2 PhDs and 1 post doc) request a replacement part (#APD900-2000, see specs attached) for the gas spectrometer in the gas lab. This is to be fitted to aid oxygen studies within the ice cores of the Blackstone Bay central valley. Berkley Uni (supervisor Dr David Wilks) to advise on appropriate experimental methods for possible publication by Miss Madison Glover and the Atlanta team.

URGENT: Stanford Ice Cube 2 team require urgent assurance that the ordered prototype single-photon detectors are present on the inventory for the forthcoming supply delivery (05.05.31).

URGENT: All Psych reports and clearances to be transmitted to Blackstone Bay admin office prior to ship out date of all non-winter staff. Projected ship out date of 10.05.31

ADMIN: Total winter skeleton crew to be 26, confirmation of staff levels and winter no-travel period requested ASAP. Non-essential equipment to be in winter-safe storage no later than 08.05.31, with full power down as of 09.05.31. All civilian research vessels due to depart morning of 10.05.31 with military vessel departure scheduled for 18:00 10.05.31. Closure and lock-down of unrequired station buildings to be 19:00 10.05.31, emergency lighting, power and heating only.

ADMIN: All critical staff now briefed with respect to this winters skeleton crew commander, Colonel Dr Harry Anderson, arriving 05.05.31.

MEDICAL: All skeleton crew medical examinations completed (with the exception of Col. Dr H Anderson), medical records requested ASAP by Dr James Barber (MD).

SAFETY: Issue regarding this years severe temperatures has been brought to the attention of Major Tim Strathcairn (British Royal Marine winter survival expert) who is to prepare a compulsory course for all in the skeleton crew team for 18:00 on 06.05.31 (Cpt. Janet Swinney to advise w.r.t station safety equipment, stores and winter supplies).

SUPPLIES: All research, food, fuel, medical and safety supplies accounted for. Request additional winter clothing, food and fuel for the extended no-travel period. Request additional snow cat and ice core drilling spares.

COMMS: Projected outages = NONE

Close PRTR [Prof. Iain Glover 19:00 01.05.31]

PRTR: 07.05.31 19:00 Iain Glover BlackStone Stn:

RESEARCH: MIT Team continue to evade open discussion RE: Experimental work citing, in private, the work is of a national security, military nature. Col. H. Anderson has received so such notification. Please advise.

RESEARCH: Arrival 05.05.31 of British and German (two staff members each) collaborating staff. Research focus on deep sonar imaging of McMurray trench. Appropriate data comms links set up with both British and German research stations of east coast. Dutch social scientist and her husband arrival unexpected but countered by reduction in winter season military personnel. Both allowed access to the station under civilian authority, but under the express supervision of Strathcairn due to lack of prior winter experience.

RESEARCH: No further items, but personal thanks for speedy delivery of gas spectrometer parts. Likewise, Stanford are happy with safe arrival of prototype equipment.

MEDICAL: All medical and psych reports received.

ADMIN: Ship-out and no-travel period dates confirmed to be 10.05.31 and period 10.05.31 to 10.10.31 respectively. All prep for winter shut-down have been completed. All supplies in order.

STAFF: Final skeleton crew confirmed following new arrivals (see above). Total numbers this season to be twenty-six (26). See below:

- Colonel Dr Harry Anderson * (*US Mil. / USAP*)
- Lt Dr Richard Duncan (*US Mil. / USAP*)
- Major Tim Strathcairn (*British Mil. / USAP*)
- Capt. Janet Swinney (*US Mil. / USAP*)
- Prof Iain Glover (*Civ. Brown Uni / USAP*)
- Dr Lilly Glover (*Civ. Brown Uni*)
- Miss Madison Glover (*Civ. Berkley Uni*)

- Dr James Barber (*Civ. USAP*)
- Dr Micha Altman (*Civ. MIT Uni*)
- Dr Steven Bell (*Civ. MIT Uni*)
- Dr Mary Cunningham (*Civ. MIT Uni*)
- Dr Steve Allen (*Civ. Stanford Uni*)
- Dr Sarah Church (*Civ. Stanford Uni*)
- Mr Sebastien Chu (*Civ. Stanford Uni*)
- Dr Dennis Rathman (*Civ. Atlanta Uni*)
- Mr Richard Taylor (*Civ. Atlanta Uni*)
- Miss Hannah Ritson (*Civ. Atlanta Uni*)
- Dr Anette Heart (*Civ. Robert Gordon Uni - UK*)
- Dr James Wentworth (*Civ. Imperial College London - UK*)
- Dr Hans-Peter Schiele (*Civ. TU Munich - Germany*)
- Dr Bernt Mehlhorn (*Civ. TU Munich - Germany*)
- Dr Heiner Nijmeijer (*Civ. Eindhoven Uni - The Netherlands*)
- Dr Katherine Nijmeijer (*Civ. Eindhoven Uni - The Netherlands*)
- Mr Tim Silverstein (*Admin*) (*US Mil. / USAP*)
- Mr Melvin Fairbanks (*Cook*) (*US Mil. / USAP*)
- Mr David Stewart (*IT/Admin*) (*Civ. USAP*)

COMMS: Poor upload speeds observed overnight 03.05.31, request HQ server side diagnostics. Please confirm.

Close PRTR [Prof. Iain Glover 19:00 07.05.31]

PRTR: 14.05.31 19:00 Col. Harry Anderson BlackStone Stn:

ADMIN: All winter shut down operations completed, including required rostered actions. Orders received RE: MIT research (#158-A), a frank but restricted discussion with Iain Glover and the civilian research admin team was held (12.05.31). US Military subsidiary order #158-B completed in the affirmative. MIT staff in receipt of orders (#158-C), this is to be completed approx. three weeks prior to the end of the winter travel embargo period, scheduling and progress reports to follow.

ADMIN: All civilian and military vessels departed 10.05.31. Total remaining staff of 26. All supplies, food and equipment inventories checked and completed.

ADMIN: Incident reported between MIT Dr M. Altman and USAP Mr D. Stewart regarding IT provisions for encoded uploads to mainland. Poor communications report of 03.05.31, appears to be fixed with good continuous testing reports. HQ server side IT to ensure encryption support for MIT research data by 20.05.31 at the latest - Please confirm. Altman and Stewart given extra kitchen duties.

MILITARY: British military officer Major Tim Strathcairn requests update to his orders by USAP, US Mil. and British Mil. Strathcairn fully on board with respect to orders #158-A and was instrumental in completion of order #158-B.

RESEARCH: Dr L Glover is rather unsupportive with respect to military oversight of the facility over the winter period, discussion with Dr L Glover (11.05.31) with respect to an amicable mutual understanding including the expected harsh winter conditions and the requirements of MIT actions. Discussion with Prof I Glover with respect to this, with assurances by both that this will not present an issue in the forthcoming months.

RESEARCH: Prof Glover outlined to all civilian staff the need for a clear military chain of command. All staff have signed non-disclosure agreements with respect to accidental shared knowledge of each others research activities. All staff briefed with respect to correct chain of command, required winter protection and rationed resource use.

RESEARCH: Ice Cube 2 Tx/Rx node buffer solution implemented. Testing ongoing with expected full resolution of issue in the forthcoming week.

WEATHER: Early in-the-field indications of the predicted harsh winter. Overnight lows of -84.6 deg C on 11.05.31 followed by further overnight lows of -84.8 deg C on 12.05.31. Strathcairn, Glover and Swinney suspect bay and harbour may freeze early this year. This has prompted the immediate relocation of stores close to the harbours edges on the suggestion of Lt Dr R Duncan.

ADMIN: All staff meetings to be Tuesdays at 17:00 with social between 18:30 and 22:00. Weekend socials for all staff to be Saturdays 19:00 to 23:00. All staff weather briefings to be Mondays at 08:30 and Thursday at 08:30. Military staff physical training to be Monday, Wednesday, Friday and Saturday (optional) all at 07:00. All staff, optional, film evenings scheduled for Wednesday and Friday at 19:00. PRTRs to be scheduled for 19:00, weekly.

MEDICAL: Dr J. Barber has needed to treat two cases of mild frostbite, this has prompted further discussions between Strathcairn and all staff. Lower than average temperatures blamed as staff require adjustment period for the forthcoming months. Im hoping that with increased awareness and the lessons learnt, any further weather related injuries will be kept to a minimum. One other injury, sprained arm, has been reported due to lack of care with site alcohol rules, increased regulation of alcohol consumption imposed, now set at two units maximum per twenty-four hour period.

Close PRTR [Col. Harry Anderson 19:00 14.05.31]

PRTR: 21.05.31 19:00 Col. Harry Anderson BlackStone Stn:

URGENT: Second incident reported between Altman and Stewart (21.05.31 08:45). Current reason is unknown but may have been sparked by lack of sleep in the past week (see below). While Stewart's duties with respect to encrypted data transfer for the MIT group have been completed, further poor upload speeds have caused tensions between the MIT, IT and admin staff. Request HQ server side log files ASAP to aid in Stewart's debugging of this ongoing issue.

WEATHER: Overnight temperatures have dropped to a low of -91 deg C. This has occurred along with a strong land to sea wind that has caused damage to outbuilding #3B (damage to roofing and westward windows). No research equipment has been damaged, but some Snow cat supplies have been damaged beyond repair. Strathcairn and Duncan have rationed the use of the snow cat to mission critical use to ensure the mean time before failure (MTBF) of existing parts is suitable for winter period.

MEDICAL: Altman has sustained a broken leg due to the above incident with Stewart. This was not a product of Stewart's actions (see incident #BSBS-INST-210531-0845), but product of Altman sprinting from main bunk house to kitchen, a distance of 120m, without correct winter footwear. Strathcairn has suggested forced separation of Altman and Stewart unless accompanied by other staff. Social and staff meeting events are unaffected.

MEDICAL: Prof Iain Glover has shown a number of symptoms of early onset winter anxiety (J. Barber has suggested a more relaxed research schedule and L. Glover has taken on some of Iain's admin roles). Note that medication may be warranted in the case of worsening symptoms.

Close PRTR [Col. Harry Anderson 19:00 21.05.31]

PRTR: 28.05.31 19:00 Dr. Lilly Glover BlackStone Stn:

MEDICAL: Iain Glover has had to step down as the civilian administrator due to a number of issues. Medication has been prescribed, however he is prioritising research output. Myself, Harry Anderson and James Barber to pick up Iain's tasks.

RESEARCH: MIT team reports good results, but remain vague. Liquid Zenon experiment has shown the lowest noise floor of any similar experiment in the literature with average read noise across entire detector bank of $0.1 e^{-1}$ electron charge equivalent.

RESEARCH: Other research teams report a slight decrease in productivity due to significant sleep issues in past week (see below).

WEATHER: Further decreases in overnight minimum temperatures, touched -92 Celsius on 25.05.31. Daytime temperatures remain approx. 2 Celsius higher, but are showing a similar downward trend.

ADMIN: Heating in sleeping block A broken during the period 24.05.31 to 27.05.31. This forced all personnel to use sleeping block B for three nights. This proved difficult with respect to space and the pre-existing issues between Altman and Stewart. Heating issue resolved, however sleeping block A remains colder due to inefficient heating. As a remedy for this in the long term, block B will sleep two extra people, main offices will sleep approx. six people, while a rota system, (uniform across all personnel), will be in place for the remaining sleepers to be housed in the main station's mess hall.

Close PRTR [Dr. Lilly Glover 19:00 28.05.31]

ERTR: 05.06.31 07:00 USAP HQ ARGENTINA MAINLAND:

URGENT: Missing PRTR from Iain Glover, Lilly Glover or Harry Anderson. Blackstone bay to respond ASAP. Expected PRTR at 19:00 04.06.31. 12-hour grace period exceeded. Please respond

URGENT: HQ requires urgent check of all personnel, site safety, stock inventory levels and station status checks.

COMMS: No communication issues at our end for either administration or research communications links. Loopback tests confirm connection and speed requirements.

Close ERTR [USAP HQ ARGENTINA MAINLAND 07:00 05.06.31]

ERTR: 05.06.31 19:00 USAP HQ ARGENTINA MAINLAND:

URGENT: 24-hour period exceeded since overdue PRTR. Urgent check in from any authorised staff member required ASAP. Please respond . . .

COMMS: Further testing at HQ servers and loopback tests reveal correct connection and speed for both research communications links and administration communications links.

CRITICAL: RESPOND ASAP, NEXT ERTR IN 6 AND 12-HOURS TIME (01:00 06.06.31) AND (07:00 06.06.31)

Close ERTR [USAP HQ ARGENTINA MAINLAND 19:00 05.06.31]

ERTR: 06.06.31 01:00 USAP HQ ARGENTINA MAINLAND:

MISSION CRITICAL: ANY PERSONNEL OF BLACKSTONE BAY STATION TO RESPOND ASAP. FULL CHECK OF STATION, STORES AND STAFF TO BE CARRIED OUT IMMEDIATELY. ALL PREVIOUS STANDING ORDERS (US MIL. BRITISH MIL. & CIV. USAP) TO BE RECINDED.

Close ERTR [USAP HQ ARGENTINA MAINLAND 01:00 06.06.31]

ERTR: 06.06.31 07:00 USAP HQ ARGENTINA MAINLAND:

MISSION CRITICAL: ANY PERSONNEL OF BLACKSTONE BAY STATION TO RESPOND ASAP.

PRIORITY ONE: EMERGENCY CALL MADE TO NEAREST RESEARCH OUTPOST TO BLACKSTONE BAY. GERMAN MILITARY RESEARCH OFFICERS INFORMED OF POSSIBLE ISSUE AT BLACKSTONE BAY. ETA IS 4 DAYS 6 HOURS. RESPOND ASAP.

COMMS: NEXT HQ ERTR SCHEDULED FOR 6-HOURS TIME AT 13:00 06.06.31

Close ERTR [USAP HQ ARGENTINA MAINLAND 07:00 06.06.31]

ERTR: 06.06.31 09:00 Col. J Mathers US. Mil. McMurdo Stn:

SYSTEM CMD: < *STARTCMD* > RELAY ERTRS VIA INTERNAL STATION INTERCOM < *ENDCMD* >

MISSION CRITICAL: GERMAN MIL. INVESTIGATION TEAM ON ROUTE, NEW ETA 3 DAYS 18 HOURS. MCMURDO, GERMAN STATION AND INVESTIGATION TEAM IN CONTINUOUS RADIO CONTACT. WE WILL CONTINUE TO ISSUE COMMS REQUESTS VIA ERTR AND RADIO.

UNMANED RECON: LONG RANGE UAV DISPATCHED TO BLACKSTONE BAY. THERMAL IMAGING, LIFE-SIGNS AND STRUCTURAL READINGS TO BE TAKEN. VISUAL, AUDIBLE AND RADIO COMMS TO BE ESTABLISHED. ETA 5 HOURS.

PRIORITY ONE: TO ANY CREW - RESPOND ASAP

Close ERTR [Col. J Mathers US. Mil. McMurdo Stn 09:00 06.06.31]

Having made up my mind long ago, I have finally done it, I have finally stretched my being between the panicle of academic prowess and the depravity of murder. Decades ago, I suspect my grandfather discovered the same thing, that the winter of Antarctica is not just cold, it has a chilling psychological secret. A propensity to drive an otherwise sane human to perform experiments beyond the rational, to take risks one would normally hesitate and shy away from, to infer a scientific outcome so dangerous it must be hidden at all costs and to forget all the lessons of humanity and humility.

And so I sit here, in her blood, replicating the same thoughts my grandfather must have had when he murdered my mother. I was told of course, there was no deigning it was my grandfathers blood that had lead out into the wilderness, no deigning that the Diethyl Ether that was suspected as the cause of the Blackstone Bay Stations fire had been logged out of the stations stores hours before the fire, the signature unmistakably his. Despite that, they had hushed those details, glossed over the facts with a white wash of suspected administrative human errors at the station, and had attempted to bury the events twenty-seven years ago in a shroud as thick as the very ice I sit upon.

The stations internal communication system keeps informing be of the imminent arrival of their UAV and the dispatch of the German investigation team. Dont they get the hint, dont they understand there is no one left alive here and that this time there will be no cover up? The secret will remain secret but the world will know this place is cursed. There will be no fire, the blood of the crew will stain this ice, it will seep deep ensuring no winter will erase what Ive done here.

Some of them had been easy. Janet Swinney, that fucking bitch, had been my first and how glorious it had felt. To know it was my actions that now dictated her fate rather than her overbearing, pointlessly out-of-the-loop, stipulation that everything must be done to code and everything subject to the rigors of the US military hierarchy. O how Id had my fun, to use science to torture was a wonderful feeling, vindication that science was an ultimate tool in the hand of man. The liquid Zenon had done its job, injected into her blood stream it had shut her foul mouth forever with its anaesthetic action and the instant freezing of her blood to a dense solid at -108.1 Celsius. Clean, fast and quiet, and of course the satisfaction.

Anderson the pompous fool, had been more difficult. He was seriously that stuck up that he thought he could take me down with his unparalleled, o so robust military training. He neglected to remember that once divided a foe will always fall quickly, and once alone he didnt seem to understand that Id already killed him some hours previously. He had drawn his pistol but Id already seen the symptoms of my plan on his pained forehead, to see him attempt to stop me despite the visible pain Id inflicted was laughable. Still, it had been immensely gratifying to know that the Diethyl Ether I had slipped into his coffee was seeping into his system, corrupting his thinking all the while he had been attempting to devise a plan of action. His dependence on smoking had prompted a most interesting outlet for my scientific scheme, that Diethyl Ether promotes temporary but heavy narcotic dependence behaviour, and indeed has an exceptionally high volatility and low flash point. Id even given him the cigarettes, Id given him the coffee, and now during his final minutes Id tossed him a lighter in a fake sign of let us relax and share a smoke. The heat of the blaze had been particularly interesting.

I find Im shivering, not from the cold, but from the ebbing excitement of my last and most difficult kill. It needed to be done, just the same that Lilly needed to be killed and for just the same reason my grandfather had killed his daughter. For now, I see before me the lifeless body of my own daughter, my own flesh and blood and my own method of creating a perfect circle. I will not look away from those eyes as they contain both love and hatred, just as my own eyes contain love and hatred. A love for the person we were each seeing at that final moment, but a hatred of what humanity can become when we reach that final impasse.

ERTR: 06.06.31 13:25 Col. J Mathers US. Mil. McMurdo Stn:
UNMANED RECON: LONG RANGE UAV ON ROUTE. ETA 35 MINS.
PRIORITY ONE: TO ANY CREW - RESPOND ASAP
Close ERTR [Col. J Mathers US. Mil. McMurdo Stn 13:25 06.06.31]

As I look into those clouded, hard as marble, iced eyes of my daughters I'm reminded of her creativity. Such vibrancy and enthusiasm she had displayed, but then I'd also shown creativity and forethought and yes even outright enthusiasm in my methods of murder. Yes, I've dug deep into my damaged psyche to find the most depraved and disgusting methods I could find, but in doing so I've elevated the outcome to the realms of art, to a dream of a perfect concept with perfect execution. She will never know the creativity I had shown with the others, but she will have known in her last moments that there had been a reason I used a more traditional and altogether less creative method for her. It was to protect her, to ensure that in the end, between her and myself, that her creativity, her drive and her brilliance were able to shine out and not be eclipsed by my jaded sense of artistry or self-indulgent and outright fatal creativity.

That damned drone will find nothing but null. There is no damage to the structure of the station - NULL, there is no evidence of station wide fire or a breakdown of the stations heating system, the temperature remains stable at 19 celsius NULL, there will be no human or animal life-signs NULL. It will attempt to make contact, but with who? For all its complexity and cost, it will return NULL for all observations and provide no clues towards the acts I've been forced to commit.

Before the end, I must complete the circle. If the circle is left broken there can be no salvation for my grandfather or myself, and there can be no final rest for the crews of Blackstone we have killed. I have done what I deem to be my duty, to observe from a scientist's view the nature of the secret, to complete the circle, to provide the murderous evidence necessary to shut this station for ever.

ERTR: 06.06.31 14:15 UAV#DDF-345 @ Blackstone Stn:

FLIGHT STATUS: Observation pattern Delta-9 in effect, altitude 1000ft, thermal, structural and life measurements completed. Commencing second flyby and audio, visual and radio hails.

THERMAL IMAGING: Blackstone Bay Stn temperature within nominal range, no evidence of heat leaks.

STRUCTURAL IMAGING: All station buildings intact, no evidence of fire or further storm damage.

LIFE-SIGNS: All buildings checked, no life-signs, scans will continue on subsequent flybys.

COMMS: No response to hails on any radio frequency in standard Antarctic AM, FM and US Mil. GHz radio bands. No response to visual or audible hails.

AUTO-COMMS: Interfacing to station main computer cluster completed. All station systems report normal operation; full system diagnostics return all-pass on all sub-systems. Commencing remote retrieval of last human activity on compute network, and last 48-hour station black-box records (details to follow).

FLIGHT STATUS: Delta-8 holding pattern to be adopted for detailed scans (1 hour), thereafter standard circular flight pattern for subsequent 5 hours. Approx. 20:00 return to McMurdo.

Close ERTR [UAV#DDF-345 @ Blackstone Stn 14:15 06.06.31]

What was it my grandfather had done? I know he had purposely walked out onto the ice, he had forced himself to be the perpetrator of his own death, but why? I had been told that the tracks twenty-seven years ago had progressed for some five miles up the valley inland, a distance I'm sure, was accompanied by terrible pain. I fail to see how he could have managed it, and what drove one step after another after another.

Perhaps it is time for my own walk, for I have nothing left. The events of the last few days should never be repeated, not now the circle is nearly closed. Indeed, this bay should be abandoned, forever to languish in unrelenting cold, to be scoured by sharp wind-blown ice crystals. Whatever curse has been put on this bay should be noted and forever left as a warning to others.

But I can't leave her, she might be cold, ridged and has died at her own father's hand, but I can't bear to leave her, not even if I know I must. She was my shining light and I've extinguished it as simply as if it were a candle. Now that I look into those solid eyes, the blue with green flecks still visible, I cannot comprehend my actions. Some of the others I can live with, but my only child? NO, I cannot live with the shame of my actions upon her, the decay of my heart as my own actions deprived her of the life that she should have enjoyed

Shame, regret, anguish. Where were these the reason grandfather had walked out onto the ice, the bitter cold breaking down his body? I'm not a religious man, far from it, but there must be some other force of nature we have not yet uncovered. There are too many coincidences, or fortuitous values of the universal constants, there are events that re-occur that many would dub as a curse, but that have to have some unknown reason. I don't believe Blackstone Bay to be cursed, but I do believe there must be something I'm missing, some higher power that must judge me.

Yes, it is time. I must complete the circle to the very last. I must judge myself and be judged by whatever is above us in the hierarchy of the universe. I must follow my grandfathers steps, be ready to make my own final sacrifice, to force my mind open to the external torture of the ice and to be judged, tormented and made to repent for my actions. I must do this to ensure my knowledge of this place and its findings are hidden, but that the events force the authorities to judge this place to be too historically unstable for continued settlement and continued investment.

Shame, regret, anguish. Pain, guilt, remorse, the foul hatred of ones own thoughts and ones own actions. Yes, now it is time for me to repent

ERTR: 06.06.31 18:37 UAV#DDF-345 @ Blackstone Stn:

THERMAL IMAGING: Human activity leaving building #B3, military snow cat inland.

LIFE SIGNS: Single human life-signs recorded.

COMMS: No response to audible, visual or radio hails.

FLIGHT STATUS: Flight pattern Delta-10 with modified elliptical path extending 20 km inland.

Close ERTR [UAV#DDF-345 @ Blackstone Stn 18:37 06.06.31]

What does it mean to be human? We like to console ourselves either with the concept of an everlasting soul, beyond our corporeal form, or the knowledge that we live on through our actions, our writing, our work and our progeny. On both of these ideas, the religious and the secular, I am found wanting. There is some defect here that I am unable to correct and unable to recognise fully. I now present myself to be judged but as yet I do not know the full charge. Yes, I have murdered and I have assaulted, but is this a product of my desire, or a product of a personality defect?

In the end, I must be tried as an animal, a predator, for human I certainly am not. From a religious perspective my soul is now charred, burned beyond recognition by my actions. From a secular view, I have discredited my own writing by my behaviour, my name will always be linked to what horrific things I unleashed here and I have killed, in iced blood by own progeny.

ERTR: 06.06.31 19:48 UAV#DDF-345 @ Blackstone Stn:

THERMAL IMAGING: Snow cat stopped, location 4.87km south-east of Blackstone bay.

LIFE SIGNS: Single human life-signs recorded.

COMMS: No response to audible, visual or radio hails.

FLIGHT STATUS: Modified flight pattern Delta-10 suspended, Delta-8 flight pattern started centred on snow cat position.

Close ERTR [UAV#DDF-345 @ Blackstone Stn 19:48 06.06.31]

I walk . . .

I do not know how far inland I drove in the snow cat, or even why I took it in the first place. Perhaps it was to clear my head and prepare myself for this final journey. Perhaps it was to ensure that there was no going back, to drive the snow cat until it failed or ran out of gas, to be truly outside of walking distance back to warmth, or the empty husk of what we would call civilisation.

Perhaps it was to close this deadly circle, to retrace my grandfathers steps, to re-enact history?

I walk . . .

The cold is starting to bite. My hands becoming numb and the stains left by the blood becoming hard, caked and embedded in the ridges and pores of my skin. I look out over the winter ice, truly I am alone, the snow cat no longer visible as I dip into a wide glacial bowl. The oppressively- dark mountains on either side of the valley are the dirty grey white of old ice, with spots of rough, ice-hewn stone, their slopes sharp. Boulders of jet black stone periodically puncture the white on white of the valley floor.

I walk . . .

ERTR: 06.06.31 20:00 UAV#DDF-345 @ Blackstone Stn:

THERMAL IMAGING: Single occupant of snow cat recorded walking in a south, south-west direction.

COMMS: No response to audible, visual or radio hails.

FLIGHT STATUS: Flight pattern Delta-8 suspended, returning to McMurdo for re-fuelling.

Close ERTR [UAV#DDF-345 @ Blackstone Stn 20:00 06.06.31]

One should know their own body, its strengths, weaknesses and the issues inherent in their psyche. As of right now I cannot feel my hands, and my eyes sting with each blink. I cannot breathe through my nose as the sting of the cold on the inner tissue linings surely indicates my nose, mucus and upper nasal tract are now freezing, consigned to death through frost-bite.

I've removed my outer jacket, the comparative, un-heated, warmth of the snow cats cab a distant memory. I cannot recall why I removed that duck down jacket, but I can still hypothesise as to my internal logic. It was either to subconsciously speed my way to death, easing my judgement, or a conscious decision to ensure that judgement was metered out in the same manner as my grandfathers final walk.

It is a matter of no debate, this winter is colder and thus I should be subject to increased torture, increased judgement. I conclude that despite doing what must be done and to closing this damned cycle, I had a choice and unlike my grandfather I had a choice that was informed by prior knowledge.

Does it not make it worse that I knew of his actions? Does it not make it ever more pre-meditated if I make the same choice when I know details of the killings all those decades ago? Whenever we use logic to make a decision, we ultimately must simplify and abstract the details in order to make a decision. We aim to cover all bases, all probabilities, but in doing so with our limited intellects we must naturally reduce each impacting factor into a base simplified assumption. My grandfather made a choice, perhaps after thought but still with limited knowledge and under the pressures of the moment. In comparison I've also made this choice after thought, but my choice has been informed by previous events. By rights I should have thought of a different way to solve this. My own lifelong anguish of having lost my mother to murder and my grandfather to insanity and ice should have prevented me from setting foot on this ice and most certainly should have predicated my actions away from killing my only daughter.

Being told of the details of those previous events, the sketchy records that were salvaged, one would have thought I'd have arrived at a different conclusion, a different logical outcome. Instead my judgement must be more severe for I came to this place, I brought my daughter, I brought my wife, I put our names down for the winter crew, all with the a-priori knowledge of my grandfathers actions. I began killing in a similar manner to him, becoming the predator of my fellow man. If free-will is our human God given right, I have abused that right by following the same path despite the indications and warnings of the past.

I must be tried, I must be judged and I must repent. But I also must close this circle.

If I have abused and even ignored my free-will, if I've reduced the human lives that were here to mere names on a plaque during a remembrance service, I must include my free-will as an instrument of my redemption. I must force this issue closed, I must stop this seeming hereditary issue from passing to a new generation and I myself must sacrifice myself to this end.

ERTR: 06.06.31 21:00 Col. J Mathers US. Mil. McMurdo Stn:

MISSION CRITICAL: GERMAN MIL. INVESTIGATION TEAM ON ROUTE TO LOCATION OF LAST HUMAN OBSERVATIONS.

PRIORITY ONE: REFUEL AND RESEND UAV ONCE REFUELED. TO AID IN INVESTIGATION AND SITUATION MONITORING. HOURLY SIT-REP

COMMS: NOTIFICATION OF SEVERE EMERGENCY EVENT RELAYED TO ALL PARTIES ON ANTARTICA AND MAINLAND HQ.

Close ERTR [Col. J Mathers US. Mil. McMurdo Stn 21:00 06.06.31]

The UAV has finally gone. All is quiet.

I know I must be close to where my grandfather had finally died, finally close to judgement.

My lungs are struggling to oxygenate my blood, my heart no longer able to prevent a slowdown in blood flow. My vision is blurred and I can no longer bring myself to even move my lips. My legs are on fire, a product of my shattered, cracked, ice-blasted skin. My shoes are covered in a thick layer of frozen urine, blood and vomit. Each step behaves as a razor blade as my knee cap fluids have become gelatinous and slushy with ice crystals. My nose is black in the close peripheries of my vision.

My head reels with thumps of pain as the icy wind batters on the doors of my mind, my forehead likely frozen, the cold seeping into my brain. My ears no longer register the sound of my shoes dragging in the ice, all I can hear is the slow thud of my arrhythmic heart.

I wet myself for the third time, not with urine but with blood, a sure sign my internal organs are damaged, that the liquid of my life is being drained into my bladder and my damaged urinary tract.

I must walk, I must atone, I must repent and I must demonstrate that I have enough self-worth, self-will and self-respect to close this circle. I stab the syringe Ive kept close to my core into my leg. I inject myself with anti-freeze from the snow cat.

I stumble, I fall from the shock of it entering my already compromised system. I crack my pounding head on the sharp boulders of this horrific landscape. I lay still as a new wave of nausea wells up from my guts a likely fatal combination of the cold and the poison of the antifreeze.

All is now white; all is now quiet.

There is no longer pounding in my head, I can no longer hear the thud of my heart.

There is no pain, there is only cold.

I know I have been still for some time, welded to this place by my own body fluids. I cannot see my legs, arms or any other part of my body but strangely I do see. I no longer see as visual images but more of a knowledge of what I have now become. I see the rolling landscape, the mountains looming over me, the bolder of cracked stone, the stains of my trail back to towards the snow cat, the remnants of my corporeal self. I feel the cold becoming one with my body, it doesnt hurt, it comes as a relief, a friend in my final moments.

I look around, white on white on white. The only evidence in existence, a new solid close to an existing solid of jet black stone. I know I am me, but I do not know who I am. Before me, in this strange non-corporeal vision I seem to have, is a body and I know it is my body. I can see entire regions of this body that are solid, or quickly solidifying as its average temperature quickly approaches the average ambient. Who am I and what lead to my unmistakable presence in this strange place. Am I human? Was I ever human? Who was I and what would be remembered of me?

My mind is foggy, restricted in intellect by the ice and restricted in experience by the death of regions of my brain. By any measure of a man I should be dead, but as yet final damnation is still to take me. All I see is white, all I hear is silence, all I smell is fresh snow and ice, all I taste is a cold metallic aftertaste, all I can feel is a gentle numbness, no pain, just numbness.

I awake, for how long I have been asleep I do not know. Again, white on white on white, but something is different. No longer can I observe myself from my non-corporeal but conscious external viewpoint as having any shred of warmth, any shred of non-solidity, any shred of humanity. My body is frozen and sits at the ambient temperature of -91.2 Celsius.

I am dead then . . .

It is strange that no moment came over me of pain or fear, no prolonged sleepiness as I drifted away from consciousness.

White, white, white and white. No longer do the black sharp boulders of the valley floor provide me with a frame of reference, the only, and I mean only reference is a slight difference in shade between the white of the floor and the slight blue tint to the white of the air.

Movement . . .

A white figure, too small yet to identify is walking towards me. As it approaches I can see the figure is naked. I look down, I am naked, washed clean of my prior sins, born anew into this new frame of reference. The figure is closer now, but still very far off. I can make out that the figure is a man, not much older than my prior self, he has a beard as white as the pure white floor he silently walks across.

As he arrives I find myself apprehensive as to the following discussion. Is this to be my new state, forever to discuss the transgressions of my previous self, that self that lies dead on the frozen plane, that self that was defined by feelings of paranoia, that self that was a killer, a torturer, and a coward?

It is my grandfather, as close to the pictures I had of him before the incident all those years ago. His white skin is clean, similarly showing no visible injuries of our walks. He approaches closer but does not speak, his silence only resonating more with my soul than if he had spoken. The shame, the guilt. He embraces me but all I feel is embarrassment, humiliation, shame, guilt, remorse, regret and contempt of my prior self.

Locked in this embrace I know the circle has been closed, there will be no further bloodshed as a result of our family name, no more death associated with that secret and no further human research at Blackstone Bay Station.

He turns away from me, walks a little to the south and looks back. A single tear grows in his left eye, it freezes and silently drops to the floor. He looks away, never to turn his head towards me again.

He walks away, slowly fading into the white, his skin seeming to melt into the blue tinge of the air, his shape slowly becoming ever vaguer and out of focus as the distance between us grows.

In this moment I understand I have been judged. I have been judged by the only man that could understand and the only man that has similarly been judged in this way. He is like me and I like him, we came to find out the same dark secret of this place, chose to act in the same way, chose to kill in the same way, chose to extinguish our daughters in the same way, and ultimately were tested in the same way. I understand he knew that I had made the same choice as him, but that I was the lesser man, for I made that choice with the full knowledge of prior history, that I did not have the courage to take my prior knowledge and use it to find an alternative.

For me the shame is knowing that another man may have had the strength to keep the circle broken, to prevent death, but to achieve the same ends. His tear only acts to plant my acts firmly into damnation, forever locking my soul to this place.

ERTR: 10.06.31 15:30 Dr Alexander Gruhl Blackstone Valley 5.12km South-South-East of Blackstone Bay Station:

MANNED RECON: German Civ. & Mil. investigation team arrived at location at 03:00 10.06.31. Temporary camp made with main strike out after 09:00 10.06.31. Ambient night-time temperature approx. -91 Celsius. Ambient daytime temperature approx. -86 Celsius.

MEDICAL: Single body found at 14:54. Cannot confirm identity but seems to be male. Significant ice damage to body, major blood loss at scene. Fresh snow cover suggests 24 hours approx. since death. Body is to be moved with approx. 10cm of ice in order to preserve scene. Note a lack of winter clothing and significant distance from main station buildings.

MANNED RECON: Blackstone Bay Stations snow cat is inoperative, fuel in tank but looks to be a blown engine fuel regulator line.

MANNED RECON: Full investigation team will progress to main Blackstone Bay Station to confirm earlier UAV recognisance. All radio hails since approx. 20km out have yielded null response. Remote connection via long-range microwave to the stations computer network shows all station sub-systems in operation, but no human logins to the system. Expected ETA at BSBS 16:45. Further ERTR at 19:00.

Close ERTR [Dr Alexander Gruhl Blackstone Valley 5.12km SSE of Blackstone Bay Station 15:30 10.06.31]

I see them attempting to move my body. They photograph, they document, they stare, they wonder, they guess, they judge.

They chip away at the ice, forever disturbing this place.

They mutter to each other, in hushed voices, concerns of what they will find at the station, prophesying death, blood and decay. They know they will not find survivors; they know they will find only death.

They place my solid, lifeless and fragmented body on their own snow cat, strapping me down as if I were to be incarcerated, forever strapped, forever unable to hurt or kill others, forever trapped in my icy tomb.

I see them begin to move off, the mist and murk of the white slowly engulfing their forms, their voices becoming hushed melting into the perpetual silence. They have removed my body from this place and now I am truly alone.

All I know is white. All I experience is silence.

All I know is white. All I experience is silence.

Now, forever in the present, I am alone.

Always, forever in the future, I will be isolated from humanity.

**** *Epilogue* ****

Prof Iain Glover, Ph.D MSc BSc CPhys killed twenty five people on the night of the 3rd June 2031. The reasoning behind the massacre remains a mystery to this day, however certain facts have been released to the public following the investigation and subsequent closure of all military and scientific research outposts in the vicinity of Blackstone Bay.

It is a matter of some scientific interest that the southern hemisphere winter of 2031 was accompanied by unusually high neutrino and cosmic radiation, and that the severe cold allowed scientific data sets of historical importance to be recorded. However, the more bazar and outright disturbing fact from 2031 is that Iain Glover was found in the exact, to the cm, position that his grandfather had been found approximately three decades earlier.

The End....

Suggested Listening: Ennio Morricone: The Thing