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## Weather and the Wreckage at Desert-One

[Major Joseph T. Benson](#)

What is the price to be paid by military commanders for not knowing the weather? Is it paid in lost equipment? Mission failure? Damage to national prestige? The blood of American servicemen? On April 24, 1980 at a remote location in central Iran code-named Desert-One, the United States paid on all counts.

Operation EAGLE CLAW, the failed attempt to rescue 53 hostages from the American embassy in Tehran, cost the lives of eight U.S. servicemen—five Airmen and three Marines. One RH-53 helicopters and a special operations-capable C-130 aircraft were also destroyed in the explosion and ensuing fires that took the lives of the special operators. What's more, in the haste to abandon Desert-One, sensitive mission information was left in one of the crippled helicopters. In his book *The Guts to Try*, the on-scene commander at Desert-One, Colonel James H. Kyle, stated that Murphy's Law certainly applied to this mission and ". . . if there was a possibility for something to have gone wrong during the operation, it did."<sup>1</sup> Weather was no exception.

On April 25th, 1980, a dejected President Jimmy Carter took full responsibility for the failed rescue attempt as he delivered the tragic news that eight servicemen had been lost. By most accounts, the mission was a disaster. The subsequent Department of Defense inquiry, a blue-ribbon panel chaired by retired Admiral James Holloway, identified eleven major errors that led to the failure. Among these, the poor interface between the pilots and weather officers concerning recognition of conditions associated with a *haboob*, a penetrating sandstorm or dust storm with violent winds, had the most bearing on the mission's failure.<sup>2</sup> The error was primarily attributed to the Air Weather Service (AWS), the Air Force weather unit responsible for providing weather support to the Air Force, Army and other government agencies. But Colonel Kyle's criticism of AWS went further. According to Kyle, AWS discovered what some already knew—it could not reliably forecast for remote areas of the world. AWS lacked the capability to detect and predict dust phenomena accurately with satellite data and its other limited forecasting methods for Iran.<sup>3</sup> The reason was simple: There was a serious shortage of environmental data coming from Iran. How could they have been expected to predict a *haboob*?

### The Crisis Begins

On November 4, 1979, Iranian student militants seized the U.S. Embassy in Tehran and took 53 American hostages. They demanded that the U.S. return deposed Shah Mohammad Reza Pahlavi, who had been admitted to the U.S. for medical treatment. President Carter refused and, along with the United Nations, demanded the immediate release of the hostages. The newly established Iranian Revolutionary Council, led by the Ayatollah Khomeini, told the American

government that it would “do its best” to free the Americans being held hostage in Washington’s embassy in Tehran.<sup>4</sup> Few in Carter’s administration had much faith that Khomeini and his radicals would deliver the American hostages. Planning for the rescue began almost immediately.

The operational plan would combine a rescue using military forces supported by an existing covert infrastructure in Iran. During the reign of the Shah, the United States and the United Kingdom had developed an extensive network of deep cover agents. In 1953, senior CIA agent Kermit Roosevelt used the British Special Operations Executive and CIA’s network of Iranian agents to organize mass demonstrations and help topple the Communist-leaning Prime Minister, Dr. Mohammad Mossadegh, and reinstate the American-friendly Shah Pahlavi. As developed as it was, a robust network alone would not aid in the overall planning and execution of the rescue<sup>5</sup>; the military would have to carry most of the load. Yet from the start, there were several flaws in the planning and preparation for Operation EAGLE CLAW. Perhaps the most glaring was organizational: the lack of a joint special operations command unit, which would have provided a common doctrine essential for complex joint operations. As retired Colonel Bob Brenni, Operation EAGLE CLAW’s lead C-130 pilot, recalled in 2001, “This mission required a lot of things we had never done before. We were literally making it up as we went along.”<sup>6</sup>

To plan and execute the rescue mission, a Joint Task Force (JTF) was cobbled together using disparate units from all four services. Never having trained or operated together, Air Force and Army special operations pilots were mixed with Marine pilots flying Navy helicopters to plan and execute the rescue. The EAGLE CLAW players were spread out, training around the world. The aircrews spent most of their time training in Florida and the southwestern United States;<sup>7</sup> the Delta Force operators were training at Fort Bragg, North Carolina. The ground and air units were not brought together to rehearse until a few weeks before the attempted rescue.

### **The Environmental Officer**

To serve as its environmental officer, the JTF selected Capt Donald “Stormy” Buchanan, an AWS climatologist and satellite meteorology expert.<sup>8</sup> He was backed up by an eight-man forecast cell at the then-Air Force Global Weather Central (AFGWC) at Offutt AFB, Nebraska (now a part of the Air Force Weather Agency). Assigned to duties at the Pentagon, the 32-year-old Buchanan had never served in a special operations unit. It is surprising that the JTF did not request a weather officer with experience in special operations. Equally surprising, AWS did not insist on the assignment of one of its special operations-experienced officers of which there were a handful in AWS. Providing environmental support to a highly sensitive rescue mission involving low flying helicopters, Delta Force troops, clandestine desert landings, and special operations-capable C-130s and C-141s all operating at night with night vision goggles and adhering to a restrictive timeline is a demanding venue for a weather officer to learn the special operations trade. Nonetheless, Buchanan got the nod.

Buchanan and his supporting cast at AFGWC quickly identified the *haboob* as the primary phenomenon that could pose major challenges for the JTF. Vast areas of suspended dust extending 10,000 feet above ground level would wreak havoc on any type of aircraft. During the five months leading up to Operation EAGLE CLAW, Buchanan requested that the JTF send him

out to provide seasonal briefings to the geographically separate air and ground units on the hazards of the frequent dust storms and how to identify them. His requests were denied. What's more, the JTF planners and decision-makers never asked Buchanan for a briefing on Iran's seasonal weather hazards. "Instead," writes historian John F. Fuller, "most of the climatological data he furnished was in written form and eventually included by him in a weather annex to the EAGLE CLAW operations plan assembled at the eleventh hour."<sup>9</sup>

Even if he were given the opportunity to educate the operators and brief the JTF leadership, would it have mattered? Stormy Buchanan may well have been an excellent staff weather officer and a master of identifying weather features on satellite images, but even Defense Meteorological Satellite Program (DMSP) visible imagery, the highest resolution imagery available even to this day, could not easily detect localized blowing or suspended dust. Besides, these high-resolution visible images are usable only during the day—EAGLE CLAW would be conducted almost exclusively in hours of darkness. Even so, AWS touted the capability of DMSP, and it became the cornerstone of environmental support to the JTF. Leading up to the rescue attempt, Buchanan's forecast cell at AFGWC used both the DMSP imagery and numerical modeling to issue short and long range practice forecasts.<sup>10</sup> To measure accuracy, the forecasts were verified as much as possible, a result of the small number of weather observations coming out of Iran. The scarcity of data was profound. In a country the size of Alaska, less than a dozen weather observations were being disseminated out of Iran on a daily basis.

Though chosen by the JTF, AWS owns part of the blame for choosing Capt. Buchanan. Why hadn't AWS thought it necessary to offer someone with experience in Special Operations Forces (SOF)? The AWS commander, Brig Gen Albert Kaehn, who commanded the 10th Weather Squadron (the unit responsible for indigenous weather networks in Laos, South Vietnam and Cambodia) during the Vietnam War, should have insisted on a SOF-savvy weatherman, one who could have developed possible solutions to overcome the lack of data emanating from Iran—perhaps a network of clandestine observers. Brig Gen Kaehn knew a little about weather data networks having worked with weather commando Keith Grimes during planning for the Son Tay raid (the November 1970 rescue attempt to free U.S. prisoners from North Vietnam).<sup>11</sup> Knowing Grimes personally, the AWS commander understood the importance of having the right leader filling the role as the senior weather officer to a highly-secretive joint special operations unit. Using both 10th Weather Squadron personnel and indigenous forces, Grimes' weather observers were responsible for collecting and transmitting thousands of weather observations for many operations, including the Son Tay raid, directly contributing to combat success. However, the legendary Col. Keith Grimes had died in a plane crash in 1977, and along with his death went his collective experiences of running weather data networks during the Vietnam War.

Though unavailable, Grimes was not the only post-Vietnam SOF weather officer with the requisite experience to become a key member of the JTF team. As stated earlier, there were a handful of others. One such officer was Capt Wayne Golding, who as an enlisted weather commando served with Grimes at Detachment 75, 5th Weather Wing in the 1960s. The SOF weathermen of Detachment 75 were experts in building weather data networks, whether deploying into non-permissive, data-denied areas themselves or by training and employing indigenous personnel to do the bulk of the collection in support of sensitive special operations missions. As such a mission, Operation EAGLE CLAW demanded a SOF weather officer with

both creativity and vision—one who would have noticed the void in weather data coming out of Iran, identified the problem to the JTF and immediately begun working on a plan to fix it. It was not the time for the JTF to accept, or AWS to offer up, the services of a novice.

### **“Foreman”**

On April 13, 1980—hostage day #162—JTF Commander Army Maj Gen James B. Vaught and senior members of his staff were flown to Washington for final deliberations. The Joint Chiefs were satisfied with Vaught’s answers to their questions. While President Carter had yet to give final approval of the rescue mission, the JTF forces were given orders to deploy to the staging bases on April 16th. Maj Gen Vaught and his JTF staff began arriving at Wadi Kena, Egypt on April 17th, the base that would serve as the advance command center for EAGLE CLAW. Providing weather support to the JTF staff and the geographically-separated forces, Capt Buchanan and his two forecasters deployed to Wadi Kena with a DMSP mobile van, provided by AWS. The C-130s were deployed to the tiny island of Masirah, where Oman had a small airbase, and the eight Navy RH-53s, on board the USS *Nimitz* in the Arabian Sea, were linked up with their Marine aircrews between April 20th and the 23rd.<sup>12</sup> Two C-141s were deployed to Dhahran, Saudi Arabia where they would await the call on the night of April 25th to extract the hostages at Hamzariyah Air Base, just south of Tehran. Dick Meadows, another veteran of the Son Tay raid, and his CIA cohorts handled the necessary details to facilitate the ground transport of the hostages from Tehran to the awaiting C-141s at Hamzariyah. All the actors were in position by April 23rd. At 1300 Zulu (Z) time (1600 local time at Wadi Kena and 1700 at Masirah) on April 24th, Maj Gen Vaught sent the code word “Foreman,” launching the rescue mission.<sup>13</sup> By dusk on the 24th, the six C-130s began taking off from Masirah as the eight helicopters lifted off the decks of the USS *Nimitz*, 60 miles off the Iranian coast.

To support the ingress into Iran, Capt Buchanan had gathered up as much detail as possible in order to build the route mission forecast. It was transmitted from Wadi Kena to the mission air commander, Colonel Kyle, and the Delta Force commander, Colonel Charlie Beckwith, who were both at Masirah, by 1000Z (1400 local time). Between Buchanan and the AFGWC forecast cell at Offutt, they determined there would be acceptable weather for the two-day raid. More specifically, Buchanan’s 1300Z briefing to Maj Gen Vaught and the JTF staff called for mostly clear skies, isolated thunderstorms well to the west of the C-130 and MH-53 ingress route and no mention of dust. With no forecasted weather impacts, the decision was made to “go.”<sup>14</sup> Ominously, however, two broad areas of suspended dust, undetected by the DMSP imagery, lay in wait for the rescue force.

### **From Bad to Worse**

Within two hours of leaving Masirah, the lead C-130, piloted by Capt Bob Brenci with Col Kyle on board, hit the first of two areas of suspended dust. Flight level visibility dropped from unrestricted to one mile. Expecting clear skies, save a few high clouds, the formation of C-130s was baffled by the presence of what Kyle’s pilot called a “milky substance” which immediately began to restrict their visibility. Col Kyle thought to pass this information back to the helicopters, who were expected to arrive at Desert-One an hour after the C-130s, but opted against “breaking

radio silence for minor weather conditions.”<sup>15</sup> In the event, no warning of the impending weather conditions was relayed to the trailing helicopters.

The first area of dust was actually the first of two *haboobs*. While the first *haboob* may have seemed minor, the second one would be anything but; it would facilitate the pending disaster. Col Kyle and the trailing C-130s met with the second *haboob* about 25 minutes later. Described as a “wall of talcum powder” by Capt Brenci, the second dust cloud was 100 miles long, more than twice as long as the first, and estimated to be 5,000 feet high. Flight visibility dropped to less than a mile. Kyle was deeply concerned with the trailing helicopters encountering the *haboobs*, but still chose to maintain radio silence in spite of the weather. This turned out to be a mistake. Even if he had wanted to, however, Kyle would have been unable to send an encrypted message regarding the hazardous weather due to the absence of secure communications on the helicopters. Using unsecured communications, however, he could have passed a prearranged code word or letter corresponding to marginal or unfavorable flying conditions back to the eight trailing helicopters. This information, and at what point the C-130s cleared the *haboob*, would have been valuable to the helicopters. Equipped with state-of-the-art radar and forward-looking infrared sensors, the C-130s were more capable in the dust than the helicopters and were able to maintain their flight formation’s integrity as they pressed on north towards Desert-One.

By 2000Z (midnight local time), all six C-130s had made it to Desert-One, a desert flight strip clandestinely surveyed a few weeks earlier by Combat Control officer Major John Carney.<sup>16</sup> Having to deal with unforeseen challenges, such as a busload of Iranian tourists that required detention by a few of Col Beckwith’s Delta Force operators, the C-130 crews were eager to receive the RH-53s. In the course of only a few precious hours of darkness, the RH-53s needed to be refueled by the C-130s with six of the eight RH-53s proceeding north carrying the full contingent of Delta Force operators to a pre-planned, concealed hidesite. Once the RH-53s had been prepped, the C-130s could depart Desert-One and quickly recover back to Masirah. All this had to happen before dawn. But at 2025Z (0025 local time) with daylight approaching, the helicopters were over an hour late.

A few hundred miles behind the faster-moving C-130s, the Marine helicopter pilots flew into the teeth of the *haboob*, as they were flying lower and slower than their fixed-wing counterparts. *Airman* magazine’s Jim Greeley summed up the weather forecast as a failure. It was supposed to be clear, but was not. “Flying at 500 feet,” wrote Greeley, “the helicopters got caught in what is known in the Dasht-e-Kavir, Iran’s Great Salt Desert, as a ‘*haboob*’ a blinding dust storm. After battling the storm for what seemed like days, one of the helicopters [was forced to] turn back.”<sup>17</sup>

Prior to reaching the first wall of suspended dust, helicopter six was forced to abort on account of pressure inside the main rotor blade.<sup>18</sup> Meanwhile, helicopters one and two were forced to land and check their hydraulic systems before resuming the journey to Desert-One in the rear of the formation. Inside the second wall of dust, visibility plunged to less than a quarter of a mile. The pilots lost all visual contact with the ground and one another. Then when helicopter number five returned to the USS *Nimitz*, the operation was down to six helicopters, the minimum required complete the rescue. Unfortunately, helicopter number five was unaware they were within twenty-five minutes of exiting the last suspended dust area.<sup>19</sup> The price of not knowing the weather was to be high. Had there been weather observers along the ingress route to Desert-One,

there would have been no surprises. In the event, however, the weather was an unpleasant surprise to the aviators.

After 90 minutes of white-knuckled flying, the six remaining helicopters limped onto Desert-One at 2100Z (0100 local time). They had traveled through over 150 miles of suspended dust that had reduced visibility to near zero. How bad was it? Flying in helicopter three (the first to arrive at Desert-One), veteran Marine pilot Lt Col Jim Shaefer described the weather as the “hairiest conditions I have ever flown in” and, addressing the on-scene commander Col Kyle, strongly recommended aborting the mission and to “. . . get on the C-130s and get out of here.”<sup>20</sup> The loss of hydraulics on helicopter number two during refueling drove the final nail in the coffin of Operation EAGLE CLAW; Maj Gen Vaught made the decision to abort the rescue mission at 2120Z on Beckwith’s recommendation. Overly fatigued and stressed from flying in the hazardous weather and in a hurry to get back to the *Nimitz*, the helicopter crews were now more prone to error and accident.

In the haste to refuel and return to friendly confines, helicopter three, whose crew was blinded by swirling propeller-blasted dust, misjudged the distance to a parked C-130 and collided with its left wing.<sup>21</sup> Both the helicopter and C-130 exploded into a ball of flames. Casualties of a failed mission, the helicopter and C-130 were destroyed. Tragically, eight men lost their lives.

### **Post Mortem**

Accurate and time-sensitive knowledge of environmental conditions could have prevented the tragedy and, possibly, assisted in the continuation of the mission or could have prompted the decision to launch on another night. Halfway through the helicopters’ ingress to Desert-One, the JTF headquarters received a report from Lt Col Ed Seiffert, piloting the lead helicopter, that visibility had become severely restricted due to dust. Col Jerry King, the JTF Operations Officer and a Special Forces soldier by trade, immediately sought Capt Buchanan for some answers. Searching through his briefing charts and satellite imagery, Buchanan could find nothing. “They shouldn’t be having any weather problems,” he replied.<sup>22</sup>

In part, Stormy Buchanan was right. No one could have seen the dust coming, even using the highest resolution satellite images; Buchanan and his team did the best they could with what they had. Maj Gen Vaught agreed that, despite problems in forecasting the dust, the weather support had been “sufficient.” Nonetheless, AWS failed to mollify its critics.

Gen David Jones, the Chairman of the Joint Chiefs of Staff, tasked the AWS commander, Brig Gen Kaehn, to conduct a postmortem analysis of the weather support AWS furnished.<sup>23</sup> Capt Buchanan anchored the three-man team that Kaehn formed to satisfy the Chairman’s tasking. The results were predictable. In a published white paper, the three-man team determined that “. . . all AWS forecasts for the entire operational area had been accurate, failing only to predict the suspended dust.”<sup>24</sup> Buchanan’s team further concluded that forecasting the dust was “beyond state of the art to forecast with any degree of reliability.”<sup>25</sup> A second commission conducted a review for the secretary of defense. Submitted in August 1980, that commission’s report bolstered Buchanan’s assertion by highlighting the inability of DMSP satellites to spot low

clouds at night.<sup>26</sup> On the one hand, the report vindicated Capt Buchanan and AWS, but on the other, Capt Buchanan and AWS had failed.

Capt Buchanan and his forecasting cell at AFGWC recognized early on that there was only a scintilla of data coming out of Iran. They realized that this was a limiting factor to providing solid weather support, yet nevertheless they failed to address this dangerous fact with the JTF. Addressing the lack of data and clearly telling the JTF the risks involved in not knowing the environmental conditions would have spurred Maj Gen Vaught to find and implement a solution. Buchanan and AWS would have been forced to find a way to rectify the lack of data—the risks were too high to settle for a sophisticated guess while hoping for a little luck. What if they had courted the services of veteran members of Keith Grimes' Detachment 75? Had they done so, one possible solution might have emerged: SOF weathermen operating inside Iran.

### **A Better Way**

Lt Col (Ret) Cranston Coleman, the Air Force Special Operations Command (AFSOC) director of weather from 1995-1997, agreed that SOF weathermen should have been used in a forward observing role during EAGLE CLAW. Coleman estimated that

“. . . weather observations from Iran would have made all the difference” in the successful outcome of Operation EAGLE CLAW.<sup>27</sup> Also in agreement is Col (Ret) John Carney, the senior Combat Controller during Operation EAGLE CLAW. “Unquestionably,” wrote Col Carney, “having SOF weathermen inserted into Iran prior to the mission would have been a definite plus.”<sup>28</sup> The problem, acknowledges Col Carney was, and always will be, the “. . . [Task Force] commanders not wanting to prematurely risk exposing the mission.” Instead, Carney believes inserting the SOF weathermen “24 hours prior” would have been acceptable. Furthermore, he continued, “The decision to employ SOF weathermen [inside Iran] would have been something I am sure Col Grimes would have suggested.”<sup>29</sup> How might the SOF weathermen have been arrayed inside a non-permissive Iran and what difference might they have made?

Inserted via helicopter 24 hours or more prior to launching the rescue mission, four two-man SOF weather teams would have been able to provide current weather conditions while determining the diurnal (i.e., over a 24-hour period) weather trends, facilitating mission planning and execution. Evenly spaced along the aircraft ingress route, the two-man teams, using high frequency radios, would have collected and disseminated hourly (or as requested) environmental observations back to the JTF headquarters. Operating around the clock, their data would have included information about the terrain, to include the presence of dust or sand deposits, which could potentially reduce visibility. Most importantly, they would have provided accurate and timely data 12 to 24 hours before the rescue mission launched. Had dust been observed limiting the visibility below minimal flight conditions for RH-53s, Maj Gen Vaught could have made the decision to postpone the mission for another night. Or, equipped with black-colored upper air balloons and radiosondes, SOF weathermen would have been able to determine the depth of the suspended dust through a profile of the winds. Knowing the depth of the dust, Col Kyle would have been able to adjust the ingress flight level. Then, at the conclusion of operations at Desert-One, one or both of the helicopters returning to the Nimitz could have picked up the eight SOF

weathermen and their minimal equipment. In this event, SOF weather teams could have made a difference.

Of course, there would have been risks getting the weathermen into Iran. The probable scenario would have been to insert the SOF weather teams concurrent with Maj Carney's Desert-One survey. In this scenario, the teams would have been on the ground for an extended period of time prior to the rescue, increasing the risk of detection. Yet tasking surrogate weather observers was not an option and remote weather sensors were not available. Carney made no attempt to employ indigenous personnel to control the first-to-arrive C-130s. Instead, before his combat controllers arrived at Desert-One, slightly concealed infrared runway lighting, which he had placed, guided the inbound aircraft.

Could AWS have tapped the cadre of SOF weathermen stationed at Hurlburt Field, Florida and offered their unique services for Operation EAGLE CLAW? Not necessarily, claims Lt Col Coleman. Save a few of Col Grimes' men, Coleman acknowledged, "We, the Air Weather Service and the 1st Special Operations Wing (Hurlburt), had allowed that capability to atrophy to the point of being almost non-functional."<sup>30</sup> Either way, the successors to Col Grimes' Detachment 75, though few in number, were trained and available. Long before the first helicopters lifted off the Nimitz or the lead C-130 departed Masirah, someone should have made the call for SOF weathermen.

## Notes

1. James H. Kyle and John Robert Eidson, *The Guts to Try* (New York: Orion Books, 1990), 306.
2. *Ibid.*, 322.
3. *Ibid.*, 327-28.
4. Bernard Gwertzman, "Government in Iran Vows Help in Seige; U.S. Uncertain Despite Promise by Tehran to do Its Best," *New York Times*, 5 November 1979: A1.
5. Roy Godson, *Dirty Tricks or Trump Cards: U.S. Covert Action and Counterintelligence*, 2nd ed. (New Brunswick, NJ: Transaction Publishers, 2003), 130.
6. Jim Greeley, "Desert-One," *Airman* 45 (2001): 2-9.
7. *Ibid.*, 3.
8. John F. Fuller, *Thor's Legions: Weather Support to the Air Force and Army, 1937-1987*, (Manlius, NY: Salina Press, 1990), 387.
9. *Ibid.*, 389.



10. John F. Fuller and Charles C. Bates, *America's Weather Warriors: 1814-1985*, (College Station, TX: Texas A&M University Press, 1986), 241.
11. Ibid., 228.
12. Kyle and Eidson, *The Guts to Try*, 203-217.
13. Ibid., 235.
14. Otto Kreisher, "Desert-One," *Journal of the Air Force Association* 82 (1999). Retrieved August 15, 2006 from <http://www.afa.org/magazine/jan1999/0199desertone.asp>.
15. Kyle and Eidson, *The Guts to Try*, 246.
16. Mark Bowden, "The Desert-One Debacle," *The Atlantic Online* (2006). Retrieved August 15, 2006 from [http://iran.theatlantic.com/interactive\\_article\\_page\\_2.html](http://iran.theatlantic.com/interactive_article_page_2.html).
17. Greeley, "Desert-One," 4-5.
18. Kyle and Eidson, *The Guts to Try*, 249-50.
19. Fuller and Bates, *America's Weather Warriors*, 243.
20. Kyle and Eidson, *The Guts to Try*, 280.
21. Ibid., 295.
22. Ibid., 260.
23. Fuller, *Thor's Legions*, 390.
24. Fuller and Bates, *America's Weather Warriors*, 243.
25. U.S. Department of Defense, Mission Evaluation Environmental Support: Executive Summary (HQ Air Weather Service), Washington D.C.: 1980.
26. Fuller and Bates, *America's Weather Warriors*, 245.
27. Cranston Coleman, "Re: Special Operations Weathermen in EAGLE CLAW" E-mail to author, 13 December 2005.
28. John Carney, "Re: Special Operations Weathermen in EAGLE CLAW" E-mail to author, 6 March 2006.
29. Ibid.

30. Cranston Coleman, "Re: Special Operations Weathermen in EAGLE CLAW" E-mail to author, 13 December 2005.

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