REDACTION CITATIONS

The red letters and numbers refer to specific exemptions of the Freedom of Information Act (Title 5 U.S.C § 552) that protect the redacted (blacked out) information.

(b) (1) denotes a redaction to protect information that is properly and currently classified in the interest of national defense, as specifically authorized under the criteria established by Executive Order and implemented by regulations, such as DOD 5200.1-R (Reference (G)). Information is withheld because it contains information concerning military operations and vulnerabilities or capabilities of plans and release of this information would impede the defense of national security.

(b) (2) (High) denotes a redaction to protect personnel, operating procedures, and national security. Information is withheld because release of this information would clearly or could be expected to impede the conduct of the mission, allow circumvention of previously unknown tactics, and place personnel at increased risk for injury or death.

(b) (3) specifically 10 USC §130b denotes a redaction to protect personnel. Information is withheld because release of this information would clearly constitute or could be expected to constitute placing personnel in overseas, sensitive, or routinely deployable units and their family members at increased risk for injury, harm, or death.

(b) (5) denotes a redaction to protect attorney work product or attorney client privilege. Information is withheld because release of this information would constitute or could be expected to be a violation of attorney client privilege and a failure to protect attorney work product.

(b) (6) denotes a redaction to protect personal privacy. Names and identities of personnel as well as other personal identifying information are withheld because release of this information would clearly constitute or could be expected to constitute an unwarranted invasion of the personal privacy of the individuals.

DEPARTMENT OF THE NAVY
NAVAL SPECIAL WARFARE COMMAND
2000 TRIDENT WAY
SAN DIEGO, CALIFORNIA 92155-5599

5830
Ser 004/L115
1 Aug 08

From: Commander, Naval Special Warfare Command
To: Commander, Naval Special Warfare Development Group

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

1. Pursuant to reference (a), the subject investigation has been reviewed and will be retained by the Force Judge Advocate, Naval Special Warfare Command, with a copy of this final review attached.

2. The proceedings, findings of fact, opinions and recommendations of the investigating officer are approved. Specifically, I concur that SOCS Valentines' tragic death occurred as a result of a parachute malfunction most likely caused by poor body position during the opening sequence. The loss of SOCS Valentine resulted from the high risk nature of the training he was conducting and not to systemic failings.

3. The investigating officer's recommendation to debrief, share experiences, lessons learned and create a baseline of information shall provide mitigating information/education that will contribute to future safer operations.

G. J. BONELLI

Copy to:
(b)(3), (b)(6)

DEPARTMENT OF THE NAVY
NAVAL SPECIAL WARFARE DEVELOPMENT GROUP
1636 REGULUS AVE.
VIRGINIA BEACH, VA 23461-2299

IN REPLY REFER TO:
5800
Ser N00/319
28 Jul 08

FIRST ENDORSEMENT on (b)(3), (b)(6) USN, ltr of
30 June 08

From: Commander, Naval Special Warfare Development Group
To: Commander, Naval Special Warfare Command

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

1. I have reviewed the above referenced, redacted Command Investigation. I concur with the findings, opinions, and recommendations, which are unchanged from the original report.

2. I concur with the investigating officer that SOCM Thomas Valentine was killed as a result of an accident during high-risk HAHO parachute training. I hereby direct the Chief Staff Officer to ensure that the Investigating Officer's recommendations for debriefing and data compilation are carried out so that the command may learn from this accident and reduce the risk during future parachute operations.

3. The investigation is returned to the Legal Office for retention and forwarding to COMNAVSPECWARCOM.

Scott P. Moore
SCOTT P. MOORE

(b)(5)

(b)(5)

(b)(5)

(b)(5)

30 June 2008

(b)(1)

From: (b)(3), (b)(6) , USN
To: Commander, Naval Special Warfare Development Group
Via: (1) Group Judge Advocate, Naval Special Warfare Development Group
(2) Chief Staff Officer, Naval Special Warfare Development Group

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

Encl: (1) NSWDG ltr 5830 N00J of 07 May, 2008
(2) Military Freefall (MFF) parachutist diploma (copy)
(3) High Altitude Physiological Screening (HAPs) card (copy)
(4) Voluntary statement of (b)(3), (b)(6) included in line of duty preliminary inquiry (copy)
(5)

(6)

(7)

(8)

The enclosures listed originated with another government agency.

(9)

(10

(11

(12) Transcript of audio from supporting aircraft superimposed on location information obtained from SOCS Valentine's GPS (copy)
(13) Analysis of SOCS Valentine's GPS track by squadron members with investigating officer's and subject matter expert's analysis and notes
(14) Falcon View overlay of release point, body, and rip cord location
(15)

The enclosures listed originated with another government agency.

(b)(1)

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

(16)

The documents described in this paragraph originated with state/local agencies

(17) NAVSPECWARINST 3000.3B (4-16 Freefall Cutaway procedures and 4-17 Freefall Parachute Malfunctions)

(18) NAVSPECWARINST 3000.3B Appendix B-4 Free Fall Jumpmaster Brief

(19) Inspection notes by (b)(3), (b)(6) , Master Rigger, NAVSPECWARDEVGRU, dated 22 February, 2008 (copy)

(20) Examination of Cypress2 1500/35/A serial number 07245 (copy)

(21) Photocopy of altimeter 3069 and 004115 certification due dates

(22) Verbatim statement of (b)(3), (b)(6) on 21 February regarding SOCS Valentine's oxygen system (copy)

(23) Photographs (1-8) taken by command member at scene with analysis from investigating officer and subject matter experts

(24) Gathered and consolidated information provided by squadron members after 13 February, 2008 accident

(25) Investigating officer's notes; qualifications, subject matter experts, list of squadron personnel that assisted in the investigation, conversation with 13 February C-130 pilot, and conversation with Casa Grande EMS personnel

(26)

(b)(1)

(27) Parachute re-pack log (copy)

Preliminary Statement

1. In the investigation of events surrounding the accident on 13 February 2008 involving the death SOCS Thomas Valentine, all reasonably available evidence was collected and reviewed. The investigating officer was informed of his duties and responsibilities on 13 May 2008. An extension for the investigation report was requested and granted for 26 May 2008. (b)(3),(b)(6) was consulted throughout the investigation for procedural issues and administrative assistance.

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

2. The U.S. Naval Criminal Investigation Service (NCIS) investigation field report was made available to the investigating officer. The Pinal County autopsy report, line of duty investigation, and information collected and collated by the squadron were also made available. In addition to an independent review of the available information, the investigating officer conducted an in-depth investigation into details regarding the incident. The investigating officer also used statements, photographs, and information included in the NCIS investigation, as well as information provided by command members who were involved in the 13 February 2008 training evolution. For the equipment and GPS recorded track analysis, the investigating officer consulted two Military Free Fall subject matter experts. Their information, qualifications, and comments are noted on the applicable enclosures.

3. This case was first referred to NCIS on 13 February 2008 by Naval Special Warfare Development Group. The death scene examination was conducted by the Casa Grande Police Department with assistance from command personnel. Squadron personnel involved in the training evolution performed an internal analysis given the information they had on hand at the time.

4. The key event in this investigation is the time from which SOCS Valentine left the ramp of the jump aircraft until the time he pulled his ripcord. Unfortunately, there is no direct evidence indicating what happened in those seconds. The difficulty in this investigation is attempting to determine what happened during that short period of time -- at night, at 130 knots, at 16,000 feet, and with no witnesses during that specific period. Reviewing the audio and video transferred to the command by the supporting aviation assets provided critical information. Although SOCS Valentine's exit was just missed by the camera due to an aspect change, the recorded audio paints a telling picture. SOCS Valentine is able to relay via radio communications that he is in a bad situation and unable to cut-away his main parachute.

5. The only conflicting evidence found in this investigation came from SOCS Valentine's GPS. It is the opinion of the investigating officer that while the GPS information can provide keen insight into certain aspects of SOCS Valentine's

experience, it also comes with inherent discrepancies given the altitudes and speeds in which the equipment is operating.

6. The evidence collected will be maintained and secured by (b)(3) (b)(3), (b)(6) DSN 537-2013 in either copy or original form. The only classified portion of this investigation is enclosure 26, the audio and video recorded by supporting aviation assets. The transcripts of the audio are not classified.

Findings of Fact

1. SOCS Valentine was a qualified Military Free Fall (MFF) Naval Parachutist. [Encl (2)]

2. SOCS Valentine had a current HAPs card. [Encl (3)]

3. SOCS Valentine successfully conducted MFF refresher jump training with (b)(3), (b)(6) on 11 February 2008. [Encl (4)]

4. SOCS Valentine conducted two MFF jumps on 11 February and three MFF jumps on 12 February 2008 to include a day-time full profile rehearsal jump with the same equipment used on the 13 February 2008 jump. [Encls (4)]

5. The information in this paragraph is based on documents that originated with another government agency

his paragraph is based on documents that originated with another government agency [Encl (5)]

6. SOCS Valentine was wearing equipment appropriate for conducting a full profile night MFF High Altitude High Opening (HAHO) training jump and according to the NAVSPECWAR MFF instruction. [Encls (18), (23-7), (24)]

7. At 0315L on 13 February 2008, all members participating in the MFF HAHO received a MFF jump brief by qualified MFF jump-master (MFFJM) (b)(3), (b)(6) [Encl (24)]

8. The weather on 13 February 2008 was acceptable for night MFF HAHO operations. [Encls (23-8), (24)]

9. The information in this paragraph is based on documents that originated with another government agency rec qualified MFFJM SOC R. Forbes. [Encls (7), (24)]

10. Between 0400L and 0420L, on 13 February 2008, SOCS Valentine received the second JMPI from qualified MFFJM SOC M. Weinman. [Encl (24)]

11. The information in this paragraph is based on documents that originated with another government agency [Encl (10)]

12. The information in this paragraph is based on documents that originated with another government agency ıation in this paragraph is based on documents that originated with another government agency [Encls (8), (11)]

13. The information in this paragraph is based on documents that originated with another government agency The information in this paragraph is based on documents that originated with another government agen[Encl (9)]

14. The aircraft's (contracted C-130) altitude at the time of drop was 17999 ft MSL. [Encl (24)]

15. The aircraft did not have a device for recording its airspeed, according to the aircraft flight lead. [Encl (25)]

16. The aircraft flight lead stated that the aircraft was flying at the briefed speed of 130 knots indicated. [Encl (25)]

17. The aircraft that conducted the HAHO operation was equipped with GPS repeaters installed by the squadron members. [Encl (13)]

18. SOCS Valentine's GPS, while receiving a signal through the GPS repeater, recorded speeds near the time of drop of 199 miles per hour. [Encl (12)]

19. This recorded speed differs from the aircraft flight lead's reported speed by approximately 50 knots. [Encls (12), (25)]

20. Numerous readings of SOCS Valentine's GPS while under some type of canopy indicated speeds not possible in vertical decent. Examples include: 196 miles per hour, 186 miles per hour, etc. [Encl (12)]

21. It is unknown if those speeds could be obtained by a distressed jumper on the outside of a hard spin. [Encl (12)]

22. At 0517L, on 13 February 2008, the first squadron member exited the C-130 aircraft on a four-second pull sequence for a night-time MFF HAHO. [Encls (24), (26)]

23. The information in this paragraph is based on documents that originated with another government agency

is paragraph is based on documents that originated with another government agency [Encls (11), (24)]

24. The information in this paragraph is based on documents that originated with another government agency

ation in this paragraph is based on documents that originated with another government agency [Encls (7), (9), (26)]

25. Communications recorded by a supporting aircraft from SOCS Valentine include:

(b)(6)

(b)(6) [Encl (12)]

(b)(6)

(b)(6) [Encl (12)]

c.

(b)(6)

(b)(6)

[Encl (12)]

26. At 0530L, on 13 February 2008, the first jumper of the stick landed safely on the intended drop zone. [Encl (24)]

27. At approximately 0530L, on 13 February 2008, a local Arizona civilian walking his dog heard a noise in the vicinity of the accident scene. The civilian dropped off his dog before returning to investigate. [Encl (24)]

28. At 0544L, on 13 February 2008, the last jumper of the stick landed safely on the intended drop zone. [Encl (24)]

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

29. At 0600L, on 13 February 2008, the personnel involved with the MFF HAHO evolution began the search for SOCS Valentine. [Encl (24)]

30. The information in this paragraph is based on documents that originated with another government agency [Encls (15), (24)]

is based on documents that originated with another government agency

31. At 0721L, on 13 February 2008, emergency vehicles arrived on the scene after receiving a 911 phone call. [Encl (24)]

32. At 0722L, on 13 February 2008, a supporting aviation asset with squadron personnel aboard spotted emergency vehicles in the vicinity of the accident scene. [Encl (24)]

33. Download of SOCS Valentine's GPS indicates a GPS trail that appears to have followed the intended glide path of the drop zone for a short distance. [Encl (13)]

34. After what appears to be a path consistent with the intended drop zone track, the GPS data then unexplainably puts the track/location back closer to the release point and point of impact. [Encl (13)]

35. SOCS Valentine was found within 290 meters from the aircraft MFF HAHO planned release point. [Encl (14), (24)]

36. SOCS Valentine's main parachute ripcord was found at location 12S VB 36710 37026, approximately 250-300 yards from SOCS Valentine's body. [Encls (14), (24)]

37. SOCS Valentine's main ripcord was found 456 meters from the aircraft MFF HAHO planned release point. [Encl (14)]

38. SOCS Valentine's parachute equipment was not disturbed by emergency medical first responders. [Encl (25)]

39. SOCS Valentine had deployed his main parachute. [Encl (23-5)]

40. SOCS Valentine was found with his left riser group (front and rear) firmly routed under his weapon and around the magazine

and magazine well, then in-between the weapon cover and the body. [Encl (23-3)]

41. Accident scene photos show that SOCS Valentine had one line under his right arm. [Encl (23-1)]

42. SOCS Valentine did not deploy his reserve parachute. [Encl (23-5)]

43. The information in this paragraph is based on documents that originated with another government agency brake was released). [Encls (6), (23-5)]

44. SOCS Valentine's left steering toggle remained stowed (left brake was not released). [Encl (23-5)]

45. SOCS Valentine's main parachute, number 000841, was in service with a repack date of 12 February 2008. [Encls (27)]

46. SOCS Valentine's reserve parachute, number 00137, was in service with a repack date of 07 May 2007. [Encls (27)]

47. SOCS Valentine's cut-away pillow was outside of its pocket, but the cut away cables were still in the housing. [Encl (23-1)]

48. The position of SOCS Valentine's harness was severely distorted in relation to a normal parachute harness position. [Encl (23-7)]

49. Both of SOCS Valentine's push-to-talk radio operating devices remained in place on the front chest rack of his operational equipment. [Encl (23-1)]

50. SOCS Valentine left a notable but not significant mark on the ground at the point of impact. [Encl (23-8)]

51. The information in this paragraph is based on documents that originated with another government agency. ation in this paragraph is based on documents that originated with another government agency. [Encl (15)]

52. The information in this paragraph is based on documents that originated with state/local agencies nformation in this paragraph is based on documents that originated with state/local agencies. [Encl (16)]

53. The information in this paragraph is based on documents that originated with state/local agencies.

nation in this paragraph is based on documents that originated with state/local agencies. [Encl (16)]

54. The information in this paragraph is based on documents that originated with state/local agencies.

The information in this paragraph is based on documents that originated with state/local agencies. [Encl (16)]

55. SOCS Valentine's parachute system was inspected on 22 February 2008 by (b)(6) Master Rigger, from Naval Special Warfare Development Group. [Encl (19)]

56. Upon investigation by the Master Rigger, no discrepancies with the parachute system were found that could have caused the parachute malfunction. [Encl (19)]

57. Upon inspection by the command Master Rigger, two altimeters (#3069 & # 004115) were included in the sealed package. Both altimeters were within the calibration window. [Encls (19), (21)]

58. SOCS Valentine was using Cypress 2 1500/35/A serial number 07245. [Encl (20)]

59. Cypress 2 serial number 07245 was in service and working properly. [Encl (20)]

60. The Cypress 2 serial number 07245 did not measure any vertical speed greater than 79 mph below 1500 feet AGL, and therefore did not activate. [Encl (20)]

61. SOCS Valentine's entire oxygen support system was inspected and found to be in proper working order. [Encl (22)]

62. There is no specific description in the NAVSPECWARINST 3000.3B of SOCS Valentine's malfunction. Given that he had risers under his equipment, it could be labeled an entanglement or a horseshoe malfunction. Horseshoe malfunctions can be caused by poor body position. [Encl (17)]

63. The emergency procedures for a horseshoe malfunction are to cut away and deploy the reserve. [Encl (17)]

64. The first step in the cut-away procedure is to throw away the main ripcord. [Encl (17)]

OPINIONS

1. In preparation for a nighttime, combat equipment, high-altitude, high-opening parachute training operation on 13 February 2008, squadron personnel, including SOCS Valentine, followed all military free fall jump procedures according to the COMNAVSPECWARINST 3000.3B. [FF (6), (7), (8)]

2. All jumpers, including SOCS Valentine, were properly prepared to conduct a nighttime MFF HAHO and received the required MFF HAHO jump brief prior to conducting MFF operations on 13 February 2008. [FF (7), (9), (10)]

3. SOCS Valentine received the required two JMPI's prior to conducting MFF training operations on 13 February 2008. [FF (9), (10)]

4. SOCS Valentine was a confident and capable MFF parachutist with over 300 jumps. [FF (1), (2), (3), (4), (5)]

5. SOCS Valentine's O2 system was functioning properly. [FF (12), (61)]

6. Per the MFF jump brief and tactical standard operating procedures, SOCS Valentine executed a line-out exit with a main parachute deployment after a four second count. [FF (7), (23)]

7. It is the opinion of this investigating officer that SOCS Valentine experienced a parachute malfunction during his opening sequence while performing a MFF HAHO line out exit. [FF (40)]

8. SOCS Valentine's malfunction was most likely caused by poor body position. [FF (40), (62)]

9. Even if SOCS Valentine knew his body position was not ideal for initiating the main parachute four second count pull sequence, he would have still pulled at the proper count in order to ensure his safety, the safety of his fellow jumpers,

and to preserve the mission profile. Pulling earlier or later could have resulted in a collision with another jumper. Review of the video offers no insight as to the nature of the malfunction. [FF (7)]

10. The speed of the aircraft was most likely not the cause of SOCS Valentine's poor body position, or the cause of the parachute malfunction. It is the opinion of the investigating officer that the contracted C-130 was traveling the briefed speed of 130 knots. Additionally, there is no mention of any member of the stick having a problem with the aircraft speed. Instead, the inherent complexity of line-out exits with combat equipment most likely caused SOCS Valentine to have such a body position as to cause a malfunction. [FF (15), (16), (17), (18), (19), (20), (21)]

11. SOCS Valentine was able to communicate via radio transmissions under canopy, indicating that he was experiencing a malfunction, yet still had the mental and physical capacity to operate his radio and relay information. [FF (24), (25)]

12. The NAVSPECWARINST 3000.3B does not have a specific description for the malfunction that SOCS Valentine experienced. Parachute entanglements in the 3000.3B are described along the lines of entanglements with other jumpers. [FF (62), (63), (64)]

13. The 3000.3B describes a horseshoe malfunction as a total malfunction. A horseshoe malfunction is generally briefed as occurring during opening sequence, either HAHO or High Altitude Low Opening (HALO), as a result of poor body position and resulting in a line wrapping around some part of the body or equipment. Typically, a horseshoe malfunction involves the pilot-chute. [FF (62), (63)]

14. A partial malfunction is described as a malfunction that "slows the rate of descent of the jumper, but not enough to land safely." SOCS Valentine's situation appears to be somewhere in between. [FF (25), (40), (62), (63), (64)]

15. SOCS Valentine's situation should be described as a parachute entanglement. In essence, SOCS Valentine was

entangled in his own parachute. [FF (23), (40), (62), (63), (64)]

16. Given the fact that SOCS Valentine's left risers were firmly lodged under his weapon on his left side, it is the opinion of the investigating officer that the SOCS Valentine found himself in a partial malfunction situation with his main canopy deployed but entangled in his combat equipment -- specifically, under his weapon and weapon cover. [FF (40)]

17. It is likely that SOCS Valentine dropped his main ripcord simply because he knew he was in a perilous situation, regardless of cut-away intentions, in order to free up his right hand to work the problem. [FF (36), (37), (64)]

18. It is possible that SOCS Valentine attempted to perform cut-away procedures given that his ripcord was found 250 - 300 yards from the accident location. The first step in a cut-away procedure is to throw away the main rip cord. [FF (36), (37), (64)]

19. Communications from SOCS Valentine indicate that he could not cut his main parachute away. After listening to the audio of SOCS Valentine, it is the investigating officer's opinion that this implies SOCS Valentine intended to, or was trying to, cut-away his main parachute, but was unable to do so because of undetermined circumstances. [FF (25), (37), (64)]

20. The data recorded by SOCS Valentine's GPS provides a picture of what happened; however, caution should be exercised in placing too much emphasis on this data. Some speeds recorded while under canopy do not appear to be possible. [FF (17), (18), (19), (20), (33), (34), (35)]

21. A key time period of 21 seconds in SOCS Valentine's GPS coverage is the time in which SOCS Valentine's track is placed back closer to the release point and point of impact from what appeared to be a track that mirrored the intended MFF profile. That time period recorded a speed of 196 miles per hour. This recorded speed is considered inaccurate based upon all other evidence compiled. SOCS Valentine's speed should have been less than 130 mph. [FF (34)]

22. (b)(6) [FF

23. It is possible, but unlikely, that SOCS Valentine was able to fly the canopy. The GPS track indicated an initial flight path; however, that GPS track contains an unexplained rapid return to near the release point, point of impact, and location of the main rip cord. [FF (34)]

24. Regardless of the GPS data, SOCS Valentine's malfunction most likely occurred upon exiting the aircraft. His GPS track after the malfunction provides some insight to what happened post malfunction, but does not change the prognosis of a malfunction during the main parachute opening sequence. [FF (33), (34), (35), (40)]

25. It is possible that SOCS Valentine released his right steering toggle in order to control whatever canopy he had. [FF (43)]

26. Given the irregular position of the parachute system as noted at the accident scene, it is unlikely SOCS Valentine was able to reach his reserve ripcord or his left steering toggle with either hand. [FF (48)]

27. It may have been possible for SOCS Valentine to reach his left push-to-talk (radio operating device) with his left hand, or his right push-to-talk with his right hand. It is unknown if either hand could have reached the *other* push-to-talk. Additionally, it is unknown which radio SOCS Valentine was communicating from while under some sort of canopy. [FF (48), (49)]

28. It is the opinion of the investigating officer that SOCS Valentine did not perform a cut away for two possible reasons:

a. SOCS Valentine was unable to cut-away due to the immobilization of his left arm (broken or pinned), and either

could not reach his cut-away pillow with his right arm or could not overcome the tension on his cut-away system due to the irregular and distorted position of the parachute harness caused by the malfunction. It is unlikely SOCS Valentine could reach his reserve rip-cord with either hand.

b. SOCS Valentine understood that performing a cut-away would most likely cause a further entanglement with his reserve parachute into his main parachute. Therefore, flying whatever canopy he had could have been seen as a better option.

Especially considering the recorded audio transmissions, this investigator feels that situation (1) is the most likely. [FF (39), (40), (41), (42), (43), (44), (47), (48), (64)]

29. Given the severity of the malfunction, the left side of the parachute would have been almost completely (if not entirely) collapsed. The right side would then have been severely distorted. It is unlikely that the right steering toggle would have provided enough control to fly even the shortest distance. [FF (40), (43), (44), (48)]

30. Though the GPS recorded nearly five miles of horizontal distance covered, that distance could have been accounted for in a much smaller vertical column if SOCS Valentine was experiencing severe spins or undulations. [FF (33), (34)]

31. SOCS Valentine had enough of a canopy to partially slow his descent to the point that his cypress did not automatically deploy the reserve parachute. The evidence does not indicate that SOCS Valentine would have reached a rate of descent greater than 79 mph below 1500 AGL. [FF (42), (58), (59), (60)]

32. SOCS Valentine experienced a malfunction upon exiting the aircraft, probably as a result of poor body position, causing his left risers to become entangled with his combat equipment. As a result of the malfunction, SOCS Valentine was unable to cut-away his main parachute and deploy his reserve. SOCS Valentine died as a result of an impact with the ground under an entangled main parachute. [FF (23), (40), (42), (52)]

Recommendations

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

1. The Naval Special Warfare Development Group Air Operations Department and the squadron personnel involved in the post-accident events were able to provide key insight as to the nature of the events surrounding the death of SOCS Valentine. Given the dangerous nature of SEAL training, all squadron members should be prepared to handle such a situation, especially if command members are amongst the first to an accident scene. The squadron members involved in the accident and post accident activities should debrief their actions, lessons learned, and experiences to the command group and other squadrons.

2. Nighttime MFF HAHO operations are inherently dangerous. The squadron involved followed all procedures according to instructions and standard operating procedures. Every effort should be made to document each and every MFF HAHO training operation in order to provide a baseline of information regarding jump profiles, equipment worn, environmental conditions, and lessons learned. Sharing this information with other squadrons will prove to be the key to future, safe jump operations.

3. This report does not recommend any corrective, disciplinary, or administrative action.

(b)(3), (b)(6)

NAVAL SPECIAL WARFARE DEVELOPMENT GROUP
1600 TITBULUS AVE.
VIRGINIA BEACH, VA 23461-9289

IN REPLY REFER TO:
5800
N00J
7 MAY 08

From: Commander, Naval Special Warfare Development Group
To: (b)(3), (b)(6) USN

Subj: COMMAND INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE DEATH OF SOCS THOMAS VALENTINE, USN, ON OR ABOUT 13 FEB 08 IN MARANA, ARIZONA

Ref: (a) JAG Manual, Chapter II

1. Per reference (a), specifically Part F, you are hereby appointed to investigate the facts and circumstances surrounding the death of SOCS Thomas Valentine, USN, that occurred on or about 13 February 2008 in Marana, Arizona.

2. The purpose of this inquiry is to determine what happened to cause this accident and why. An investigation has already been completed that was intended to answer the question whether or not SOCM Valentine was in the line of duty at the time of the accident. To complete this investigation, you will need to review the Naval Criminal Investigative Service investigation into the incident, the medical examiner's report, the line of duty investigation, and any other relevant document that may have been excluded from those reports. Also, you should consult with a qualified jumpmaster and solicit his written opinion.

3. If you have not already done so, you should also read Chapter II, Parts A, B, C and F of reference (a) in their entirety before beginning your preliminary inquiry.

4. You may seek legal advice from (b)(3), (b)(6) USN, during the course of your preliminary inquiry. You should also coordinate your investigation with (b)(6) (b)(6) of

5. By copy of this appointing letter, the Legal Office is directed to furnish the necessary clerical assistance in preparing the results of your preliminary inquiry.

(b)(3), (b)(6)

By direction

FOR OFFICIAL USE ONLY

ENCLOSURE (1)

United States Army

John F. Kennedy

Special Warfare Center and School

TO ALL WHO SHALL SEE THESE PRESENTS GREETING

BE IT KNOWN THAT HT2 THOMAS J. VALENTINE, (b)(6) IS A

Graduate

OF THE

MILITARY FREE FALL PARACHUTIST COURSE (2E-SI4X/ASI4X/011-ASIW8)
03-Jan-96 - 02-Feb-96

US Army

John F. Kennedy Special Warfare Center and School

IN TESTIMONY WHEREOF, AND BY AUTHORITY VESTED IN US WE DO CONFER UPON THE INDIVIDUAL THIS

Diploma

ATTEST GIVEN AT FORT BRAGG, NORTH CAROLINA THIS 2ND DAY OF FEBRUARY 1996

COMMANDANT

ENCLOSURE (2)


PHYSIOLOGICAL TRAINING
This is to certify that the following person has met the requirements for the USAF Physiological Training Program
NAME
Valentine, Thomas J.
GRADE
E-6
PHASE OF TRAINING
HAP Refresher
ISSUE DATE
5 Apr 07
EXPIRATION DATE
PHYSIOLOGICAL TRAINING UNIT
AMDS/SGPT
Langley AFB, VA 23665
(b)(3)
(b)(3)

ENCLOSURE (3)

DEPARTMENT OF THE NAVY

VOLUNTARY STATEMENT

1. Place NSWDG
2. Date 25 FEB 08

I, (b)(3), (b)(6) USN, make the following and voluntary statement to _____, Whom I know to be _____. I make this statement of my own free will and without any threats or promises extended to me. I fully understand that this statement is given concerning my knowledge of the training death of SOCS Thomas VALENTINE. I conducted refresher training with SOCS Valentine on Monday FEB11, 2008. We then did 2 training jumps with SOCS Valentine being on my plane and in my stick. We conducted 3 more training jumps on Tuesday FEB 12, 2008. The last jump that Tuesday was a dress rehearsal for the next morning. I was SOCS Valentine's jumpmaster and he jumped with me personally on each jump prior to the accident. I observed a confident and capable jumper in SOCS Valentine on all previous jumps. SOCS Valentine was jumper #22 the morning of 13 Feb. I was jumper #24 and last out of the plane. I observed SOCS Valentine leave the plane. I saw nothing out of the ordinary with his exit, although visual observation after about 1 second is impossible to see. My comms were not working prior to leaving the plane and I did not hear any comms during the jump.

V/R

(b)(3), (b)(6)

ENCLOSURE (4)

NAVAL SPECIAL WARFARE COMMAND

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Page(s) ENCLOSURES 5-11,

Withheld entirely at this location. One or more of the following explain this decision:

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__✓__Documents originated with other government agency(ies). Referred for review and direct response to you.

_____Pages contain information furnished by other government agency(ies). We will advise you of releasability of information following consultation with agency(ies).

Comments: DOCUMENTS REFERRED TO NCIS

IO's comment: Below information / GPS analysis and communications overlay was conducted on or about 13-15 February by:

(b)(3), (b)(6)

- Points are the GPS downloaded track from SOCS Valentine (F12)
- Blue indicates FD4's (another HALO jumper in the stick) GPS data for comparison.
- [illegible] text represents F12's transmissions.
- [illegible] text followed by [illegible] text (last transmission) represents either / or in the communications analysis.

JUMPER # 22 F12 COMM LOG

	DATE	ALT	LEG D	LEG T	LEG SPD	COURSE	POSITION
1	2/13/2008 5:16:57 AM	18400 ft	0.5 mi	0:00:09	198 mph	230° true	N32 52.679 W111 40.118
2	2/13/2008 5:17:06 AM	18385 ft	0.4 mi	0:00:07	199 mph	231° true	N32 52.403 W111 40.511
3	2/13/2008 5:17:13 AM	18161 ft	175 ft	0:00:01	119 mph	229° true	N32 52.192 W111 40.821
4	2/13/2008 5:17:14 AM	18107 ft	174 ft	0:00:01	118 mph	229° true	N32 52.173 W111 40.847
5	2/13/2008 5:17:15 AM	18121 ft	225 ft	0:00:06	26 mph	275° true	N32 52.155 W111 40 873

#24 LAST JUMPER BOOTS OFF RAMP

6	2/13/2008 5:17:21 AM	17797 ft	44 ft	0:00:01	30 mph	54° true	N32 52.158 W111 40.917
7	2/13/2008 5:17:22 AM	17752 ft	36 ft	0:00:01	24 mph	345° true	N32 52.162 W111 40.910
8	2/13/2008 5:17:23 AM	17716 ft	38 ft	0:00:01	26 mph	300° true	N32 52.168 W111 40.912
9	2/13/2008 5:17:24 AM	17678 ft	38 ft	0:00:01	26 mph	296° true	N32 52.171 W111 40.918
10	2/13/2008 5:17:25 AM	17644 ft	50 ft	0:00:01	34 mph	209° true	N32 52.174 W111 40.925
11	2/13/2008 5:17:26 AM	17614 ft	57 ft	0:00:01	39 mph	187° true	N32 52.167 W111 40.930
12	2/13/2008 5:17:27 AM	17579 ft	527 ft	0:00:07	51 mph	109° true	N32 52.158 W111 40.931
13	2/13/2008 5:17:34 AM	17361 ft	523 ft	0:00:04	89 mph	172° true	N32 52.129 W111 40.833
14	2/13/2008 5:17:38 AM	17196 ft	287 ft	0:00:05	39 mph	58° true	N32 52.044 W111 40.818
15	2/13/2008 5:17:43 AM	16910 ft	263 ft	0:00:02	90 mph	162° true	N32 52.069 W111 40 771
16	2/13/2008 5:17:45 AM	16801 ft	0.2 mi	0:00:07	84 mph	155° true	N32 52.028 W111 40.755
17	2/13/2008 5:17:52 AM	16483 ft	0.1 mi	0:00:02	181 mph	144° true	N32 51.900 W111 40.683
18	2/13/2008 5:17:54 AM	16384 ft	374 ft	0:00:02	127 mph	157° true	N32 51.829 W111 40.622
19	2/13/2008 5:17:56 AM	16284 ft	368 ft	0:00:02	125 mph	139° true	N32 51.773 W111 40.593
20	2/13/2008 5:17:58 AM	16188 ft	238 ft	0:00:02	81 mph	153° true	N32 51.727 W111 40.546
21	2/13/2008 5:18:00 AM	16087 ft	368 ft	0:00:02	125 mph	136° true	N32 51.692 W111 40.525
22	2/13/2008 5:18:02 AM	15985 ft	261 ft	0:00:02	89 mph	157° true	N32 51.649 W111 40.475
23	2/13/2008 5:18:04 AM	15896 ft	333 ft	0:00:02	114 mph	123° true	N32 51.609 W111 40.455
24	2/13/2008 5:18:06 AM	15798 ft	233 ft	0:00:02	79 mph	146° true	N32 51.580 W111 40.400
25	2/13/2008 5:18:08 AM	15627 ft	0.1 mi	0:00:03	149 mph	317° true	N32 51.548 W111 40.375
26	2/13/2008 5:18:11 AM	15459 ft	350 ft	0:00:02	119 mph	137° true	N32 51.626 W111 40.462
27	2/13/2008 5:18:13 AM	15344 ft	0 2 mi	0:00:05	159 mph	150° true	N32 51.585 W111 40 415
28	2/13/2008 5:18:18 AM	15056 ft	0 1 mi	0:00:05	78 mph	140° true	N32 51.420 W111 40.300
29	2/13/2008 5:18:23 AM	14826 ft	325 ft	0:00:02	111 mph	132° true	N32 51.347 W111 40.229

ENCLOSURE (12)

OF 3

30	2/13/2008 5:18:25 AM	13657 ft	365 ft	0:00:01	62 mph	156° true	N32 51.311 W111 40.182
31	2/13/2008 5:18:29 AM	13401 ft	169 ft	0:00:02	58 mph	167° true	N32 51.256 W111 40.155
32	2/13/2008 5:18:31 AM	13275 ft	466 ft	0:00:03	106 mph	134° true	N32 51.229 W111 40.146
33	2/13/2008 5:18:34 AM	14010 ft	1.1 mi	0:00:21	196 mph	336° true	N32 51.177 W111 40.080
34	2/13/2008 5:18:55 AM	12483 ft	165 ft	0:00:03	37 mph	103° true	N32 52.078 W111 40.567
35	2/13/2008 5:18:58 AM	12274 ft	54 ft	0:00:01	37 mph	96° true	N32 52.072 W111 40 536
36	2/13/2008 5:18:59 AM	12209 ft	294 ft	0:00:05	40 mph	91° true	N32 52.071 W111 40 526
37	2/13/2008 5:19.04 AM	11960 ft	79 ft	0:00:03	18 mph	207° true	N32 52.071 W111 40 468
38	2/13/2008 5:19:07 AM	11733 ft	419 ft	0:00:08	36 mph	257° true	N32 52.059 W111 40.475
39	2/13/2008 5:19:15 AM	11284 ft	100 ft	0:00:02	34 mph	320° true	N32 52.044 W111 40.555
40	2/13/2008 5:19:17 AM	11167 ft	44 ft	0:00:01	30 mph	163° true	N32 52.057 W111 40.568
41	2/13/2008 5:19:18 AM	11121 ft	124 ft	0:00:03	28 mph	78° true	N32 52 050 W111 40 565
42	2/13/2008 5:19.21 AM	11003 ft	88 ft	0:00:01	60 mph	145° true	N32 52.054 W111 40.5413
43	2/13/2008 5:19:22 AM	10946 ft	156 ft	0:00:01	106 mph	121° true	N32 52.042 W111 40.532
44	2/13/2008 5:19:23 AM	10889 ft	128 ft	0:00:03	29 mph	54° true	N32 52.029 W111 40.506
45	2/13/2008 5:19:26 AM	10651 ft	59 ft	0:00:01	40 mph	89° true	N32 52.041 W111 40.485
46	2/13/2008 5:19:27 AM	10593 ft	411 ft	0:00:06	47 mph	292° true	N32 52 041 W111 40 474
47	2/13/2008 5:19:33 AM	10254 ft	86 ft	0:00:02	29 mph	146° true	N32 52.066 W111 40.548

48	2/13/2008 5:19:35 AM	10143 ft	75 ft	0:00:03	17 mph	63° true	N32 52.054 W111 40.539
49	2/13/2008 5:19:38 AM	9976 ft	131 ft	0:00:03	30 mph	60° true	N32 52.060 W111 40.526
50	2/13/2008 5:19:41 AM	9811 ft	109 ft	0:00:04	19 mph	64° true	N32 52.070 W111 40.503

51	2/13/2008 5:19:45 AM	9599 ft	0.1 mi	0:00:50	8 mph	41° true	N32 52.078 W111 40 484

52	2/13/2008 5:20:35 AM	6955 ft	134 ft	0:00:05	18 mph	62° true	N32 52.155 W111 40 406

53	2/13/2008 5:20:40 AM	6688 ft	34 ft	0:00:01	23 mph	288° true	N32 52.166 W111 40.382
54	2/13/2008 5:20:41 AM	6641 ft	27 ft	0:00:01	18 mph	70° true	N32 52.168 W111 40.389
55	2/13/2008 5:20:42 AM	6539 ft	105 ft	0:00:03	24 mph	97° true	N32 52.169 W111 40.384

56	2/13/2008 5:20:45 AM	6390 ft	182 ft	0:00:04	31 mph	90° true	N32 52 167 W111 40.363
57	2/13/2008 5:20:49 AM	6196 ft	312 ft	0:00:06	35 mph	274° true	N32 52.167 W111 40.328
58	2/13/2008 5:20:55 AM	5914 ft	20 ft	0:00:01	14 mph	83° true	N32 52.170 W111 40.389
59	2/13/2008 5:20:56 AM	5868 ft	108 ft	0:00:02	37 mph	343° true	N32 52.171 W111 40.385
60	2/13/2008 5:20:58 AM	5769 ft	85 ft	0:00:03	19 mph	170° true	N32 52.188 W111 40.391
61	2/13/2008 5:21:01 AM	5625 ft	0.1 mi	0:00:38	11 mph	87° true	N32 52.174 W111 40.388

62	2/13/2008 5:21.39 AM	3828 ft	206 ft	0:00:04	35 mph	272° true	N32 52 179 W111 40.271

63	2/13/2008 5:21:43 AM	3662 ft	0.1 mi	0:00:11	45 mph	277° true	N32 52.180 W111 40.311
64	2/13/2008 5:21:54 AM	3235 ft	137 ft	0:00:05	19 mph	242° true	N32 52.194 W111 40.451
65	2/13/2008 5:31:59 AM	3039 ft	88 ft	0:00:03	20 mph	160° true	N32 52.184 W111 40.474
66	2/13/2008 5:22:02 AM	2880 ft	97 ft	0:00:02	33 mph	359° true	N32 52.171 W111 40 469
67	2/13/2008 5:22:04 AM	2795 ft	124 ft	0:00:03	28 mph	197° true	N32 52.187 W111 40 469

ENCLOSURE (12)

68	2/13/2008 5:22:07 AM	2667 ft	220 ft	0:00:06	25 mph	30° true	N32 52.167 W111 40.476
69	2/13/2008 5:22:13 AM	2416 ft	127 ft	0:00:03	29 mph	309° true	N32 52.198 W111 40.455
70	2/13/2008 5:22:16 AM	2292 ft	55 ft	0:00:01	38 mph	63° true	N32 52.212 W111 40.474
71	2/13/2008 5:22:17 AM	2249 ft	79 ft	0:00:02	27 mph	355° true	N32 52.216 W111 40.465
72	2/13/2008 5:22:19 AM	2166 ft	12 ft	0:00:01	8 mph	172° true	N32 52.228 W111 40.466
73	2/13/2008 5:22:20 AM	2126 ft	97 ft	0:00:02	33 mph	129° true	N32 52.226 W111 40.466
74	2/13/2008 5:22:22 AM	2041 ft	242 ft	0:00:04	41 mph	34° true	N32 52.216 W111 40.451
75	2/13/2008 5:22:26 AM	1879 ft	466 ft	0:00:41	8 mph	271° true	N32 52.250 W111 40.425
76	2/13/2008 5:23:07 AM	1547 ft	2 ft	0:01:59	0.0 mph	0° true	N32 52.251 W111 40.516
77	2/13/2008 5:25:06 AM	1536 ft					N32 52.251 W111 40.516

ENCLOSURE (12)

3 OF 5

ENCLOSURE (5)

GPS analysis conducted by Squadron members

Investigation into accident involving T. Valentine , USN
Investigating Officer

(b)(3), (b)(6)

Original slides first followed by slide with IO notes

- Received from (b)(3), (b)(6) on 13 May, 2008
- Analysis conducted on or about 13-15 February, 2008 by:

(b)(3), (b)(6)

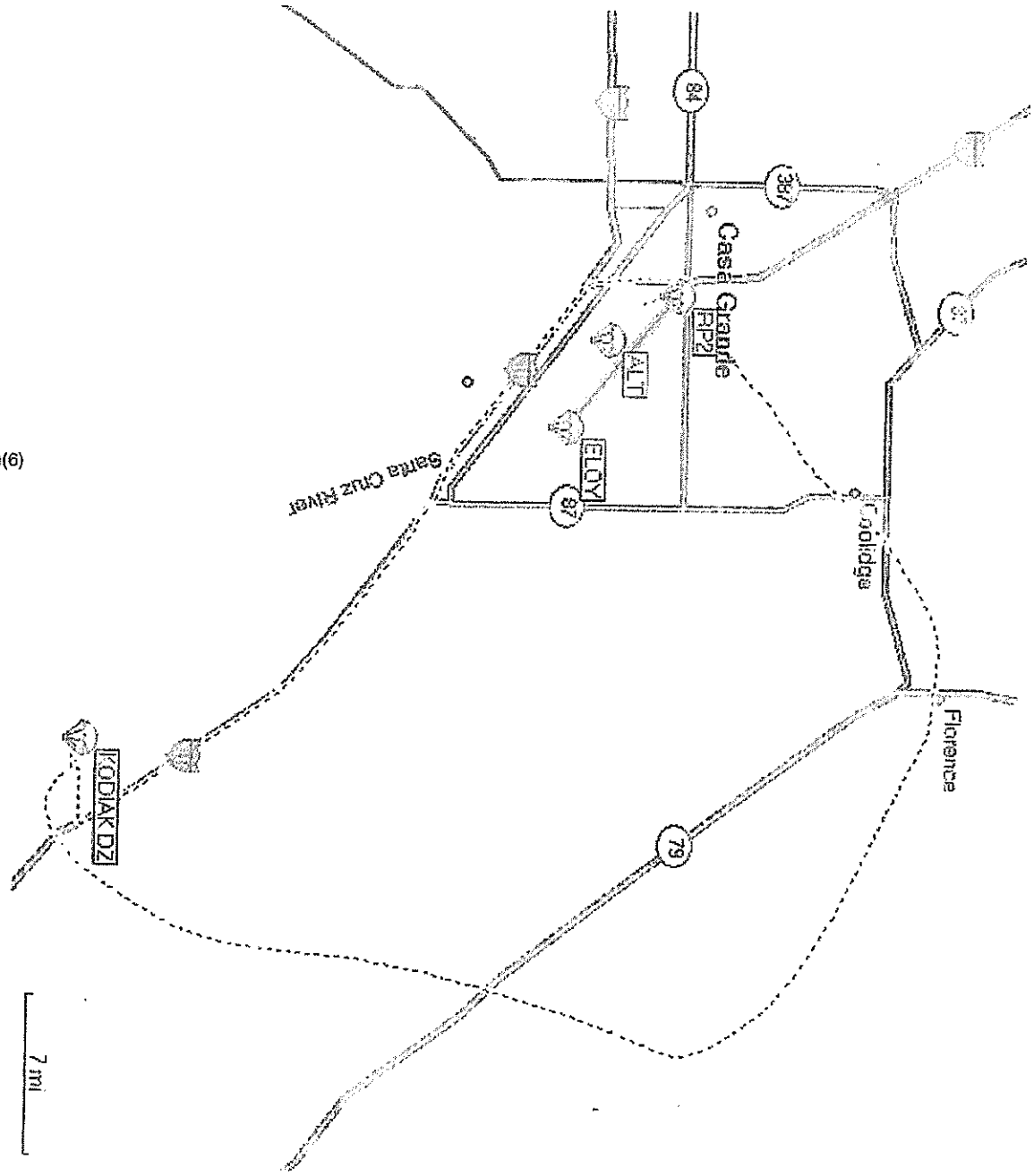
- Reviewed with:

(b)(3), (b)(6) at 1200L on 19 May, 2008 at NSWDG
1100L on 20 May, 2008 at NSWDG

- IO's note: GPS data appears to be good for reference and general information.
- The contracted C-130 was equipped by the squadron with GPS repeaters

(b)(3), (b)(6) / Investigating Officer

(b)(3), (b)(6)



/ Investigating Officer

ENCLOSURE (18)

2 of 11

(b)(3), (b)(6)

Slide revealed on 19/20MAY2008 with:

- Situation Members that conducted analysis of Valentine's GPS

/ Investigating Officer

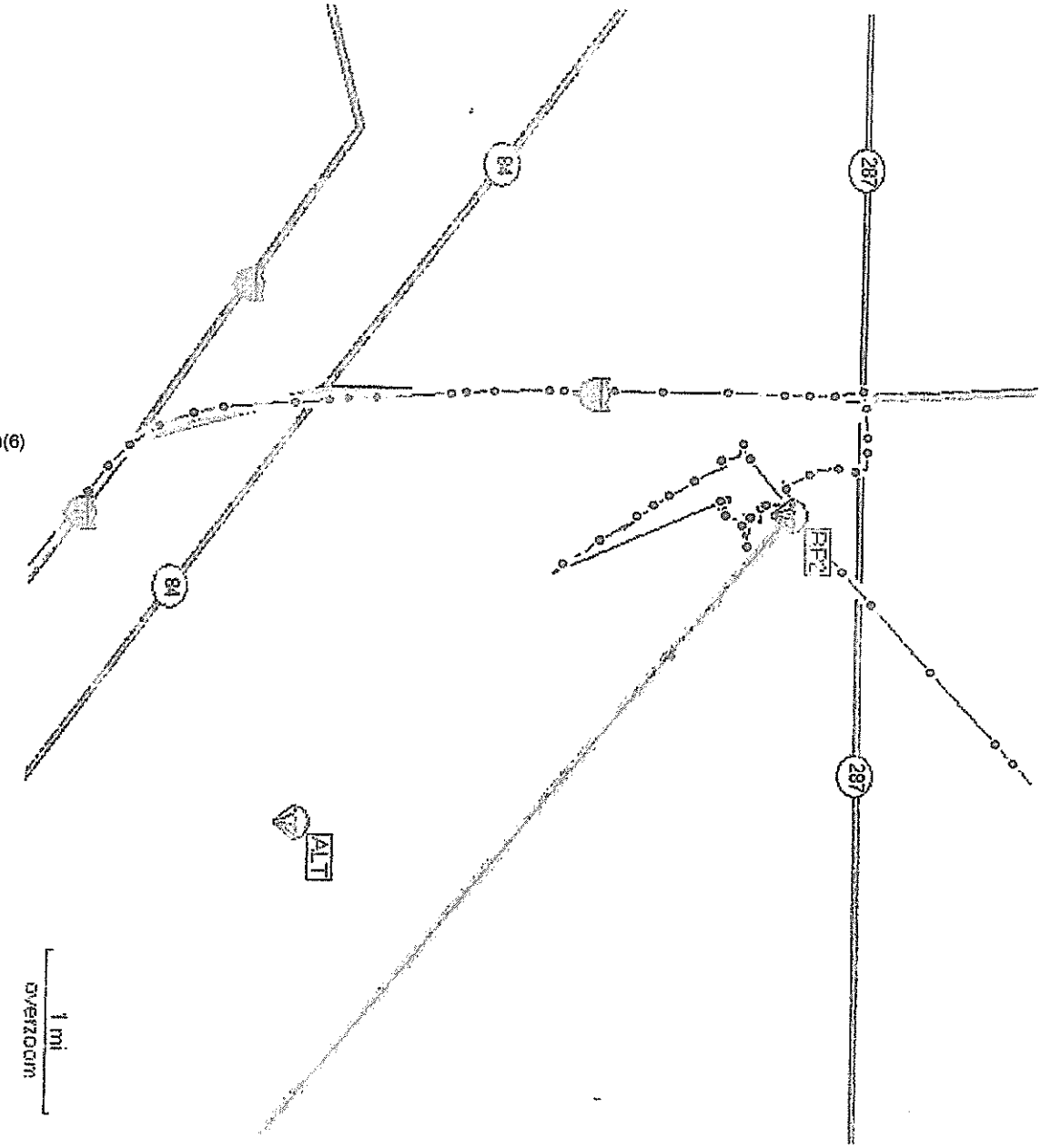
(b)(3), (b)(6)

/ Investigating Officer

ENCLOSURE (1)

(b)(3), (b)(6)

/ Investigating Officer

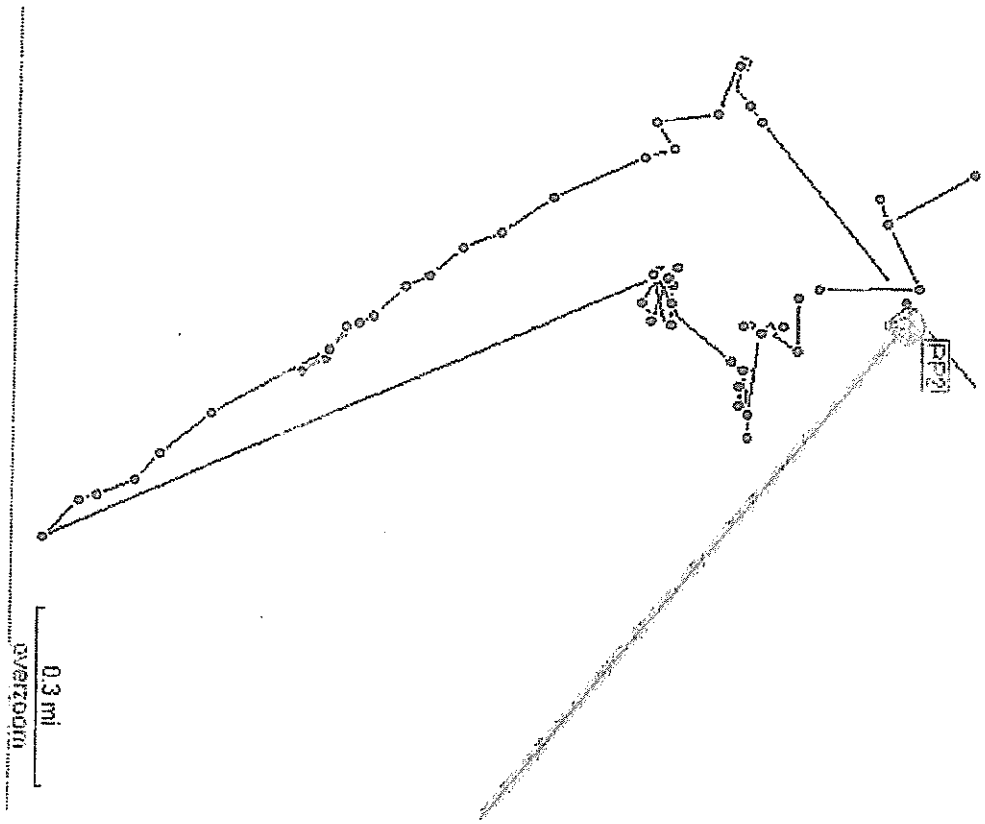


ENCLOSURE (13)

ENCLOSURE (13)

5 of 11

(b)(3), (b)(6)



/ Investigating Officer

ENCLOSURE (13)

6 OF 11

(b)(3), (b)(6)

(b)(3), (b)(6)

Valentine exits near the end of the stick

?Right turn initially? (SOP dictated an initial right turn, however, not uncommon to open in a different direction)

?Erroneous Data?

?Generally on path? ?1st indication of trouble?

Investigating Officer

Slide reviewed on 19/20MAY2000 with:

•Squadron members that conducted internal analysis of Valentine's GPS

Body

?Trouble?

C-130 aircraft route & direction of travel

Release point (drop location)

Intended HAHO profile track

?Unexplained GPS discrepancy = too fast / far given the time stamp?

Could there been loss of coverage?

Longest / fastest leg in log: 1.1 mile / ::21 seconds / 196 mph / drop 1526 feet

•Most leg time between ::01 and ::05 seconds

•Most leg distances between 40ft and 100feet

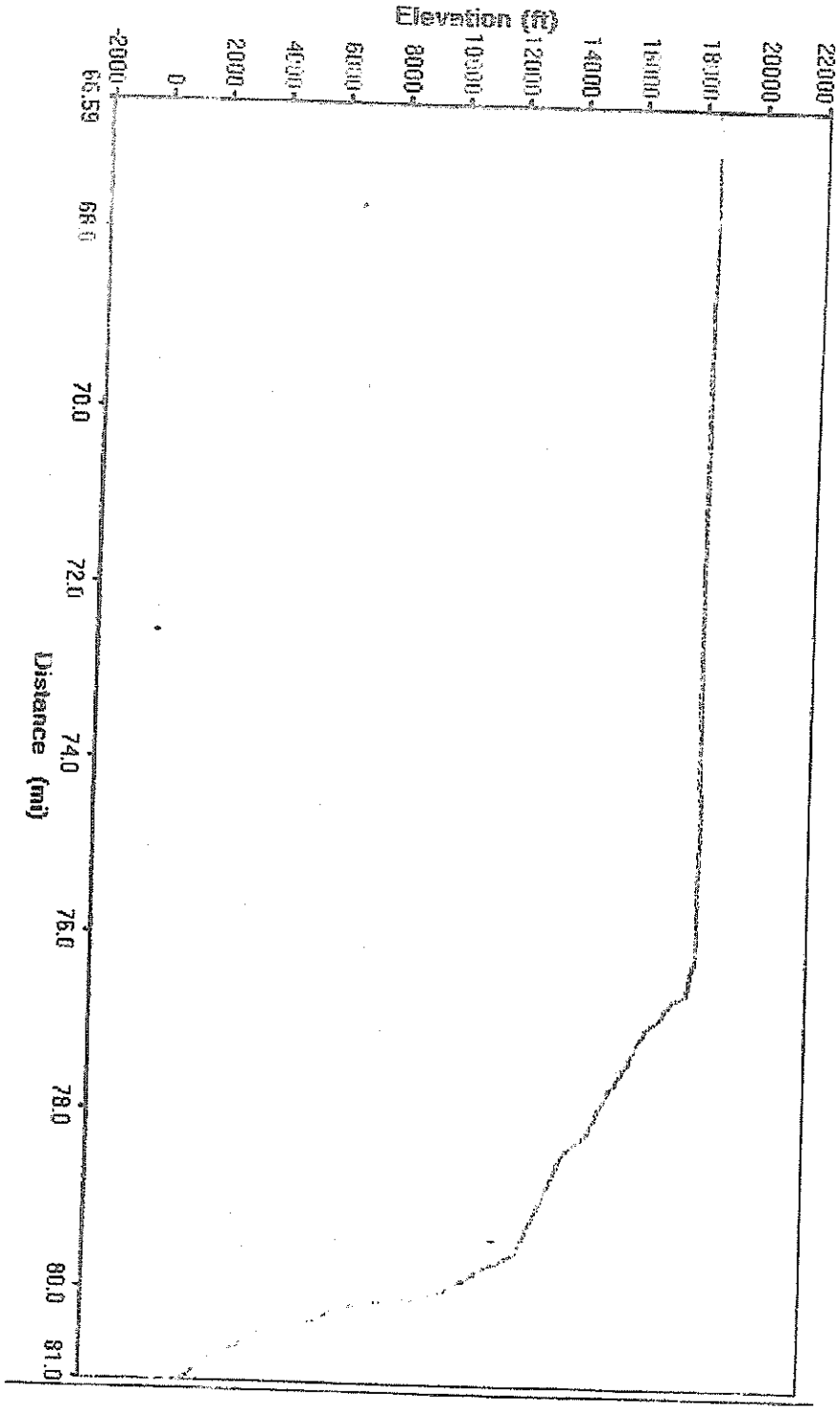
0.3 mi

?Erroneous Data?

/ Investigating Officer

ENCLOSURE (13)

(b)(3), (b)(6)



Investigating Officer

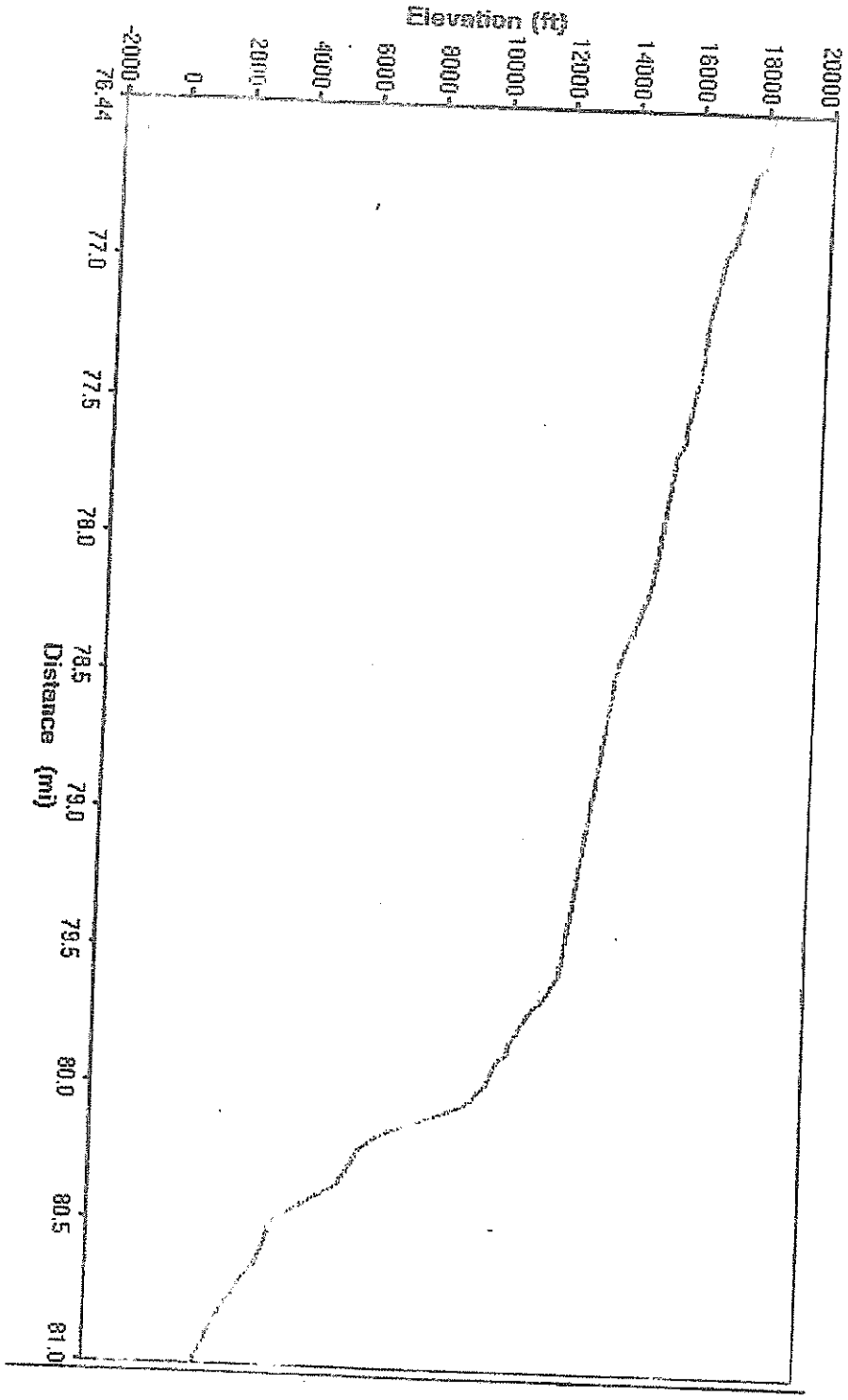
ENCLOSURE (#3)

(b)(3), (b)(6)

/ Investigating Officer

ENCLOSURE (13)

(b)(3), (b)(6)



/ Investigating Officer

ENCLOSURE (48)

10 of 11

HALO member profile: note start of jump

Site reviewed on 19/20MAY2008 with:

(b)(3), (b)(6)

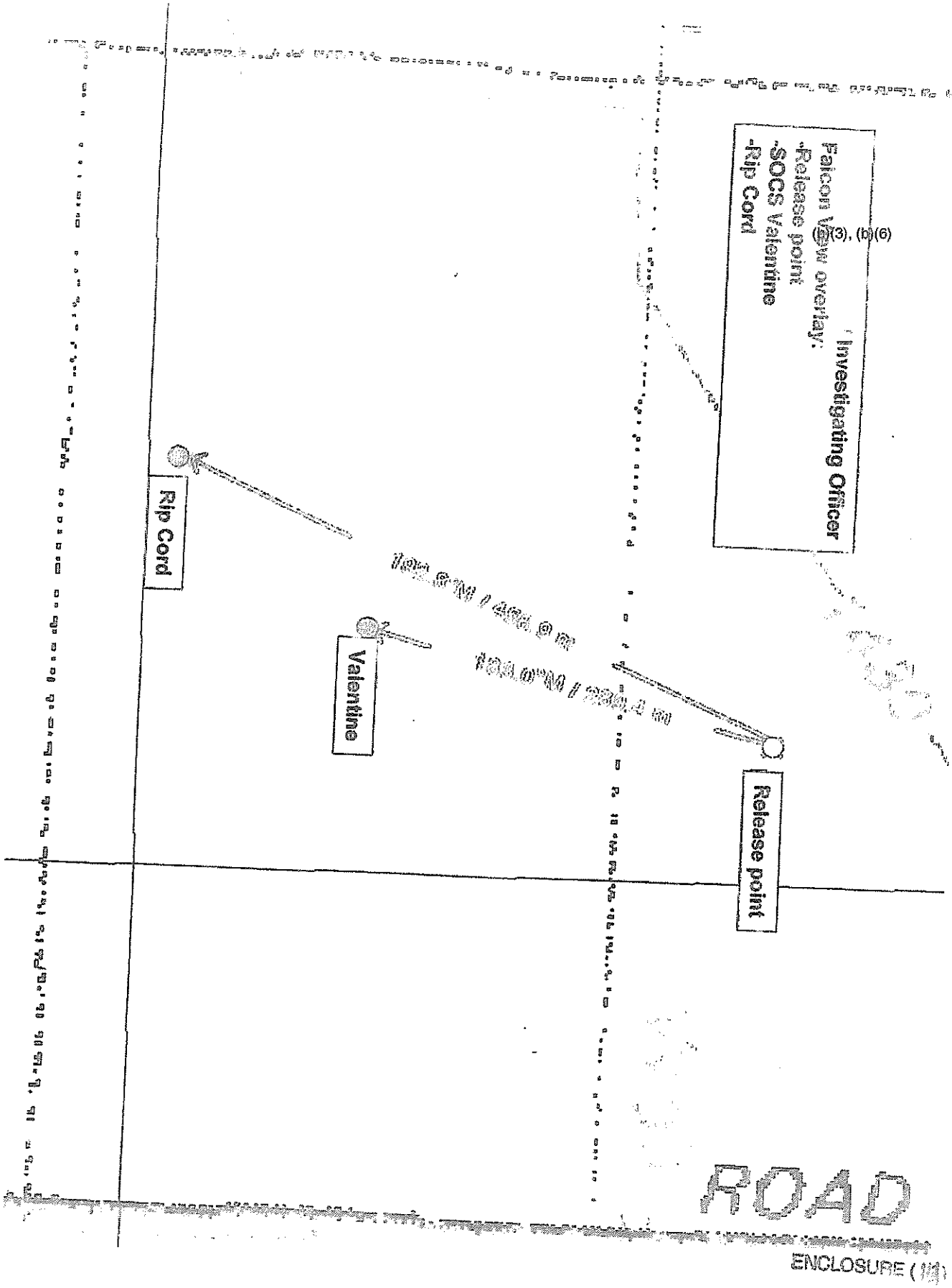
/ Investigating Officer

Squadron members that conducted analysis of Valentine's GPS

(b)(3), (b)(6)

/ Investigating Officer

ENCLOSURE (2)



ENCLOSURE (14)

NAVAL SPECIAL WARFARE COMMAND

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Page(s) ENCLOSURE 15

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_____ Deleted under exemption(s) _____

__✓__ Documents originated with other government agency(ies). Referred for review and direct response to you.

_____ Pages contain information furnished by other government agency(ies). We will advise you of releasability of information following consultation with agency(ies).

Comments: DOCUMENTS REFERRED TO NCIS

NAVAL SPECIAL WARFARE COMMAND

DELETED PAGE INFORMATION SHEET

Page(s) ENCLOSURE 16

Withheld entirely at this location. One or more of the following explain this decision:

_____Deleted under exemption(s) _____

__✓__Documents originated with state/local agency(ies). They must be contacted directly to obtain this information.

_____Pages contain information furnished by other government agency(ies). We will advise you of releasability of information following consultation with agency(ies).

Comments: DOCUMENTS CAN BE REQUESTED FROM THE PINAL COUNTY DEPARTMENT OF HEALTH SERVICES MEDICAL EXAMINER'S OFFICE

4-15. Canopy Control and Canopy Controllability Check

Parachute Aerodynamics

A ram-air parachute is a high-performance gliding system. The parachutist must have a basic knowledge of the aerodynamics to understand flight characteristics, capabilities, limitations, and canopy control techniques. For detailed information on parachute aerodynamics, refer to the NSW LTG "Canopy Control" or FM 3-05.211.

Turbulence

Wind obstructions (e.g., trees, hills, buildings, etc.), unstable air masses aloft, or flying close behind another canopy can cause turbulence that affects ram-air canopy performance. Turbulence will cause the canopy to rock and buffet slightly. In turbulent wind conditions, use 25 to 50 percent brakes to smooth out the canopy ride.

Canopy Controllability Check

If canopy performance is questionable after deployment, a jumper should perform the following controllability check:

- Release brakes.
- Check straight flight path.
- Look left and turn left 90 degrees.
- Look right and turn right 90 degrees.
- Determine stall point.

If the canopy requires more than 50 percent toggle to fly straight, stalls prior to 50 percent brakes, or is unstable during turns, it is uncontrollable and should be cut away.

Separation from Other Canopies

The recommended separation while under canopy is 50 feet behind and 50 feet above other parachutists.

> **Note:** Further information on HAHO parachuting techniques is provided in the NSW HAHO LTG and FM 3-05.211.

4-16. Free-Fall Cutaway Procedures

Use of Reserve Parachute

The reserve parachute is used when the main parachute fails or the parachutist determines that the main parachute will not provide a safe rate of descent for landing. When deployed together, ram-air main and reserve parachutes are usually incompatible and likely will malfunction.

Cutaway Technique

Before the reserve parachute can be deployed, the main parachute must be cut away. The technique for performing a cutaway and reserve deployment of the MT series parachute system is as follows:

- Throw away the main ripcord.
- Maintain arch if still in FF.
- Look at and grab the cutaway handle with your right hand.
- Look at and grab the reserve ripcord with your left hand.
- Pull the cutaway handle to full extension and throw it away.
- Pull the reserve ripcord to full extension and throw it away.
- Look and clear over your right shoulder to ensure that the reserve pilot chute has deployed.
- Perform post-opening procedures and canopy controllability check.

Decision Altitude and Cutaway Altitude

The most critical element in any malfunction is altitude awareness. The decision to cut away should be made by 2,500 feet AGL and cutaway should be performed by 2,000 feet AGL. A cutaway may be performed below 2,000 feet AGL, but jumpers must use caution due to altitude required for reserve deployment.

4-17. Freefall Parachute Malfunctions

Total Malfunctions

A total malfunction is defined as the jumper falling at terminal velocity with no canopy. Following are possible ram-air canopy total malfunctions and proper jumper reactions:

ENCLOSURE (19)
1 of 5

FLOATING RIPCORD (caused by the ripcord not being stowed properly)

- Attempt to locate ripcord housing and trace to ripcord.
- If not found, cut away main and deploy reserve.

HARD PULL (caused from tight pack, bent pins, or AAD misrouted)

- Use both hands to pull.
- If not successful, cut away main and deploy reserve.

BAG LOCK

- Perform cutaway and deploy reserve.

PACK CLOSURE (caused by wedged pilot chute)

- Make quick look (time is critical).
- Elbow the pack.
- If not successful, cut away main and deploy reserve.

PILOT CHUTE HESITATION/BURBLE (caused by not checking over shoulder)

- Make a quick look (time is critical).
- Elbow the pack.
- If not successful, cut away main and deploy reserve.

HORSESHOE (caused by poor body position)

- Cut away and deploy reserve.

RISER SEPARATION (caused by worn or old equipment)

- Cut away main canopy and deploy reserve.

Partial Malfunction

Partial malfunctions will slow the rate of descent of the jumper, but not enough to land safely. Some partial malfunctions can be cleared, while others require the main to be cut away and the reserve deployed.

Altitude awareness is critical. Jumpers should not get engrossed in fixing a partial malfunction and lose track of time and altitude. The following are possible ram-air canopy partial malfunctions and jumper reactions:

STREAMERS/SNIVELS (caused by poor packing, poor body position, or damaged equipment)

- Pull down rear risers twice vigorously.
- If not successful, cut away main canopy and deploy reserve.

CLOSED END CELLS/HUNG SLIDER (caused by a slow opening)

- Pull down steering toggles twice to waist level, hold for 3 to 4 seconds.
- Perform a canopy controllability check.
- If not controllable, cut away main canopy and deploy reserve.

TENSION KNOTS (caused by old or worn equipment and/or a hard opening)

- Pull down riser with affected line, let snap free. If not cleared repeat once more.
- Perform a canopy controllability check.
- If not controllable, cut away main canopy and deploy reserve.

RIPS/TEARS/HOLES (caused by worn equipment, hard opening, and poor packing)

- If hole is bigger than 10 inches or you can see the sky through the hole, cut away main and deploy reserve.
- If hole is smaller than 10 inches, compare rate of descent with other jumpers.
- Perform canopy controllability check.
- If uncontrollable or if descent rate too fast, cut away main canopy and deploy reserve.

PREMATURE BRAKE RELEASE (caused by poor packing)

- Pull down affected riser to counter turn.
- Release opposite brake.
- Perform a canopy controllability check (look for broken steering line).
- If not controllable, cut away main canopy and deploy reserve.

BROKEN STEERING LINE/BROKEN LINES (caused by old or worn equipment and/or a hard opening)

- Perform a canopy controllability check.
- Use both rear risers for landing (CAUTION: The canopy reacts and stalls much quicker using rear risers).
- If not controllable, cut away main canopy and deploy reserve.
- Prepare for PLF.

LINE TWIST (caused by bad body position or poor packing)

- Reach above and spread risers apart.
- Bicycle out.
- Do not release brakes.
- If unable to correct by 2,500 feet AGL, cut away and deploy reserve canopy.

MAIN AND RESERVE CANOPIES DEPLOY (caused by ripcord handles snagging or AAD firing)

- If the reserve deploys while under a main canopy, try to contain between legs and steer to DZ.
- If both canopies are inflated, grasp the cutaway pillow with the right hand. Separate canopies by pushing or pulling the left rear riser. It does not matter which canopy, main or reserve, is at the left rear; the objective is to separate the two canopies. Once canopies have separated as much as possible, initiate cutaway procedures. See note below.

Note: Main and reserve canopies may fly together and possibly could be landed safely. However, when in doubt and altitude permits, perform emergency cutaway procedures.

PILOT CHUTE OVER NOSE (caused by bad opening or flying canopy backwards [deep stall])

- Perform a canopy controllability check.
- If not controllable, cut away main canopy and deploy reserve.

4-18. Canopy Collision Procedures

Avoiding a Collision

After opening and checking for a good canopy, the jumper's first concern should be to avoid a canopy collision. Actions to help prevent a canopy collision include:

- Stay alert to prevent collisions from happening.
- Avoid target fixation.
- Turn right to avoid a head-on collision.
- Remember that the low man has the right of way.

Collision Procedures

If a canopy collision occurs, the jumper must perform the following actions. Appendix B, Figure B-1, provides more detail on canopy entanglement procedures.

- Take a modified spread eagle position with left hand protecting handles; try to bounce off lines and steer clear.
- If entangled, communicate with each other and attempt to clear at altitude.
- Maintain altitude awareness.
- When using FF parachutes, the top jumper has priority on cutaway in an entanglement. This is due to the fact that the top jumper normally has a good canopy and the possibility of being further entangled by the bottom jumper's parachute if the bottom jumper cuts away first.
- If necessary, the top jumper can land the bottom jumper; to do so he must flare higher.
- Do not cut away from entanglement below 1,000 feet AGL. If the collision occurs close to the ground, attempt to deploy the reserve to slow the rate of descent.

4-19. Canopy Landing Procedures

Disconnecting the Reserve Static Line

If under good canopy, the RS/L system may be disconnected prior to landing. This is required for water and high-wind landings to prevent reserve deployment if the main is cut away.

Appendix B

Free-fall Jumpmaster Brief

ENCLOSURE (16)
1 of 12

FREE-FALL JUMPMASTER BRIEF

ADMINISTRATIVE

- Sign manifest (ensure all jumpers and observers are on manifest)
- Take muster
- Check qualifications (HAPP/S Card).

SITUATION

- Personnel involved
  - Jumpmaster
  - Assistant Jumpmaster
  - DZSO
  - Malfunction Officer
  - Medical support
  - Vehicle drivers
  - Others (Oxygen Safety Technician).

- Jump description
  - Type of jump
  - Drop altitude (Above Ground Level [AGL])
  - Drop speed
  - Pull altitude
  - Number of lifts and passes
  - Stick order.

- Aircraft description
  - Type of aircraft
  - Place of exit
  - Seating arrangement (show diagram)
  - Oxygen equipment location
  - Location of Jumpmaster and Assistant Jumpmaster in aircraft.

- DZ
  - Name and location
  - Method of marking Drop Zone (DZ) (day/night)
  - Size
  - Elevation and altimeter setting
  - Terrain type and obstacles (show diagram)
  - Jumper approach
  - Anticipated exit point.

- Hook knife or fixed blade with hard sheath
- Altimeter
- Radios (night High Altitude, High Opening [HAHO] only)
- Oxygen equipment (13,000 feet above Mean Sea Level [MSL] and higher or 10,000 feet for 30 min.)
- Miscellaneous (e.g., gloves, hearing protection, etc.).

- Uniform, Water
  - Wetsuit (long sleeve top)/Battle Dress Uniform (BDUs)
  - Headgear (or wet suit hood) with goggles
  - Footgear/fins
  - Flotation
  - Signaling device
  - Hook knife or fixed blade with hard sheath
  - Miscellaneous (e.g., gloves, hearing protection, etc.).

- Other equipment
  - Combat equipment/harness and lowering line
  - Parachute bags.

STAGING/BOARDING AREA

- Location
  - Parking

- Procedures
  - Unloading and donning equipment
  - Set altimeter and AAD
  - JMPI
  - Line up in stick order
  - In-flight rigging procedures

- Loading aircraft.
  - Safest approach to aircraft
  - Load in reverse stick order.

ACTIONS IN THE AIRCRAFT

- Commands and Hand signals (day/night)
  - Don helmets and seatbelts
  - Remove seatbelts (1,000 feet AGL)
  - Time warnings (20 and 10 minutes)

- Safety concerns
  - Remember, low man has the right of way.
  - Maintain altitude awareness.
  - Pull at assigned altitude. Do not let AAD activate before you pull.

CANOPY CONTROL AND LANDING

- Canopy procedures at altitude
  - Check the canopy, other jumpers, and release brakes.
  - Perform the canopy controllability check.
  - Locate the DZ and check canopy penetration against wind.
  - Stay in the wind cone.
  - Keep in mind the low man establishes the landing pattern.
  - Steer the canopy to the downwind leg at the appropriate altitude.

- Canopy controllability check
  - Check the forward flight of the canopy.
  - Correct with opposite toggle for turn. If more than 50 percent toggle is required to fly straight, cut away the main and deploy the reserve.
  - Look left and turn left 90 degrees.
  - Look right and turn right 90 degrees.
  - Determine the stall point; cut away if not controllable at 50 percent of the full stall.

- Setup and landing
  - Identify obstacles.
  - Fly the downwind leg offset from the target.
  - Enter the base leg.
  - Enter the final approach.
  - Watch for other jumpers.
  - Lower equipment if required (approximately 200 feet).
  - Use the brakes as needed to slow forward penetration.
  - Flare from full flight and land.
  - For night jumps, land at 50 percent brakes and prepare for PLF.
  - Get up immediately if not injured.

- Multiple aircraft conducting visual formation airdrop on MCADS drop:
  - Trailing aircraft 2000 feet to right of lead aircraft at and behind at 60 degrees offset (see Figure 6-3).
  - Aircraft will drop MCADS simultaneously.

- "Stand up" is given four minutes from release point. Stand up, face the MCADS, check pins on jumper in front of you, and conduct a check of your handles and equipment. Ensure aircraft deck is free of obstacles.

- Stand-by (5 seconds). Jumpers prepare for extraction of MCADS.

- "Go" is given when the MCADS extracts. For C-5 and C-17 aircraft dropping MCADS sequentially, jumpers will ensure that both MCADS have exited the aircraft prior to moving towards the rear of the aircraft.
  - First jumper will immediately follow the MCADS, maintaining a steady jog to the rear of the aircraft.
  - Remaining jumpers will follow the lead jumper in a single file.
  - Jumpers will be cautious of aircraft surge and weightlessness as the MCADS is extracted from the aircraft.
  - The first jumper will ensure deployment of the MCADS cargo parachutes prior to exit.
  - All jumpers will conduct a diving exit, conduct a 5-second count and deploy main parachutes.

  Example: 1-thousand, 2-thousand, 3-thousand, reach-thousand, pull-thousand.
  - Steer canopy to follow MCADS.
  - Group on MCADS.

NOTE: If any jumper falls down in the aircraft while moving to the ramp, the stick will be stopped. The jumper will be inspected and an additional pass will be required.

EMERGENCY PROCEDURES

- Emergency exits
  - 0 to 1,000 feet AGL — Ride in with aircraft.
  - 1,000 to 2,000 feet AGL — Controlled exit, deploy reserve.
  - 2,000+ feet AGL — Deploy main (clear and pull regardless of altitude).

- Accidental canopy deployment

In aircraft:
- Exit with canopy if being pulled out.
- If controlled, move the jumper to the front of the aircraft troop compartment and remove the gear.
- Close the door if inside the helicopter.

SITUATION	HIGHER PARACHUTIST	LOWER PARACHUTIST
Parachutists entangled. Higher parachutist has a good canopy. Above 2,000 feet AGL	◦ Attempt to clear from the lower canopy. ◦ NOTE: If the lower canopy is cleared, it should re-inflate in 150 to 200 feet.	◦ If the canopy cannot be cleared, check the altitude. ◦ Above 2,000 feet AGL, perform cutaway procedures.
1,000 to 2,000 feet AGL	◦ Make every effort to control the lower canopy. ◦ Be prepared to do a PLF.	◦ Perform cutaway procedures. OR ◦ Jettison equipment. ◦ Land with higher parachutist. ◦ Be prepared to do a PLF.
Below 1,000 feet AGL	◦ Make every effort to maintain control of the lower canopy. ◦ Be prepared to do a PLF. ◦ NOTE: The higher parachutist should fly the final approach and land with half brakes.	◦ Jettison equipment. ◦ Land with the higher parachutist. ◦ Be prepared to do a PLF.
Parachutists entangled. Neither has a good canopy.	◦ Get clear of entangled lines and cut away (altitude permitting).	◦ Cut away after the higher parachutist (altitude permitting).
	WARNING **The higher parachutist may be fatally engulfed in the canopies if the lower parachutist performs a cutaway first.** ◦ If still unsuccessful, both should deploy reserve parachutes in an attempt to slow the descent. ◦ If only one reserve parachute inflates, the parachutist with the good reserve must bring the other parachutist to the ground. ◦ If both reserves inflate, cut away from the entanglement. ◦ NOTE: Communication between the parachutists and altitude awareness are critical in successful disengagements.	

Figure B-1. Canopy Entanglement Procedures

- Electrical wire landings
  - Avoid contact, even if a downwind landing is required.
  - Discard the ripcord.
  - Do not lower the equipment. Jettison the equipment if already lowered.
  - Steer the canopy parallel to the wires.
  - Keeps feet and knees together, toes pointed down.
  - Apply the brakes to descend between the wires.
  - Prepare for PLF.
  - Do not make contact with the ground; wait for assistance if hung up.
  - Unhook the reserve S/L system.
  - If contact is made with the ground, cut away the main and run clear.

- Tree landings
  - Avoid if possible. Continue to steer canopy.
  - Do not lower equipment; jettison equipment if already lowered.
  - Keep feet and knees together.
  - While entering trees, apply the brakes to descend through the limbs.

ENCLOSURE (2)

Cover face at the last possible moment. Do not let go of the toggles.
Prepare for PLF.
- If hung up, wait for assistance.

- Unintentional water landings
  - Jettison the equipment and release the reserve S/L system.
  - Continue to steer the canopy.
  - Release the waist strap.
  - Face into the wind at 200 feet.
  - Release the chest strap at 150 feet.
  - Flare for landing.
  - As your feet enter the water, be prepared to perform a PLF and release the leg straps.
  - Roll out of the harness and swim free.
  - Inflate the life jacket (be sure the chest strap is released).
  - Do not attempt to save equipment or parachute gear at the risk of your life.

- High-wind landings
  - Release the reserve S/L system.
  - Face into the wind.
  - If the winds are high, a full flare may not be required.
  - To deflate canopy, run to downwind side.
  - If dragged, turn on to one side and apply full brake on the upper side of the body until the canopy collapses.
  - Cut away as a last resort. Be aware that, unless it has been disconnected, the RS/L will deploy the reserve when the main is cut away.

- Night Operations
  - Illuminate chem-lights at the 10-minute warning; ensure your lights are visible.

- Night MCADS
  - The MCADS craft will be marked with green chemlites and strobes.
  - The MCADS platform will be marked with red chemlites. Red chemlites indicate danger.

- Rough terrain
  - Look for clear level ground; avoid landing behind hills or objects.
  - Look for indications of ground wind direction.
  - Fly canopy at 50 to 75 percent on landing approach if not sure of terrain.
  - Prepare to do PLF.

- Evasion and recovery/escape and evasion/ditching at sea

PARACHUTE MALFUNCTIONS

Total/high-speed malfunctions

- Floating ripcord (total)
  - Cause: Ripcord not stowed properly
  - Action: At designated pull altitude, attempt to locate the ripcord housing and trace it to the ripcord. If not found: cut away the main and deploy the reserve.
- Hard pull (total)
  - Cause: Tight pack, bent pins, AAD misrouted
  - Action: Use both hands to pull. If not successful, cut away the main and deploy the reserve.
- Pack closure (total)
  - Cause: Pilot chute wedged (uncommon)
  - Action: Quick check over right shoulder (for burble). Elbow the pack. If not successful, cut away the main and deploy the reserve.
- Pilot chute hesitation/burble (total)
  - Cause: Body position
  - Action: Quick check over right shoulder (for burble). Elbow the pack. If not successful, cut away the main and deploy the reserve.
- Bag lock (high speed)
  - Cause: Poor packing, damaged equipment
  - Action: Cut away the main canopy and deploy the reserve
- Horseshoe (high speed)
  - Cause: Poor body position
  - Action: Cut away and deploy the reserve.

Partial malfunctions

- Riser separation (partial)
  - Cause: Worn equipment
  - Action: Cut away the main canopy and deploy the reserve.
- Streamer, or snivels (partial)
  - Cause: Poor packing, poor body position, and/or damaged equipment
  - Action: Pull down the rear risers twice vigorously. If not successful, cut away the main canopy and deploy the reserve.
- Closed end cells or partially hung slider (partial)
  - Cause: Slow opening

Action: Pull down the steering toggles twice to waist level. Perform canopy controllability check. If not controllable, cut away the main canopy and deploy the reserve.

- Tension knots (partial)
  - Cause: Old or worn equipment
  - Action: Pull down the riser with the affected line; let it snap free twice. Perform canopy controllability check. If not controllable, cut away the main and deploy the reserve.

- Canopy rips, tears, holes (partial)
  - Cause: Worn equipment, hard opening
  - Action: If bigger than 10 inches or if you can see the sky through the hole, cut away the main and deploy the reserve. If smaller than 10 inches, check the rate of descent with other jumpers. Perform canopy controllability check. If not controllable, cut away the main canopy and deploy the reserve.

- Premature brake release (partial)
  - Cause: Poor packing
  - Action: Pull down affected riser to counter turn. Release the opposite brake. Perform a canopy controllability check (look for broken steering line). If not controllable, cut away the main canopy and deploy the reserve.

- Broken steering line/broken lines (partial)
  - Cause: Worn equipment, hard opening
  - Action: Perform a canopy controllability check. Use both rear risers for landing (canopy reacts and stalls much quicker). If canopy not controllable, cut away the main canopy and deploy the reserve.

- Both main and reserve canopies deploy (partial)
  - Cause: Handles snagging, AAD firing when reserve deployed
  - Action: If the reserve deploys while under the main canopy, try to contain it between your legs. If both canopies inflate, grasp the cutaway handle with the right hand. Grasp the left rear riser, regardless of whether it is main or reserve. Attempt to separate the canopies by pulling or pushing on the left rear riser. Once the canopies have separated as much as possible, initiate cutaway procedures.

- Line twists (partial)
  - Cause: Jumper or deployment bag spinning on opening
  - Action: Reach above and spread risers apart. Bicycle out. Do not release brakes. If you cannot clear by 2,500 feet AGL, cut away main canopy and deploy reserve.

- Pilot chute over nose (partial)
  - Cause: Bad opening, flying canopy backwards (deep stall)
  - Action: Perform a canopy controllability check. If not controllable, cut away the main canopy and deploy the reserve.
- Cutaway procedures

- Make the decision to cut away by 2,500 feet AGL, cut away by 2000 feet AGL. Avoid cutaway below 1000 feet.
- Throw away the main ripcord.
- Maintain an arch if still in free-fall.
- Look at and grab the cutaway handle with your right hand.
- Look at and grab the reserve ripcord with your left hand.
- Pull the cutaway handle to full extension and throw it away.
- Pull the reserve handle to full extension and throw it away.
- Look and clear over your right shoulder to ensure that the reserve pilot chute has deployed.
- Perform post-opening procedures.

POST-JUMP PROCEDURES

- Daisy chain the lines and place the canopy in the parachute bag.
- Assist other jumpers on the DZ.
- Muster and report to the DZSO.
- Debrief (prepare for subsequent jump).
- Transport back to the area.
- Use Unit SOP for cleanup.
- Prepare reports and log jumps.

SAFETY POINTS

- Conduct function check on Cypres AAD prior to donning equipment.
- Jumper ensure that two JMPIs are administered.
- Approach the aircraft from the briefed safe direction.
- Protect the ripcords at all time.
- Stay alert and pay attention to the Jumpmaster.
- Emphasize altitude awareness.
- Remember, low man has the right of way.
- Avoid target fixation on the final approach to avoid collisions.
- Watch for obstacles on the DZ.
- Use a signaling device for emergencies.
- Assigned medical personnel are in charge of all injuries.
- Bring equipment problems to the Jumpmaster's attention immediately.
- Ensure rigger checks when packing.
- Ask questions at any time if something is not clear.

[illegible]

1 [illegible] REMOVED FROM [illegible] BY [illegible] BAG [illegible] AFTER EXIT

2 BOTH CANOPIES WERE IN COMPLETELY UNDAMAGED CONDITION

3 RES BAG & PC ASSY, 3 RING RELEASE HANDLE & MAIN P/C WERE SEPARATE FROM RIG

4 RES R/C IN PLACE & ROUTED THROUGH HOUSING BUT NOT THROUGH RSL (MISSING JUMPER) OR GUIDE RING.

5 AAD SN'S REMOVED FROM RIG PRIOR TO [illegible] NSWCA.

6 HOOK KNIFE IN PLACE ON WRIST BAND (CONDITION - ACCESSIBLE & SERVICEABLE, APPEARS TO NOT HAVE BEEN USED)

7 MAIN CONTAINER - NO APPARENT DAMAGE MAIN CLOSING LOOP (CORRECT MAT'L & INTACT, CORRECT LENGTH) 1 DROP OF BLOOD ON RT MAIN FLAP NEAR GROMMET

ENCLOSURE (10)

1 of 5

[illegible] PKT [illegible]

- [illegible] PKT ATTACHED [illegible] [illegible] ON [illegible]
Y [illegible] NO OBVIOUS DAMAGE TO [illegible]
[illegible]

---

3 RING RELEASE SYSTEM HOUSINGS
LONG ONE (LEADING TO JUMPER'S LEFT SHOULDER)
EXTENDED THROUGH CLAMP @ CHEST STRAP AREA 3/4"
(NOT EVEN) W/ SHORT ONE, AS SUPPLIED BY MFGR
APPEARS UNDAMAGED. CLAMP @ CHEST STRAP TIGHT.
NEITHER HOUSING OBSTRUCTED OR DAMAGED IN
ANY OBSERVABLE WAY

RESERVE CONTAINER - APPEARS UNDAMAGED
FLAPS REMOVED BEFORE INSPECTION. RES. CLOSING
LOOP INTACT W/NO DAMAGE (LENGTH 2 5/8" MEASURED
FROM GROMMET IN RES. PACK TRAY

HARNESS - RISER COVERS SNAPPED. NO OTHER
DISCREPENCIES NOTED

MAIN-RT REAR CONNECTOR LINK (LOOSE,
NOT EVEN FINGER TIGHT. HAD 3 THREADS SHOWING)
NO OTHER DISCREPENCIES NOTED

ENCLOSURE ([illegible])

[illegible] of 3

- OC MASK WAS BROKEN ... MDV ...

- NO 3[illegible] PRESENT

[illegible] MAD 3- A ALTIMETER ... SET [illegible] NEG [illegible]
1,750 FT - MECHANISMS APPEAR OK - NO EXTERNAL
DAMAGE NOTED

CANNISTER ... 29 JAN 05 [illegible] (WITH ... PG, ...)
SERIAL # 004115 MFG ALT 2
SERIAL # 3089 MFG SSE INC
P - 3 - OF 3

CONCLUSIONS - NO DEFINITIVE CAUSE FOR THE
FATALITY FOUND WITH THE EQUIPT & INFO PROVIDED.
DISCREPENCIES FOUND - LONG CUTAWAY HOUSING (SEE 3RING
RELEASE SYSTEM PG 2)

- LOOSE CONNECTOR LINK ON RT REAR
RISER OF MAIN PARACHUTE

NO OTHER EQUIPT OR PHOTOS EXAMINED.

(b)(3), (b)(6)

MASTER RIGGER [illegible]
22 FEB 05

ENCLOSURE ([illegible])

3 of 3

Examination of CYPRES 2 1500/35/A serial number 07246

This Cypres2 unit was sent to Airtec for evaluation after a landing under a spinning main canopy which resulted in a fatality.

The unit received a read out. The result of the readout was that the unit did not measure any vertical speed above the activation speed of 79 mph below 1500 feet AGL at any time, and therefore did not activate.

The unit was tested afterwards in a pressure chamber. The original cutter was replaced by a connection to the datastation to record activation details. The Cypres was exposed to a simulated flight to appx. 5000 feet AGL, followed by a descent with 87 mph average descent rate.
The unit activated in time at the preset altitude.

The result of the data readout and the following pressure chamber test confirm the conclusion that the unit was airworthy and functional all times. On the fatal jump, the vertical speed under canopy was not fast enough for an activation.

Please contact us in case of any questions.

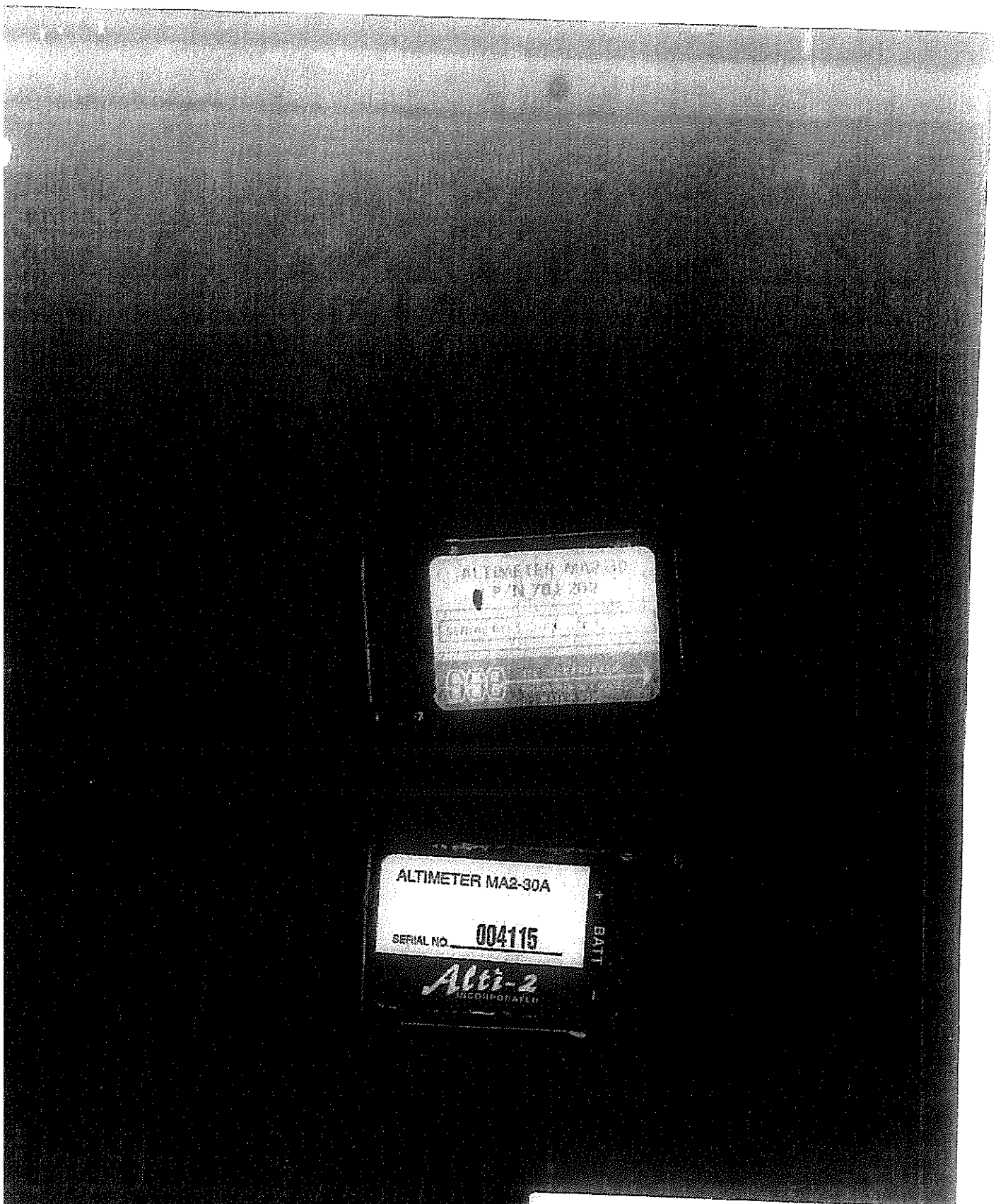
Best regards,

(b)(6)

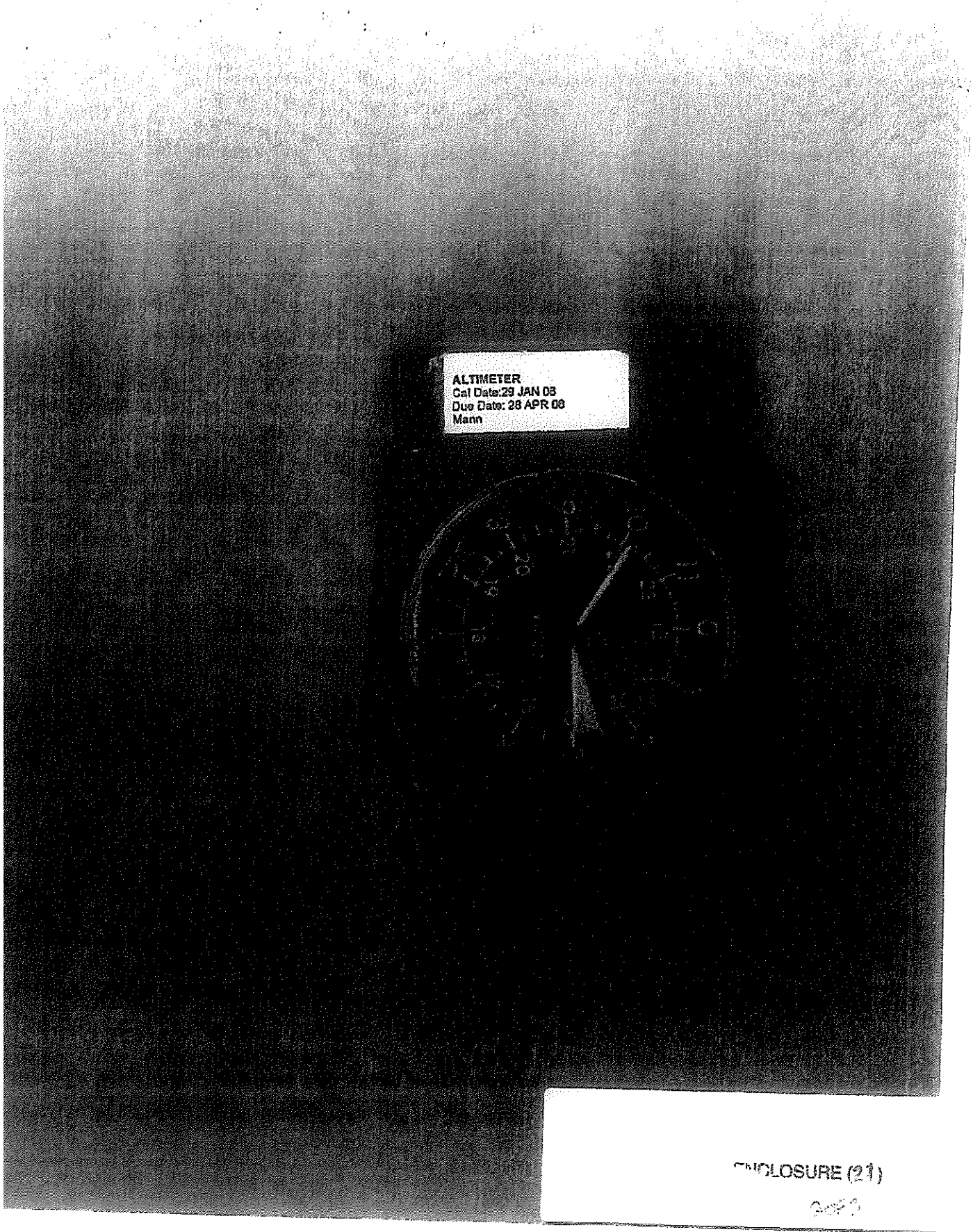
Airtec GmbH&Co.KG

Bad Wünnenberg, 10.03.2008

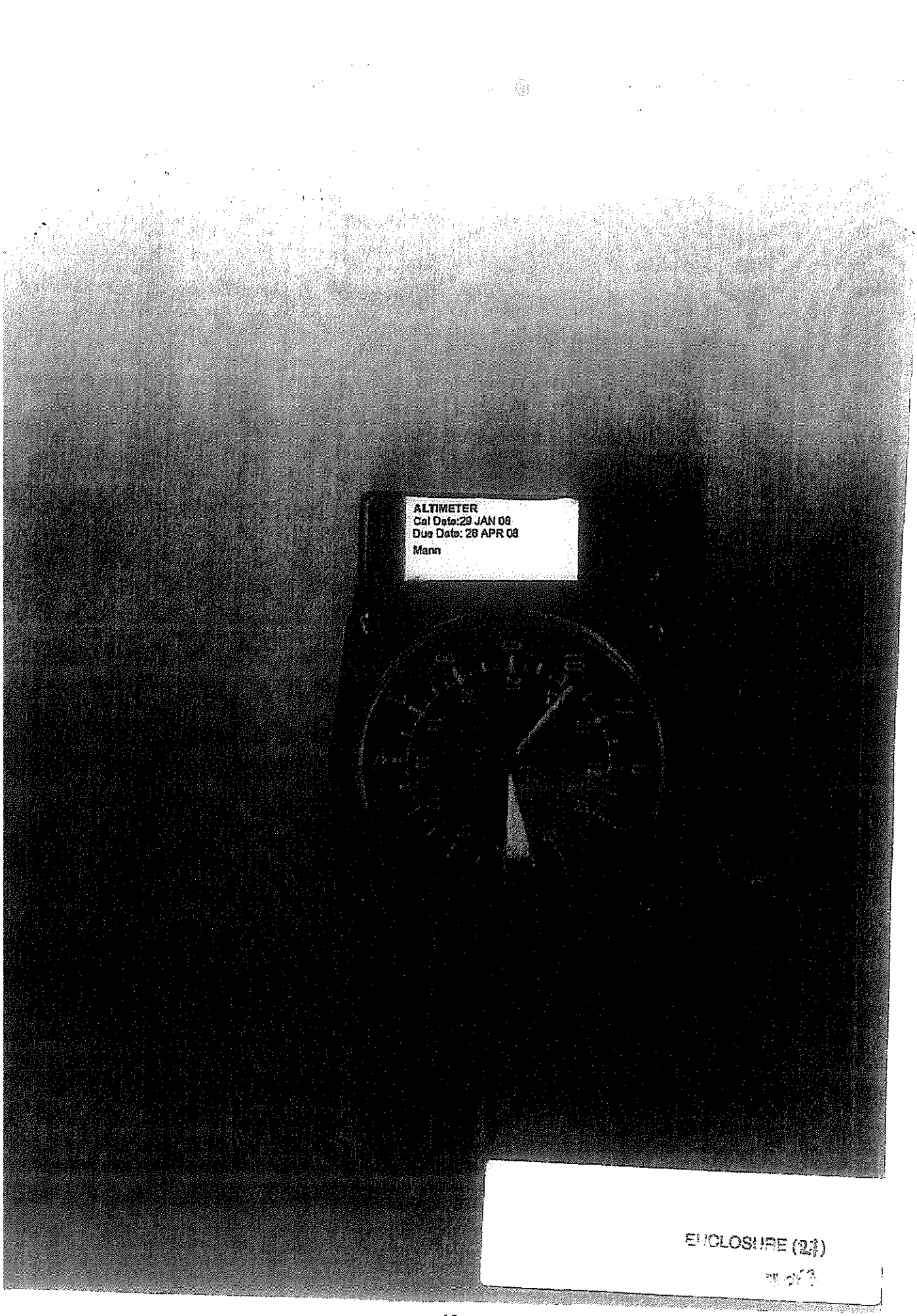
ENCLOSURE (64)



ENCLOSURE (21)



ENCLOSURE (21)



ENCLOSURE (21)

21 February 2008

To Whom It May Concern:

The following statement pertains to the actions I, (b)(3), (b)(6) , took to inspect the O2 system that was worn by the jumper the morning of 13 Feb 08. This inspection took place on the morning of 13 Feb 08 in the riggers loft at the training site with the two Navy Parachute riggers, and myself present.

Upon inspection the O2 bottle was intact and no deficiencies were noted. The O2 regulator was in good working order, the on/off valve worked properly, the gage read approximately 25% full. The only deficiency noted was one side of the regulator body that extends outward along side the on/off valve was bend inward toward the on/off valve but did not interfere with the valve operation. No holes, kinks or other deficiencies were noted of the O2 hose. I connected the bottle to the jumper's mask and it worked properly. I also connected it to another mask and again there were no deficiencies

(b)(6)

...d
and no deficiencies were noted. The mask flowed oxygen at a full rate upon depression of the activating lever with both bottles.

Upon inspection of the mask/mitch straps one of the aluminum backing plates to the bayonet fitting was bent approximately 90 degrees/perpendicular to the bayonet fitting on the other side of the nylon strap.

(b)(3), (b)(6)
O2 Technician

ENCLOSURE (22)

Photos

Investigation into accident involving T. Valentine
USN
Investigating Officer (b)(3), (b)(6)

Original photos first followed by photos with notes

- Received from (b)(3), (b)(6) on 13 May, 2008
- Photos taken by NSWSG command member
- All photos taken at the accident scene, in the morning of 13 February, 2008. (b)(3), (b)(6)

- IO's note: all photos indicate the weather on 13 February supported MFF operations.
- IO's note: all photos indicate that SOCS Valentine was following all procedures with regards to the donning of combat equipment in support of a night, full-profile MFF HAHO.
- Photos reviewed with subject matter experts, info on each individual slide. Unless specifically indicated, the notation comments were common to the IO and the subject matter experts.

(b)(3), (b)(6)

/ Investigating Officer

ENCLOSURE (28)

SOCS Valentine

13 Feb 08

ENCLOSURE (24)

- Key Personnel:
  - Troop Commander:
  - Troop Chief: SOCS Valentine (deceased)
  - Primary Jump Master: (b)(6)
  - Secondary Jump Master: (b)(3), (b)(6)
  - DZSO: (b)(3), (b)(6)
  - Malfunction Officer: (b)(3), (b)(6)
  - Primary Riggers: (b)(3), (b)(6) and (b)(3)
  - Oxygen Tech: (b)(3), (b)(6)
  - DZ Corpsman: (b)(3), (b)(6)
  - Primary Recorder and Photographer: (b)(3), (b)(6)
- Training evolution: Night, Combat Equipment, O2, HAHO, Unknown Drop Zone
  - Altitude 17,999 MSL
  - 6.5 kilometer offset, Bearing 129
  - Drop Zone: Eloy Skydive Arizona

ENCLOSURE (24)

- Equipment:
  - MJN-1 (red chemlite on chest / green chemlite on back)
  - Operational Cammies
  - Mitch Helmet
  - MBITR w/ Peltor Headset
  - NVG's (PVS 15A)
  - LBE w/ Plates and M-4 (Shape)
  - Ruck Sack (Front mount)
  - Oxygen Mask and Bottle
  - Attack Board w/ compass and GPS

- Timeline:
  - 0315L: Jump Master / Evolution Brief
  - 0400L: Lock Up / JMPI's
    - SOCS Valentine received his first JMPI from (b)(3), (b)(6) and his second JMPI from (b)(3), (b)(6)
  - 0420L: Walk through/Dirt dive
  - 0425L: Load bus and depart for C-130
  - 0435L: Load C-130
  - 0445L: Take Off
  - 0507L: 10 minute warning
  - 0513L: 4 minute warning / Disconnect from Oxygen Consol onto bottle
  - 0514L: 3 minute warning / Ramp opened
  - 0515L: 2 minute warning
  - 0516L: 1 minute warning
  - 0517L: Green Light, Boots off Ramp

ENCLOSURE (29)

Transcription of DZSO's notes

- 0517L BOOTS OFF RAMP (17,999 MSL)
- 0530L FIRST JUMPER ON DZ
- 0544L LAST JUMPER ON DZ (0546 HEAD COUNT PASSED)
- 0600L MAN MISSING
- 0600L SEARCH OF DZ AND SURROUNDING FIELDS
- 0615L LAUNCHED C-130
- 0625L VEHICLE SEARCH (RP AND BACK TOWARDS DZ)
- 0718L C-130 RTB DUE HYDRAULIC (LANDING GEAR) PROBLEM
- 0722L CASA FLIGHT (FR7 ON BOARD) SPOTTED FIRE TRUCKS AND AMBULANCE IVO RP
- 0728L ARRIVED TO LOCATION (12S VB 36808 37169), IDENTIFIED F12
- 0743L F11 CONTACTED F02
- 0800L CONTACTED F11
- 0800L WAS THE SGT IN CHARGE ON SITE ALSO (b)(6) WAS THE DETECTIVE ON SITE. BOTH MEMBERS OF (b)(3), (b)(6) THE CASA GRANDE P.D.
- 0813L RIGGERS (b)(6)) ARRIVE ON SITE AND BEGIN INSPECTION

ENCLOSURE (29)

- HELMET UNATTACHED 3FT AWAY FROM BODY ON F12's LEFT
- ALTIMETER RIGHT NEXT TO HELMET
- KNODS 15-20 FT AWAY FROM BODY, AS WELL AS A GREEN CHEM LITE AND TAC BOARD COMPASS
- CUT AWAY PILLOW OUTSIDE THE POCKET BUT CABLES STILL INSIDE THE HOUSING
- CYPRESS DID NOT FIRE
- CUT AWAY HANDLE STILL ON HOUSING
- ATTACK BOARD FOLDED IN HALF, APPEARS THAT F12 LANDED FACE AND CHEST FIRST TOWARDS HIS LEFT SIDE.
- O2 BOTTLE STILL ATTACHED
- GPS FORE RUNNER THRU HIS CHEST STARP
- GPS 76 CX STILL ON AND FUNCTIONING
- 3 RINGS STILL ATTACHED BOTH SIDES
- LEG STRAPS STILL IN
- LEFT RISERS IN BETWEEN HIS WEAPON AND MJN 1
- RIGHT TOGGLE USTOWED

- LEFT TOGGLE STILL STOWED
  - (POSSIBLE REASON FOR HARD SPIN)
  - O2 GAUGE ON REFILL
  - BOTH MBTRS ON
  - SLIDDER DOWN ALL THE WAY
  - D-BAG RUBBER BANDS INTACT NO BROKEN RUBBER BANDS
  - GLASSED AND FRICTION OVER MAIN PILOT CHUTE BRADLE AT D-BAG
  - PICTURES WERE TAKEN DURING RIGGERS INVESTIGATION
  - 0851L RIP CORD WAS FOUND 250 TO 300 YARDS SOUTH OF THE BODY
  - GRIDS
  - F12
  - NODS
  - CHEMLITE AND COMPASS
  - RIP CORD

12S VB 36826 37168
12S VB 36832 37169
12S VB 36837 37166
12S VB 36710 37026

ENCLOSURE (39)

- 0856L TIME LINE FROM CASA GRANDE POLICE DEPARTMENT CASE NUMBER 08/001382
- 0530L CIVILIAN (b)(6) WAS WALKING HIS DOG THRU THE GOLF PARK WHEN HE HEARD SOUND A CHUTE HE DIDNT KNOW WHAT IT WAS SINCE IT WAS STILL DARK.
- 0630L AFTER DROPPING OF HIS DOG OFF AT HOME, (b)(6) RETURNED TO THE SITE AND FOUND F12
- 0702L RAN OVER THE GOLF PRO OFFICE AND INFORMED ASSISTANT SUPERINTENDENT (b)(6) TO CALL 911
- 0721L 911 RECEIVED THE CALL ENGINE 502 ARRIVED TO THE SITE .
- 0727L F12 WAS DECLARED DEAD BY (b)(6) FROM THE 502 FIRE DEPARTMENT
- 0819L (b)(6)

CASA GRANDE POLICE DEPARTMENT
520 NORTH MARSHALL ST

- 0920L (b)(6) (b)(6)
HER FIGURES

POLICE DEPARTMENT (FORENSIC) IF WE NEED (b)(6)

- 0924L F12 WAS TAKEN TO THE TUCSON MEDICAL EXAMINATION CENTER NEXT TO THE KENO HOSPITAL 2825 EAST DISTRICT TUCSON AZ, 85714 # 520-243-8600

ENCLOSURE (3)

(b)(3), (b)(6)
Investing Officer
Qualified Military Free-Fall Parachutist / 130+ jumps

The investigating officer discussed the photos and GPS information with two subject matter experts; (b)(3), (b)(6) (NSWDG Air OPS) and (b)(3), (b)(6) (Squadron member, present at the accident scene). Additionally, members of SOCS Valentine's squadron conducted and internal analysis of the data within days of the accident. All of their information was made available. (b)(3), (b)(6) (Squadron member) and (b)(3), (b)(6) assisted explaining the information that the squadron had collected and analyzed. Other members that participated in the initial analysis by the squadron are noted on that enclosure.

Investigating officer's summary of phone conversations:

201400LMAY2008: (b)(6) / Phone conversation between (b)(3), (b)(6) and (b)(6) (b)(3), (b)(6), right lead from International Air Response, C-130 that conducted HAHO insertion of SOCS Valentine. (b)(6) was asked if there was any recording device that would have indicated and preserved the air-speed at the time of the HAHO insertion. (b)(6) responded that the C-130 A-model is an old air-craft and does not have that type of sophisticated / modern equipment to record such data. (b)(6) said he was flying the morning of 13 February and the C-130 was traveling at the briefed speed of 130 knots indicated.

201800LMAY2008: (b)(6) / Phone conversation with (b)(6), Casa Grande Fire Department. (b)(6) was with the initial responders and pronounced SOCS Valentine dead. Investigating Officer asked (b)(6) if he or any other EMS responders had disturbed any of SOCS Valentine's equipment when they arrived at the scene. (b)(6) stated that other than pulling some parachute material off Valentine's face to check for a pulse, no other equipment was touched or disturbed. He stated that SOCS Valentine's helmet was already off and that the body and equipment remained untouched.

ENCLOSURE (5)

(b)(1)

UNCLASSIFIED (b)

ENCLOSURE (37)