



From a
GREAT HEIGHT
Helicopter Recovery at Takur Ghar

by Troy J. Sacquety

Abstract: *The 4-5 March 2002 Battle of Takur Ghar in Afghanistan resulted in two downed MH-47E Chinook helicopters. Only one, tail number 476, was salvageable. However, it was in an extremely remote and contested area, factors that complicated a recovery. With considerable planning and the use of a contracted airframe, aviation maintenance soldiers from 2nd Battalion, 160th Special Operations Aviation Regiment recovered the helicopter, allowing it to return to service.*

Within weeks of the 11 September 2001 terrorist attacks on the United States, Army Special Operations Forces (ARSOF) began conducting combat operations in Afghanistan against the terrorist group al-Qaeda and forces of the Taliban government which harbored them. Dubbed Operation ENDURING FREEDOM (OEF) on 7 October 2001, the U.S. assisted anti-Taliban Afghan fighters, securing much of the countryside, and liberating the capital city of Kabul in November. By late-December, a coalition of anti-Taliban Afghan groups and western allies had installed Hamid Karzai as head of a transitional government.¹

While Coalition and anti-Taliban Afghan forces made rapid gains in seizing Afghan territory, they were unsuccessful in destroying al-Qaeda and the Taliban. Most importantly, a sizeable enemy force escaped during the Battle of Tora Bora, 6-17 December, assuring ongoing military action. Among the first soldiers engaged, the MH-47E Chinook pilots and crews of 2nd Battalion, 160th Special Operations Aviation Regiment (2/160th) remained heavily involved in combat operations in early 2002. One of the pivotal moments of the 2/160th's early involvement in OEF came on 4 March 2002, during Operation ANACONDA.

Centered on the Shahi-Kot Valley and Arma mountains, in Afghanistan's Paktia Province, ANACONDA was designed to drive al-Qaeda and Taliban fighters against blocking positions held by regiments from the 101st Airborne and 10th Mountain Divisions. Combined – Joint Task Force Mountain expected just a few hundred insurgents, and reasoned that they would not put up much of a fight. This assumption was wrong.² Nowhere was this more apparent than on the mountaintop of Takur Ghar. Situated at 10,500 feet above sea level, Takur Ghar provided an excellent vantage point to observe movement in the valley below, and U.S. forces aimed to seize the height. Unfortunately for the MH-47E pilots, crews, and accompanying ground

forces, enemy forces had already occupied and fortified the peak.

The first to discover the entrenched enemy were those in an MH-47E with tail number 476. As the pilot tried to offload its troops onto Takur Ghar in the pre-dawn hours on 4 March, insurgents brought 476 under intense fire. Suffering several crippling rocket-propelled grenade strikes and automatic weapons fire, the Chinook jerked upward, causing U.S. Navy SEAL, Petty Officer First Class (PO1) Neil C. Roberts, to fall approximately five to ten feet into the snow on the ridge. Although the pilot tried to return to extract PO1 Roberts, the helicopter was critically damaged. With great skill, the pilot managed to set the crippled helicopter down about six kilometers away at a location nearly 2,000 feet below the summit.³ The crew and passengers were picked up by another helicopter. Meanwhile, in an effort to recover or rescue PO1 Roberts, whose status was unknown, two additional MH-47Es separately inserted SOF teams. Both helicopters came under fire, and the insurgents disabled one (tail number 475), leading to a lengthy battle on top of Takur Ghar. After the battle, the ARSOF command element, Combined Joint Special Operations Task Force-Afghanistan (CJSOTF-A), had to decide if, and then how, to salvage the two downed aircraft.⁴

The recovery of 475 was the most problematic due to its location and the extent of damage suffered. In addition to being shot down, it had been subject to intense gunfire throughout the firefight on Takur Ghar. A U.S. Air Force plane solved the problem when it inadvertently bombed and completely destroyed the helicopter. "There wasn't anything to recover," recalled then-Lieutenant Colonel (LTC) Kevin W. Magnum, 1/160th commander, and the senior 160th SOAR officer in Afghanistan.⁵ That left 476 as the sole salvageable MH-47E.

Estimating the cost of salvage and repair of 476 to be less than the expense of procuring a new MH-47E, CJSOTF-A gave the go-ahead for the 160th to recover the airframe. Maintenance Test Pilot Chief Warrant

NOTE: IAW USSOCOM Sanitation Protocol for Historical Articles on Recent Operations, pseudonyms are used for majors and below who are still on active duty, unless names have been publically released for awards/decorations or DoD news release. Pseudonyms are identified with an asterisk (*). The eyes of active ARSOF personnel in photos are blocked out when not covered with dark visors or sunglasses, except when photos are publically released by a service or DoD. Source references (end notes) utilize the assigned pseudonym.

Gardez

5

TAKUR GHAR AMBUSH



2 4

Takur Ghar

1 3

Little Whale

Shahikot Valley
The Whale

The Ambush

1 On 4 March 2002, MH-47E tail number 476 comes under fire and P01 Neil C. Roberts falls out. The pilot attempts to rescue him, but the aircraft is too heavily damaged to return.

2 476 crash lands below the summit and is abandoned.

3 MH-47E tail number 475 attempts to

land troops to rescue P01 Roberts and is shot down on the summit, leading to an intense firefight. Seven Special Operations personnel are killed and several others wounded. This helicopter is later destroyed.

Aircraft Recovery

4 A team from 2/160 recovers 476 on 8 April 2002 with the aid of a Russian-built Mi-26.

5 Mi-26 conducts refueling at Gardez.

6 Mi-26 conducts second refueling at Kabul.

7 Mi-26 delivers 476 to the airfield at Bagram. The MH-47E Chinook is then transported to Fort Campbell, Kentucky for repair.

Officer 4 (CW4) Peter A. Milch* recalled that “LTC Mangum asked me what could I do. I replied, I need to see it.”⁶ An assessment team, made up of CW4 Milch*, Maintenance Technician CW3 Thomas M. Katz*, and Technical Inspector Staff Sergeant (SSG) Samuel J. Stills*, was ready two weeks after the crash. Bringing tools and lengths of hose in case they had to drain the fuel tanks, the team flew from Bagram Air Base to a forward operating base (FOB) that housed a Navy SEAL platoon. Early the next morning, a few SEALs, the 160th assessment team, and Afghan Northern Alliance soldiers boarded Toyota Hilux pickup trucks for the three-and-one-half hour drive through “scary, bad guy land,” to the crash site.⁷

While on the drive, the 160th team learned that the only observation 476 had been under was an occasional drone flyby and one visit by a SEAL team. Because of the lack of constant control, the SEALs had planted desired items like “food, water, and warm jackets” aboard.⁸ Missing items would have been a clear indication that someone had visited the crash. When the group arrived at the site, covered by sniper overwatch,

a Navy Explosive Ordnance Disposal (EOD) expert checked for booby traps, and to see if the planted items had remained in place. Having determined the site was safe, the EOD tech gave the ‘green light’ to evaluate the aircraft.⁹

SSG Stills* recalled that the helicopter was sitting “on a [steep] angle, and we had to watch our step” because slippery hydraulic fluid coated the floor.¹⁰ The three 160th soldiers inspected the aircraft for half-an-hour to determine if it could be made operational with minimal repairs. They found that an RPG impact had destroyed some avionics, sent shrapnel into the rotor blades and electrical system, and caused a fire. CW4 Milch* called it “a complete [and] total electrical nightmare.”¹¹ In addition, a single bullet had severed an oil line and completely drained the fluid from the rear rotor transmission. The assessment team could not determine if the MH-47E had operated without oil. The situation was potentially fatal if the helicopter tried to fly and the transmission “locked up” in flight, explained Katz.*¹² CW4 Milch* assessed, “There was so much damage we were surprised the aircraft continued flying” during the



Top: The rear of 476. The glove tied to the ramp was placed there by the SEAL team as a marker to help determine if the helicopter had been tampered with. If the glove was removed, it was a sure sign that someone else had been there.



Center: The initial view of 476 as seen by the assessment team. At first glance, the helicopter does not appear to have sustained much damage.



Bottom: The other side of 476 displayed much more of the damage that crippled the helicopter. Notice the impact damage to the front, below the window just to the rear of the cockpit.

battle.¹³ SSG Stills* summarized the team's conclusion: "there was no way to fly it out."¹⁴

Because the helicopter needed to be lifted out, the team emptied the fuel tanks to reduce the weight, and for safety. Emptying the fuel tanks would remove the hazard of having a flammable combustible on the craft and prevent shifting weight that a liquid would cause when the helicopter was lifted. The assessment team hooked up the drain hoses, placed the open ends downhill, and opened the emergency fuel dump tubes. Draining the tanks ahead of the actual recovery also allowed time for fuel vapors to dissipate. The group then returned to the FOB. On the way back, the convoy came under fire as it neared a village, but did not engage.

Once back at Bagram, the recovery team searched for a helicopter with enough lift capability to sling load the crashed MH-47E from its nearly 9,000-foot elevation. Their efforts met with frustration. The first choice was a U.S. Marine Corps CH-53E Sea Stallion heavy-lift helicopter, but its pilots did not think they could lift the Chinook from that altitude. At that height, the ability of a helicopter to produce lift is greatly reduced because of lower air density.

Next, 2/160 tried to get a CH-47D, which had more powerful engines than the MH-47E, from the 101st Airborne Division. Its pilot, a former Night Stalker, thought they might be able to lift 476 if the recovery team could lighten the airframe to under 18,000 pounds.¹⁵ After hard calculation, the 160th personnel determined they could get the MH-47E below that weight by strip-

ping off the rotor blades, engines, avionics, most interior components, electronics, fuel probe, and external fuel tanks. In the end, the 101st decided that even if all those items were removed, the risk was too high.¹⁶

Finally, Captain Elias Goosecheap* from Company A, 2/160th suggested contracting a corporate-owned Russian-made and crewed Mi-26. He had seen the

extremely large heavy-lift helicopter operating just a few weeks prior. It took about two and a half weeks to obtain the necessary permissions and award a contract for the helicopter company to perform the job. Once the Mi-26 arrived at Bagram on 7 April, soldiers from Company D, 2/160th planned with the Russian crew how to recover 476.

Communication proved challenging. Thankfully, one of the 160th soldiers was a Russian linguist.

“There was so much damage we were surprised the aircraft continued flying.”

— CW4 Peter A. Milch*

Tail number 476 set down several kilometers from Takur Ghar. It suffered considerable damage and was no longer in a flyable condition, but it was recoverable.



Through him, the Mi-26 crew learned what they had been contracted to lift. Although reluctant, the crew agreed to lift the broken Chinook if the recovery team could get it down to 20,000 pounds. The 160th team decided to remove both engines, the rotor blades, fuel probe, gun mounts, avionics, and other specialized electronics, to get 476 to the target weight. The Russian crew also lightened their own aircraft to provide more lift capacity. The plan was to go in that night (7 April), prepare the aircraft for sling load, and lift it out at dawn the next day.

At 2000 hours, four MH-47Es took off for the 45-minute flight to the downed helicopter. The Mi-26 remained on the ground until the recovery was far enough along that it could proceed for a pick up. Three of the MH-47Es carried U.S. Army Rangers for force protection, while the fourth carried the nine-man recovery team and their equipment. Additionally, several 101st Airborne Division AH-64 Apaches, an F-18 Hornet jet fighter, and an unmanned aerial vehicle orbited overhead while another four A-10s were on strip alert. Katz* said that it was “really comforting knowing [the aircraft were] watching over us.”¹⁷

At the site, the three MH-47Es inserted the Rangers. After declaring the area safe, they signaled the recovery team to land. Although surveillance had monitored 476 to detect tampering, a Navy EOD specialist again checked out the wreckage. He determined that the aircraft had not been tampered with, and signaled the recovery team into action. Although they had been briefed, most of the recovery team had not yet seen 476 for themselves. Sergeant (SGT) Michael P. Bonham* recalled that the helicopter was perched “on the side of a mountain [and looked like it] could have rolled off in a moment.”¹⁸

Still, the 160th soldiers swarmed over the aircraft, each wearing night vision goggles (NVGs) while working to complete their individual task. However, Katz* recalled that the recovery team found the NVGs too restrictive, so they “went with the alternative plan of using blue chem sticks.”¹⁹ In quick order, the crew removed anything they could, including the “probe, FLIR [Forward Looking Infrared] turret, MMR [Multi-Mission Radar] components and pod, all cockpit instrumentation and radio control heads, [and] every avionics black box and component,” according to the After Action Report.²⁰

Concurrently, two soldiers worked on removing the engines, while overcoming a brief challenge brought on by the physiological challenges of operating at a high altitude. Like all members of the recovery team, SGT Bonham*, one of the mechanics, had received medication to prevent altitude sickness, but he began to vomit and suffer from a severe headache during the engine removal. He was aided by a 160th medic, who provided additional medication that quickly enabled him to return to work. SGT Bonham* recalled that a few minutes after taking a pill, he was “good to go.”²¹ Even though none of the other team members got sick, the altitude took a toll, sapping everyone’s energy, and slowing down the engine removal.

Complications arose, as well, when the crew’s plan to use the base of the rotor blades as a lift point to hoist the engines from their mounts failed. When they tried to execute the plan, the blades bent under the weight, and team members had to physically lift the engines from the mounts, then lower them to the ground without damage. The extra effort put them far behind schedule. As the sun broke over the mountains at 0100 hours, they were still removing the second engine.

The Russian-made Mi-26, one of the largest helicopters in the world, is capable of providing extreme heavy lift. It was a logical choice for recovering 476.





Top: A close up view of the damage to the front of 476. The RPG had exploded on the outside of the helicopter, and started a fire that affected the electrical system. The areas where the paint has been chipped are shrapnel impact points.



Center: 476 landed at an angle. When combined with slippery hydraulic fluid that covered the floor, it made work difficult for the recovery crew.

Bottom: The front view of 476. This photo further illustrates the angle at which the damaged helicopter had landed.



The team next turned their attention to cutting the rotor blades from underneath with a rescue saw. This worked well until the blades were nearly cut through. When only a few strands of material remained, the blades bent to the ground. The angle made completing the cut difficult, so the recovery team twisted the blades back and forth to break them free. The technique was less than ideal, and one blade struck the airframe, putting a gash in the exterior. Once the last rear blade was cut at 0220 hours, the team radioed for the Mi-26 to proceed. With two 160th soldiers on board, it flew to the crash site.

While the Mi-26 was en route, two members of the recovery team at 476 worked on removing the front rotor blades. A falling blade again struck the airframe, this time damaging the high frequency antenna. The

other team members staged the removed components in a central location for quick loading when the Chinooks returned to extract the team and force protection detail.²²

The engines proved to be the most difficult items to relocate to a central collection point. The mechanics hoped to lift the engine into the back of the single John Deere Gator all-terrain utility vehicle that the recovery team had brought with them. However, fatigue having set in, no matter how hard they tried, the soldiers could not wrestle the engine into the back of the Gator. Their ingenious solution to the problem was to park the Gator downhill, use the severed rotors as ramps, and roll the engine into the back. Once accomplished, the team realized that it could not get the first engine out of the back



Left: The recovery crew at work cutting the rear rotor blades. Cutting them proved problematic and time-consuming when the blades bent down, forcing the crew to work them back and forth to help break them away.

Bottom: Physically lifting the engines proved to be too much for the exhausted recovery crew, who had been working at high altitude for hours. They ingeniously used the Gator and the cut rotor blades to roll an engine into the back of the vehicle. Unfortunately, once on the Gator, they did not have the strength to lift it out, meaning that only one engine was recovered.





The Mi-26 as it prepared to sling load 476. Notice CW4 Milch* and CW3 Katz* on the rear, both of whom were lifted into the air and had to jump off the rising airframe.



The Mi-26 lifts 476 from its crash site. Once it left, the maintenance crew followed in another Chinook.

of the Gator to load the second. As they pondered how to recover the second engine, the Mi-26 arrived.

CW4 Milch* and CW3 Katz* climbed on 476 to hook up the slings from the hovering Mi-26. Katz* remembered that the rotor wash was “like a hurricane.”²³ The Mi-26 effortlessly lifted the Chinook, so much that the two found themselves quickly ascending, forcing them to jump about eight feet down to the ground. The Mi-26 easily handled the load and made it the approximately fifteen miles to Gardez for a refueling from 101st Airborne Division CH-47Ds. The Mi-26 set 476 down, detached the straps, and then landed alongside the 101st Chinook.

Meanwhile, back at the crash site, the recovery team struggled with the second engine. The group received word that unidentified vehicles were headed their way. The MH-47E pilots made the decision to immediately extract the recovery team and the Rangers. Thus, the only ‘casualty’ of the recovery operation, other than altitude sickness, was one engine left behind.

The MH-47Es transporting the recovery team and the security force flew to Gardez to assist the Mi-26 crew with refueling and re-hooking 476 to the lift helicopter. After hooking 476 up, the recovery crew piled

back into their Chinook to follow the Mi-26 to Kabul International Airport.²⁴ At Kabul, the Mi-26 crew again set down 476, refueled, and conducted an inspection of their helicopter. Finally, the recovery team again helped sling load 476 and followed the Mi-26 to its final destination, at Bagram.²⁵

For CW4 Milch*, having 476 back on the tarmac was a sobering moment. “Just about everybody in the 160th [who was there] came out to look at it. It was extremely surprising that they could fly it away,” from Takur Ghar. CW4 Milch* later recovered some of the many spent enemy rounds from 476 and presented them to the crew who had flown it in combat. Then, the wreck was prepped for shipping back to the U.S. for a complete overhaul.²⁶

Having recovered the aircraft, the 160th rebuilt 476, and continued to fly it in combat. In addition to saving an airframe, the recovery had a more significant impact. It led to standardized procedures and training in Downed Aircraft Recovery Team (DART) operations within the 160th, and the development of DART packages of standard recovery equipment.²⁷ After the recovery, CW4 Milch* traveled to the Boeing plant that manufactures Chinooks. He gave a presentation to a



The recovery team posed for a quick photo after the successful recovery. It was the first combat-loss recovery of a Chinook since the Vietnam War.

full auditorium describing the strength of the airframe and the importance of the April mission. In addition to saving the airframe, and developing DART packages, the 160th used the recovery mission as a training case study. The recovery of 476 forced 2/160th to become “proactive instead of reactive” in regards to helicopter recovery, and incorporate it into their training. This is an ethos that has since spread to the other battalions.²⁸

The recovery, and lessons learned, also led to the development of new equipment, such as the spider-crane, a helicopter-deployable mobile hoist. This equipment would eliminate the problems experienced at Takur Ghar in recovering the engines. Instead of relying on human muscle power, which was greatly affected by environmental conditions in this case, a crane is not affected by weather conditions or altitude. Overall, in conducting the first combat-loss Chinook recovery since Vietnam, the recovery team demonstrated that they had the skills and ingenuity to conduct a difficult salvage mission in an austere and contentious environment. In so doing, they helped to keep a valuable SOF-specific helicopter in the fleet and influenced training the force in the event of a future downed helicopter scenario.²⁹ 🇺🇸

Takeaways:

- 1 The 2/160th soldiers used ingenuity and contracted assets to recover an aircraft downed in mountainous, hostile territory.
- 2 The recovery kept a valuable, SOF-specific airframe in the fleet during the early days of GWOT.
- 3 The 160th applied lessons from the recovery to refining its downed aircraft recovery capability, improving unit training, and developing new recovery equipment.

Endnotes

- 1 France, the UK, Germany, Canada, Turkey, Norway, Australia, and New Zealand provided forces. For more on early operations, see Charles H. Briscoe and others, eds., *Weapon of Choice: U.S. Army Special Operations Forces in Afghanistan* (United States Army Special Operations History Office, 2016).
- 2 For more on Operation ANACONDA, see *Weapon of Choice*, 275-335.
- 3 D/2/160, "Aircraft 476 Recovery Overview," [2003?], copy in USASOC History Office, Fort Bragg, NC, hereafter "Aircraft 476 Recovery Overview."
- 4 For more on CJSOTF-A, see Dr. Michael Krivdo, "CJSOTF-A: A Short History, 2002-2014," in *Veritas: Journal of Army Special Operations History*, Vol. 12, No. 2 (2016), on internet at https://arsof-history.org/articles/v12n2_cjsotf_page_1.html.
- 5 LTG Kevin W. Mangum, interview by Dr. Michael Krivdo, 18 February 2016, USASOC History Office, Fort Bragg, NC; LTG Kevin W. Mangum email to Dr. Troy J. Sacquety, "SUBJECT: Takur Ghar," 23 April 2016, USASOC History Office, Fort Bragg, NC.
- 6 CW5 Peter A. Milch*, interview by Dr. Troy J. Sacquety, 28 January 2016, USASOC History Office, Fort Bragg, NC, hereafter Milch interview.
- 7 Milch interview.
- 8 Milch interview.
- 9 Milch interview.
- 10 Samuel J. Stills*, interview by Dr. Troy J. Sacquety, 26 January 2016, USASOC History Office, Fort Bragg, NC, hereafter Stills interview.
- 11 Milch interview.
- 12 Thomas M. Katz*, interview by Dr. Troy J. Sacquety, 8 April 2016, USASOC History Office, Fort Bragg, NC, hereafter Katz interview.
- 13 Milch interview.
- 14 Stills interview.
- 15 Katz interview.
- 16 "Aircraft 476 Recovery Overview."
- 17 Katz interview.
- 18 MSG Michael P. Bonham*, interview by Dr. Troy J. Sacquety, 25 January 2016, USASOC History Office, Fort Bragg, NC, hereafter Bonham interview.
- 19 Katz interview.
- 20 "Aircraft 476 Recovery Overview." Other items removed included the oxygen systems, aircraft survivability equipment, fast rope insertion extraction system, and radio antennas.
- 21 Bonham interview.
- 22 "Aircraft 476 Recovery Overview."
- 23 Katz interview.
- 24 On arrival at Gardez, the 160th soldiers noticed that the Mi-26 refueling operation had attracted the attention of about seventy-five locals. Despite verbal warnings to back away, the crowd only dispersed when pelted by sand and rocks flung by rotor blade turbulence when the Mi-26 lifted off.
- 25 "Aircraft 476 Recovery Overview."
- 26 Milch interview.
- 27 Bonham interview. See term DART in "Joint Publication 1-02: Department of Defense Dictionary of Military and Associated Terms," amended 15 February 2013, appendix A, p. 39, on internet at https://usacac.army.mil/sites/default/files/misc/doctrine/CDG/cdg_resources/manuals/jps/jp1_02.pdf.
- 28 Terry Mason* interview by Dr. Troy Sacquety, 22 October 2020, USASOC History Office, Fort Bragg, NC.
- 29 Milch interview.

The Chinook is set down at Gardez to allow the Mi-26 to refuel. Locals came to investigate and refused to leave until the propeller wash pelted them with flying debris.