

20Nov70 Son Tay

Operation Ivory Coast

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Coordinates:  [21°8′39.68″N 105°29′45.17″E](#)

Operation Ivory Coast
Part of the Vietnam War



Son Tây prison camp. The walled compound is center left next to the river.

Date	November 21, 1970
Location	Son Tay , North Vietnam
Result	Mission Failed
Belligerents	
 North Vietnam	 United States
Combatants of unknown nationality	
Commanders and leaders	
Unknown	LeRoy J. Manor Arthur D. Simons
Strength	
Unknown	56 Special Forces soldiers ^{[1][2]} 92 airmen ^{[3][n 1]} 28 aircraft ^[4]
Casualties and losses	

42 guards killed^[5]

2 injured
1 helicopter and 1 airplane

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Military engagements **of the Vietnam War**

Operation Ivory Coast was a failed rescue mission conducted in [North Vietnam](#) during the [Vietnam War](#) by [United States Special Operations Forces](#) and other elements of the U.S. military.

On November 21, 1970, a [joint United States Air Force/United States Army](#) force commanded by Air Force Brigadier General [LeRoy J. Manor](#) and Army Colonel [Arthur D. "Bull" Simons](#) landed 56 [U.S. Army Special Forces](#) soldiers^[1] by helicopter in the [Son Tây](#) prison camp located only 23 miles (37 km) west of [Hanoi](#), North Vietnam. The mission's objective was the recovery of 61 American [prisoners of war](#) thought to be held at the camp, situated in an area where 12,000 North Vietnamese troops were stationed within 5 miles (8.0 km).^[6] The mission failed when it was found during the raid that all the prisoners had been previously moved to another camp.

The specially selected raiders extensively trained and rehearsed the operation at [Eglin Air Force Base, Florida](#), while planning and intelligence gathering continued from May 25 to November 20, 1970.^[7] Despite the absence of prisoners, the raid was executed with a high degree of success,^[8] incurring only two minor casualties and the loss of two aircraft, one of which had been part of the plan from the start.^{[5][9]} Criticism of intelligence failures to determine that the camp was empty of U.S. POWs, both public and within the administration of President [Richard M. Nixon](#), led to a major reorganization of the United States intelligence community a year later.^[10]

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Planning, organization and training

Polar Circle

The concept of a rescue mission inside North Vietnam began on May 9, 1970. An Air Force intelligence unit concluded through analysis of aerial photography that a compound near [Son Tay](#), suspected since late 1968 of being a [prisoner of war](#) camp, contained 55 American POWs and that at least six were in urgent need of rescue.^{[11][12][n 2]} On May 25, the unit met in the [Pentagon](#) with BG [Donald Blackburn](#), Special Assistant for Counterinsurgency and Special Activities (SACSA), to report their findings. Blackburn was responsible directly to the [Chairman of the Joint Chiefs of Staff](#) and had also been the first commander of the covert [Studies and Observation Group](#) in Vietnam.^[13]

Blackburn immediately met with General [Earle G. Wheeler](#), the JCS Chairman, to recommend a rescue of all the POWs at Son Tay.^[14] To study the feasibility of a raid, Wheeler authorized a 15-member planning group under the codename *Polar Circle* that convened on June 10. One of its members was an officer who would actually participate in the raid as a rescue helicopter pilot.^{[15][n 3]} The study group, after a review of all available intelligence, concluded that Son Tay contained 61 POWs.^[6]

When Blackburn's recommendation that he lead the mission himself was turned down, he asked COL Arthur D. Simons on July 13 to command the Army's personnel and selected [Eglin Air Force Base](#) as the training site.^{[16][n 4]}

Ivory Coast

The second phase, Operation Ivory Coast, began on August 8, 1970, when Admiral [Thomas H. Moorer](#), the new J.C.S. Chairman, designated Manor as commander and Simons as deputy commander of the mission task force. Ivory Coast was the organization, planning, training, and deployment phase of the operation. Manor set up an Air Force training facility at Eglin's [Duke Field](#) and brought together a 27-member planning staff that included 11 from the prior feasibility study.^{[5][17]}

Simons recruited 103 personnel from interviews of 500 volunteers, most Special Forces personnel of the 6th and [7th Special Forces Groups](#) at [Fort Bragg](#), [North Carolina](#).^[18] USAF planners selected key Air Force commanders, who then picked personnel for their crews. Helicopter and A-1 Skyraider crews were put together from instructors at Eglin and personnel returned from Southeast Asia. Two crews for [C-130E\(I\) Combat Talons](#)^{[19][n 5]} were assembled from squadrons in Germany and North Carolina.^{[20][n 6]} All were then asked to volunteer for a temporary duty assignment without additional pay and without being told the nature of the rescue mission.^{[21][n 7]} One hundred three Army and 116 Air Force personnel were selected for the project, including ground force members, aircrewmembers, support members, and planners.^{[22][n 8][23][n 9]} The 219-man^{[24][n 10]} task force planned, trained, and operated under the title of the "Joint Contingency Task Group" (JCTG).^[25]

The planning staff set up parameters for a [nighttime raid](#), the key points of which were clear weather and a quarter moon at 35 degrees above the horizon for optimum visibility during low-level flight.^[6] From these parameters, two mission "windows" were identified, October 18–25 and November 18–25.^[6] Training proceeded at Eglin using a replica of the prison compound for rehearsals^{[26][n 11]} and a \$60,000 five-foot-by-five-foot scale table model (codenamed "Barbara") for familiarization.^{[27][28][29][n 12]}



Practice formation showing helicopters drafting on their Combat Talon navigation escort. The HH-3E used in the assault is third from the right as viewed.

Air Force crews flew 1,054 hours in southern [Alabama](#), [Georgia](#), and [Florida](#) conducting "dissimilar (aircraft) formation" training with both UH-1H and HH-3E helicopters at night and at low-level^[30] (a flight profile for which procedures had to be innovated by the two selected crews),^[31] and gaining expertise in navigation training using [FLIR](#), which, until Ivory Coast, had not been part of the Combat Talon's electronics suite.^[32] A vee formation in which the slower helicopters [drafted](#) in echelon slightly above and behind each wing of the Combat Talon escort aircraft was chosen and refined for the mission.

Special Forces training began on September 9, advancing to night training on September 17 and joint training with air crews on September 28 that included six rehearsals a day, three of them under night conditions. By October 6, 170 practice sessions of all or partial phases of the mission were performed on the mockup by the Special Forces troopers, many with live fire.^[33] On that date, the first full-scale [dress rehearsal](#), using a UH-1H as the assault helicopter, was conducted at night and included a 5.5-hour, 687 miles (1,106 km) flight of all aircraft, replicating the timing, speeds, altitudes, and turns in the mission plan.^[34] The rehearsal spelled the end of the option to use the UH-1 when its small passenger compartment resulted in leg cramps to the Special Forces troopers that completely disrupted the timing of their assault, more than offsetting the UH-1's only advantage (smaller rotor radius) over the larger HH-3.^[35] Further dress rehearsals and a total of 31 practice landings by the HH-3E in the mockup's courtyard confirmed the choice.^[36]

On September 24, Manor recommended approval of the October window to US [Secretary of Defense Melvin Laird](#), with October 21 as the primary execution date. However, at a [White House](#) briefing on October 8 with [National Security Advisor Henry Kissinger](#) and General [Alexander M. Haig](#),^[n 13] Kissinger delayed the mission to the November window because [President Nixon](#) was not in Washington and could not be briefed in time for approval of the October window. This delay, while posing a risk of compromising the secrecy of the mission, had the benefits of additional training, acquisition of night-vision equipment, and further reconnaissance of the prison.^[37]

Manor and Simons met with the commander of [Task Force 77](#), [Vice Admiral Frederic A. Bardshar](#), aboard his [flagship USS America](#) on November 5 to arrange for a diversionary mission to be flown by naval aircraft.^{[38][n 14]} Because of policy restrictions of the bombing halt then in place, the naval aircraft would not carry [ordnance](#) except for a few planes tasked for [Search and Rescue](#).^[39]

Between November 10 and November 18,^[n 15] the JCTG moved to its staging base at [Takhli Royal Thai Air Force Base, Thailand](#),^{[40][n 16]} and began studying the weather. On November 18, [Typhoon Patsy](#) struck the [Philippines](#) and headed west towards Hanoi. Weather forecasts indicated that Patsy would cause bad weather over the Gulf of Tonkin on November 21, preventing carrier support operations, and, then converging with a cold front coming out of southern China, would cause poor conditions over North Vietnam for the remainder of the window. The presence of the cold front, however, indicated that conditions in the objective area on November 20 would be good and possibly acceptable over Laos for navigation of the low-level penetration flights. A reconnaissance flight on the afternoon of November 20 by an [RF-4C Phantom](#) carrying a weather specialist confirmed the forecast.^{[41][n 17]} Manor authorized the advancement of the mission date by 24 hours.^[42]

Mission organization

Special Forces



On November 18, President Nixon approved execution of the mission, and the final phase, Operation Kingpin, began.^[43] The fifty-six Special Forces troopers selected to conduct the raid were flown on the evening of November 20 by a conventional [C-130 Hercules](#) from Takhli to their helicopter staging base at [Udorn RTAFB](#). The Special Forces were organized into three [platoons](#): a 14-man assault group, codenamed *Blueboy*, which would crash-land within the prison compound; a 22-man support group, *Greenleaf*, which would provide immediate support for the assault team, and a 20-man security group, *Redwine*, to protect the prison area from [NVA](#) reaction forces and provide backup support if needed for either of the other two groups. Simons (using the call sign *Axle*) accompanied the *Greenleaf* group, while the ground force commander, LTC Elliott P. "Bud" Sydnor, Jr. (*Wildroot*), was with the *Redwine* group.^{[44][n 18][45][46][n 19]}

The 56 raiders were heavily armed: 51 personal sidearms, 48 [CAR-15](#) carbines, two [M16 rifles](#), four [M79 grenade launchers](#), two shotguns, and four [M60 machine guns](#). They carried 15 [Claymore mines](#), 11 demolition charges, and 213 [hand grenades](#) and were equipped with a plethora of wire cutters, bolt

cutters, axes, chainsaws, crowbars, ropes, bullhorns, lights, and other equipment (much of it acquired from commercial retail sources) to execute the mission.^[47] The ground force was also equipped for voice communications with 58 [UHF-AM](#) and 34 [VHF-FM](#) radios, including a survival radio for each individual soldier.^{[48][n 20]}

Aviation support



HH-3E "Jolly Green" identical to the helicopter carrying the *Blueboy* assault group

One hundred sixteen aircraft (59 Navy and 57 Air Force) participated in the operation, with 28 aircraft (crewed by 92 airmen) assigned direct roles in the target area.^{[49][n 21]} Two C-130E(I) Combat Talons, modified in August with the temporary addition of [forward looking infrared](#) (FLIR) sets borrowed from another classified C-130 program,^{[50][n 22]} were assigned to navigate the mission. One was to lead the helicopter "assault formation" (*Cherry 01*), and the second, as a backup, to escort the A-1 "strike formation" (*Cherry 02*).^{[51][n 23]} Because of the variances in cruising speeds between the helicopters and fixed-wing aircraft, the forces flew separate routes, with the faster strike formation trailing the helicopter formation by several minutes and zig-zagging across its route. Each Combat Talon crew cross-trained to assume the role of the other, but the assault formation was required to have a navigation leader with four fully functioning engines all the way to the objective.^[34]

The 28 aircraft with direct roles were:

#	Type	Radio call sign	Parent Unit	Kingpin task
2	C-130E(I) Combat Talon	Cherry 01–02	7th SOS , (Det. 2 1st SOW)	rescue force navigation, airborne command, and target illumination
5	HH-53C Super Jolly	Apple 01–05	40th ARRS (3rd ARRG)	support teams lift (01, 02), gunship (03), and POW extraction (04, 05)
1	HH-3E Jolly Green ^[n 24]	Banana	37th ARRS (3rd ARRG)	assault team lift
5	A1-E Skyraider	Peach 01–05	1st SOS (56th SOW)	close air support at objective
10	F-4D Phantom	Falcon 01–05, 11–15	13th TFS , 555th TFS (432nd TRW)	high altitude target area MiG combat air patrol in two waves
5	F-105G Wild Weasel III	Firebird 01–05	6010th WWS ^[n 25] (388th TFW)	high altitude target area surface-to-air missile suppression

Execution of Operation Kingpin

Penetration into North Vietnam

Beginning at 22:00,^{[52][n 26]} aircraft began leaving five bases in Thailand and one in South Vietnam.^{[53][n 27]} *Cherry 02*, the Combat Talon escort for the A-1 strike formation, took off from Takhli at 22:25,^[53] but *Cherry 01* had difficulty starting an engine and took off 23 minutes late at 23:18. *Cherry 01* adjusted its flight plan and made up the time lost at engine start.^[54] At 23:07, the HC-130P aerial refuelers (call signs *Lime 01* and *Lime 02*) took off from Udon, followed by the helicopters ten minutes later.^[54] Shortly after midnight, the A-1 Skyraiders lifted off four minutes early from [Nakhon Phanom Royal Thai Air Force Base](#) under clandestine, blacked-out conditions.^[55] The helicopters encountered thick clouds over northern [Laos](#) at their refueling altitude and climbed to 7,000 feet (2,100 m) AGL (Above Ground Level) to refuel from *Lime 01* on the flight plan's fourth leg. *Lime 01* then led them to the next checkpoint for hand-off to *Cherry 01* at 01:16.^{[56][57]}

The formations flew roughly parallel tracks that crossed Laos to the west of the [Plain of Jars](#) before turning northeastward.^[58] Both formations flew twelve planned legs.^[59] The flight path was a corridor 6 miles (9.7 km) wide, for safe terrain clearance in the event of formation breakup or a helicopter's loss of drafting position.^[60] The Combat Talon navigators were tasked with keeping the formations on the center line of the corridor.^[61] The pilots of both formations required a flight path of descending legs, each approximately 1,000 feet (300 m) above the terrain in the mountain valleys,^[60] because the HH-3E had difficulties in climbing while in formation. The Combat Talon C-130s experienced sluggish flight controls at the required airspeeds, and the A-1s were hampered by their heavy ordnance loads.^[62]

The slow speeds required for the formations (105 [knots](#) (194 km/h; 121 mph) for the helicopters and 145 knots (269 km/h; 167 mph) for the A-1s)^[63] degraded nearly all modes of the Combat Talon's AN/APQ-115 TF/TA navigational radars. The [Terrain Following mode](#) computed changes in altitude only to a programmed minimum airspeed of 160 knots (300 km/h; 180 mph), well outside the parameters of the mission. The Terrain Avoidance mode, adapted from the AN/APQ-99 terrain avoidance radar of the RF-4C photo reconnaissance aircraft, was distorted by the nose-high attitude dictated by the slow speeds and would no longer display hazardous terrain directly in front of or below the Combat Talon's flight path. The [Doppler radar](#), used to calculate wind drift and [ground speed](#), often had to use information in its computer's memory because of processing lapses. While the ground-mapping radar, correlating landmarks shown on maps to radar returns, was not affected, the [jungle](#) terrain did not provide easily identifiable points. All of these handicaps were overcome with the external pod installation of FLIR, which readily identified the rivers and lakes used as turning points.^[64]



VA-113 A-7E on deck of USS *Ranger* 1970-71

The assault formation approached from the southwest using the [clutter](#) returns of the mountains to mask them from radar detection, while U.S. Navy aircraft launched at 01:00^[56] from the [aircraft carriers](#) [USS](#)

[Oriskany](#)^[n 28] and [USS Ranger](#)^[n 29] in the largest carrier night operation of the Vietnam War.^{[65][n 30]} Starting at 01:52, twenty [A-7 Corsairs](#) and [A-6 Intruders](#), flying in pairs at stepped-up altitudes to deconflict their flight paths, entered North Vietnamese airspace on three tracks,^[56] dropping flares to simulate an attack. The last track also dropped chaff to mimic the [mining](#) of [Haiphong](#) harbor. Over the Gulf of Tonkin, twenty-four other aircraft in thirteen orbits provided support and protection.^{[66][n 31]} The operation prompted a frantic air defense reaction at 02:17 that provided a highly effective diversion for the raiders and completely saturated the North Vietnamese air defense system.^[67]

Both Air Force formations,^[68] over a period of thirteen minutes, were unavoidably and separately exposed for several minutes each to an early warning radar located at [Na San](#), North Vietnam, 30 miles (48 km) to the north, because the flight tracks had to be routed around uncharted mountains.^[60] Neither formation was detected, possibly because of the diversion.^[69] The rescue forces entered the Red River valley at 500 feet (150 m) AGL to find conditions clear and visibility excellent. The helicopter formation reached its Initial Point (20 kilometers—12 minutes flying time—from Son Tay) with the A-1 strike formation two minutes behind, as planned.^[67] The HH-3E assault team helicopter had flown formation just behind and above the left wingtip of *Cherry 01*, [drafting](#) on the leader to gain the additional [airspeed](#) needed to bring its cruise airspeed safely above the [stalling speed](#) of the Combat Talon.^[31] Two of the HH-53s and *Cherry 01* accelerated and climbed to 1,500 feet (460 m) AGL, while the four assault helicopters broke formation and descended to 200 feet (61 m) in single file, timed to land forty-five seconds apart.^{[5][67]}

Combat assault

Cherry 01 transmitted the execute command "Alpha, Alpha, Alpha" to all aircraft^[70] as it overflew the prison and dropped four illumination flares, then performed a hard-turning descent to 500 feet (150 m) to drop two battle simulators^{[71][n 32]} south and southeast of Son Tay. After *Apple 03* made its strafing pass with side-firing [miniguns](#) on the prison's guard towers, *Cherry 01* successfully dropped one of two planned [napalm](#) ground markers as a point of reference for the A-1s, then departed the area to orbit over Laos.^[67]

The assault helicopters in single file encountered winds that caused them to break formation 150 yards (140 m) to the right of their intended track. The pilots of the gunship helicopter, *Apple 03*, preceding the others, observed a compound nearly identical to the prison camp in size and layout (previously labeled a "secondary school" by intelligence sources) and steered toward it, followed by the assault lift force. However, *Apple 03* recognized the river next to the actual location and corrected their flight path.^[72] *Banana*, carrying the *Blueboy* assault team, descended on the wrong location and found the expected courtyard to be much smaller than required and the treeline enclosing the compound rather than tracking through it. By then, *Blueboy*, as previously rehearsed, was firing its weapons from all openings in the HH-3E. *Banana*'s pilots recognized the error, applied power, and quickly passed north to the actual target.^[73]

Despite the error, and trees taller than briefed that forced a steeper descent, the assault team crash-landed into the courtyard of Son Tay prison at 02:19^{[56][n 33]} with all weapons firing. Although one raider, acting as a door gunner, was thrown from the aircraft,^{[74][n 34]} the only casualty was the helicopter's flight engineer, whose ankle was fractured by a dislodged fire extinguisher.^[n 35] Army Captain [Richard J. Meadows](#) used a [bullhorn](#) to announce their presence to the expected POWs, while the team dispersed in four elements on a rapid and violent assault of the prison, killing guards and methodically searching the five prisoner blocks cell by cell.^{[75][n 36]}

At 02:19,^[56] *Apple 01* (after observing *Banana* fire on the site) landed the *Greenleaf* support group outside the south side of the secondary school, thinking it to be the target prison compound. Unaware that it was 400 meters from the objective, it lifted off to relocate to its holding area. The "secondary school" was actually a barracks for troops^[n 37] and, alerted by *Banana*'s aborted assault, opened fire on *Greenleaf* as two of its elements assaulted the compound. The support group attacked the location with small arms and hand grenades in an eight-minute firefight, after which Simons estimated that 100 to 200 hostile soldiers had been killed. Two A-1s supported *Greenleaf* with an air strike using [white phosphorus](#) bombs on a wooden footbridge east of the area. *Apple 01* returned at 02:23, and by 02:28,^[56] the support group had disengaged under fire and reboarded the helicopter for the short movement to the correct landing area.^{[76][n 38]}

The pilot of *Apple 02*^[n 39] observed the errors in navigation by the helicopters in front of him and made a hard turn towards the prison. He also observed *Apple 01* unload at the secondary school and initiated Plan Green, the contingency plan for the loss or absence of *Greenleaf*. The *Redwine* security group, including ground force commander Sydnor, landed at 02:20^[56] outside Son Tay prison and immediately executed the previously rehearsed contingency plan. In the meantime, *Cherry 02* arrived with the A-1 force, dropped two more napalm ground markers, and created other diversions to disguise the target area by dropping [MK-6 log flares](#) and battle simulators at road intersections that North Vietnamese reaction forces might be expected to use.^[77] *Cherry 02* then orbited in the area as on-call support for the ground teams.^[78]

After a thorough search that included a second sweep ordered by Meadows, *Blueboy*'s three teams found that the prison held no POWs.^{[79][n 40]} Meadows transmitted the code phrase "Negative Items" to the command group.^{[5][80][n 41]} Pathfinders clearing the extraction LZ blew up an electrical tower that blacked out the entire west side of Son Tay including the prison area. At 02:29,^[56] Sydnor ordered the A-1s to attack the vehicle bridge over the Song Con leading into the area and, three minutes later, called for extraction by the HH-53s idling on the ground in a holding area a mile away.^[56] Before the first helicopter arrived, a truck convoy approached the prison from the south, but was stopped by two *Redwine* security teams that each fired an [M72 light antitank weapon](#) into the lead vehicle.^{[81][n 42]}

At 02:28,^[56] *Cherry 02*'s radar navigator noted that [Fan Song](#) search radars for North Vietnamese [surface to air missiles](#) were active. SAM launches at the F-105 [Wild Weasel](#) force began at 02:35,^[56] with at least 36 missiles fired at the rescue forces.^{[82][n 43]} One F-105 was briefly enveloped in burning fuel by a near-miss at 02:40^[56] and returned to base. Its replacement was severely damaged six minutes later by another SAM.^[83] Twenty other SAMs fired at Navy aircraft all missed. Two [MiG-21](#) interceptors on alert duty at [Phúc Yên Air Base](#) were never given permission to launch, despite several requests to do so.^[84]

The HH-53s returned singly, and *Apple 01* landed at the extraction LZ first, at 02:37. It lifted off with its passengers at 02:40,^[56] followed a minute later by the landing of *Apple 02*, which departed at 02:45.^[56] *Apple 03*, the last aircraft out, was cleared to leave its holding area at 02:48.^[56] The raid had been executed in only 26 minutes,^{[85][n 44]} well within the planned 30-minute optimum time.^[5] Although at first it was feared one raider had been left behind, all the troopers were accounted for. One *Redwine* trooper had been wounded in the leg and was the only casualty to hostile fire on the raid.^{[86][n 45]}

The assault formation was out of North Vietnam by 03:15^[87] and landed back at Udorn at 04:28, five hours after launch.^[88] The crew of the damaged F-105 was compelled to eject over [Laos](#) thirty minutes

after being hit when it flamed out in sight of its tanker from lack of fuel.^{[89][90][n 46]} *Lime 01*, refueling at Udorn, took off using the call sign *King 21* to coordinate the [Search and Rescue \(SAR\)](#) effort, while *Lime 02* refueled *Apple 04* and *Apple 05* to extend their flight time. Supported by a [C-123 Candlestick](#) flare aircraft diverted from its station on another mission, a SAR force was launched, and when its *Sandy A-1s* arrived from Nakhon Phanom to cover the pickups, *Apple 04* and *Apple 05* each recovered one of the downed airmen at first light after three hours on the ground.^[83]



Blueboy assault group aboard *Banana* HH-3E at the start of the mission. CPT Richard Meadows is seated in the left foreground.^{[91][92][n 47]}



HH-3 *Banana* in prison compound looking east. The guard tower is directly over the east entrance gate.



Wreckage of HH-3 *Banana* looking toward west compound wall, with the river beyond



Equipment left behind by Sơn Tây raiders

Aftermath

Intelligence controversy



Post-raid [Oval Office](#) debriefing of Simons and Manor (3rd and 4th from left respectively)

The mission was deemed a "tactical success" because of its execution, but clearly involved an "[intelligence failure](#)". The 65 prisoners at Sơn Tây had been moved on July 14, probably due to the threat of flooding, to a camp 15 miles (24 km) closer to Hanoi that the POWs dubbed "Camp Faith". ^{[93][94][n 48]} Although relatively near Sơn Tây, the risk of disastrous consequences from lack of reconnaissance, planning, and rehearsing precluded a switch of targets at the last minute. A mission with Camp Faith as the objective required a lengthy delay for a new window of acceptable conditions, ^{[95][n 49]} which increased the chance of security compromise and further withheld personnel and equipment from their parent commands. New reports of increasing numbers of deaths among POWs argued strongly against such a delay. The raid went as planned in the event the renewed activity at Sơn Tây noted in aerial reconnaissance photos taken November 13 involved POWs. ^[96]

Although the mission objective involved an intelligence failure, the gathering of accurate intelligence for the operation, in both quality and quantity, was remarkably successful. ^{[97][98][99]} The failure lay in "compartmentalization" of the information and isolation of the JTCG from "the normal intelligence flow". ^[100] As a planner and participant stated in his history of the operation: "The raid was allowed to take place because those who had the correct intelligence information were not aware that someone was contemplating a POW rescue." ^[101]

Further, by the time intelligence regarding the moving of the prisoners was received, prompting the [Defense Intelligence Agency](#) to do an intensive overnight re-analysis of all of its data, the day of the operation had already arrived because of the 12-hour time difference with Southeast Asia and the 24-hour advancement of the operation due to Typhoon Patsy. ^[102] When a final meeting with Defense Secretary [Melvin Laird](#) took place at 05:00 (Washington, D.C., time) to determine if the mission should proceed, its launch was less than five hours away. ^[103] There was no consensus on the reliability of the data, and Blackburn was strongly predisposed to go ahead. ^[104] One military analyst observed that as a result, the highest-level decision makers succumbed to the phenomenon of "[groupthink](#)". ^[105]

Recognition of participants

For their actions, members of the task force received six [Distinguished Service Crosses](#), ^[n 50] five [Air Force Crosses](#), ^[n 51] and at least 85 [Silver Stars](#), including all 50 members of the ground force who did not receive the DSC. ^{[106][n 52]} Manor received the [Distinguished Service Medal](#). ^[107]

The successful demonstrations of joint operating capability in *Ivory Coast* and *Kingpin* were, in part, a model for the creation of a joint [United States Special Operations Command](#) in 1987.

Son Tây raider *Apple 1* HH-53 68-10357 was subsequently converted to MH-53M Pave Low standard, served in Bosnia and Iraq and was finally retired in 2008 after 38 years of service. It is now on display in the Cold War Gallery of the [National Museum of the United States Air Force](#) in Dayton, Ohio.^[108]

Impact of the raid

Criticism of the raid, particularly in the news media and by political opponents of the Vietnam War and the Nixon Administration, was widespread and of long duration. Not only was the failure denounced as the result of poor or outdated intelligence, but charges were made that the operation caused increased mistreatment of the prisoners.^{[98][109]}

However, as a result of the raid, the North Vietnamese consolidated their POW camps to central prison complexes. An area of the infamous "[Hanoi Hilton](#)" formerly housing civilian and South Vietnamese prisoners became "Camp Unity", a block of large communal areas housing 50 POWs each. After their [repatriation](#), many POWs said that being in close contact with other Americans lifted their morale, as did knowledge of the rescue attempt.^{[110][n 53]} Some POWs said that food, medical care, and even seemingly basic things like mail delivery vastly improved after the raid.^[111]

The Defense Department conducted an investigation into a possible breach of security as the reason behind the movement of the prisoners and concluded that none occurred.^{[112][113]} The intensity of the criticism, and leaks of information including reports of the operation, caused the Nixon Administration to reorganize both the military communications network and the government's intelligence apparatus.^[10]

Notes

Footnotes

- ¹ [^](#) Gargus was radar navigator on one of the aircraft and a mission planner.
- ² [^](#) The USAF intelligence unit was the 1127th Field Activities Group, [Fort Belvoir](#), Virginia.
- ³ [^](#) LTC Warner A. Britton was a career rescue expert, having begun his 26-year career in World War II as an OA-10 (USAAF variant of the [PBY Catalina](#)) pilot in the [Thirteenth Air Force](#). While he had limited experience flying the HH-53, he had commanded two rescue squadron detachments in Vietnam.
- ⁴ [^](#) Schemmer states that [Fort Bragg](#), North Carolina, was their base of choice, but that the commander of the [Special Warfare Center](#) refused their request of a specific secure location. However, Gargus (pp. 10-11) stated that Simons was not named as deputy (to take advantage of his unique position in selecting the best leaders for a ground force) until after Manor had been selected to command the mission, and that it was Manor who chose Eglin, the "ideal training site for the joint raiding force."
- ⁵ [^](#) The "MC-130" designation for the Combat Talon did not appear until 1977.
- ⁶ [^](#) None of the flight members had flown together as crews before training began.
- ⁷ [^](#) Among those who entered North Vietnam, only four Army and eleven Air Force officers (all members of the planning group) had advance knowledge of the target. Because of Eglin's proximity to [Cuba](#), many members believed the target was there.

8. [^](#) Schemmer's list includes 4 USAF pararescuemen in Thailand who were added after JCTG deployed but did not train in Florida; all aircraft support personnel who deployed; a small team from [AFLC](#) who maintained voice radio jamming equipment installed in the A-1s; and technical representatives of [Texas Instruments](#) for maintenance of the terrain following radars because of the low mean-time-between-failure rate of its APQ-115 (Thigpen, 2001, p. 39).
9. [^](#) Gargus's list includes the 14 HC-130 crewmen (omitted by Schemmer) who did not train in Florida.
10. [^](#) CPT Nina Gusev, an intelligence officer with the [388th Tactical Fighter Wing](#), was added to the planning staff in Thailand and was the only woman involved in the mission.
11. [^](#) The often-made assertion that the mockup was taken down during the day and reassembled at night to avoid detection by Soviet [spy satellites](#) is a myth. While the geometry and dimensions of the prison compound were exact in the mockup, and it had been built of [two-by-four studs](#) and strips of cloth to facilitate such disassembly, the mockup was too crude, and blended too well with roads and other features already present, to be identified as Son Tây. However, to satisfy security concerns, aerial photographs were taken to be certain of that conclusion. Similarly, reports that full-size trees were uprooted and relocated to exact locations are also in error. Even were such a labor-intensive idea not outlandish, the probable loss of the assault helicopters during practice would have canceled the mission.
12. [^](#) "Barbara" was named for Barbara L. Strosnider, a [GS-6](#) administrative assistant in the USAF Directorate of Plans who transcribed plans for both the feasibility and planning groups.
13. [^](#) Also present were Blackburn and LTG [John W. Vogt, Jr.](#), [Director of the Joint Staff](#) and Blackburn's boss. Schemmer (1976), p. 113.
14. [^](#) *America* was about to rotate home and would be replaced by the [Ranger](#).
15. [^](#) The Special Forces personnel arrived in Thailand at 03:00 November 18, which was 15:00 in Washington D.C.
16. [^](#) Takhli, once a major F-105 Thunderchief base, was about to deactivate, and was chosen both for that reason and the presence of a secure complex formerly used by the [Central Intelligence Agency](#).
17. [^](#) The specialist was LTC Frank A. Ross, of the 10th Weather Squadron, who was a qualified fighter pilot.
18. [^](#) Simons' "official" role was deputy commander of the Joint Contingency Task Group.
19. [^](#) Major John Wares, co-pilot of A-1E *Peach 01*, also states that Simons' callsign was *Axe*. Schemmer (p.91), however, asserts that *Wildroot* was Simons' call sign, and (p. 169) implies that recorded radio traffic of the mission confirms this. However the traffic from *Blueboy* to *Wildroot* that Schemmer refers to was not ascribed by him to any individual by name but to the "ground commander," who was Sydnor, not Simons.
20. [^](#) There were two AN/PRC-41 sets for UHF air-to-ground communication, ten [AN/PRC-77](#) sets for directing air strikes, 24 AN/PRC-88 "squad radios" for communication within and among the groups, and 56 Air Force AN/PRC-90 survival radios pre-set to [SAR](#) frequencies. During training, each of the 92 radios had a backup set, plus 50 additional sets for redundancy, with Schemmer noting the force was as well-equipped in communications as a battalion of infantry.
21. [^](#) Aircraft assigned to the USAF support force included two [HC-130P](#) helicopter refueling and command aircraft (*Lime 01-02*), twelve [KC-135](#) tankers (refueling tracks *Orange* and *Lemon*), two [EC-121T](#) airborne early warning aircraft (*Frog 01-02*), two [RC-135M Rivet Card/Combat Apple ELINT](#) aircraft, and one KC-135A Combat Lightning radio relay plane (*Luzon*). A [T-39](#)

[Sabreliner](#), three C-130 Hercules airlifters, and a standby SAR force of two HH-53s and four A-1 Sandys rounded out the Air Force participants. The USN provided ten [A-6 Intruders](#) and 27 [A-7 Corsairs](#) in multiple roles including aerial refueling, six F-4J Phantom and six [F-8J Crusader](#) fighters, two [E-1B Tracer](#) airborne early warning aircraft, one [KA-3B Skywarrior](#) tanker, and six EKA-3B Skywarrior tanker-[ECM](#) aircraft. The 59th naval aircraft was an [EP-3B "Bat Rack" Orion](#) from the VQ-1 detachment at [NAS Agana, Guam](#). A 60th scheduled aircraft aborted before launch from *Ranger*. Not included in these totals are a C-123 "Candle" flare ship and an [EC-130 ABCCC](#) aircraft, *Alley Cat*, that diverted from other Laotian missions to aid the SAR, two [C-141 Starlifters](#) staged at Udorn to transport critically ill POWs, nor the UH-1H transported from Florida to Thailand with the JCTG.

22. [^] The FL-2B FLIRs were obtained from the [1198th Operational Evaluation and Training Squadron, Norton AFB](#), California, which used them in "Project Heavy Chain".
23. [^] The formation designations were those used by the JCTG.
24. [^] S/n 65-12785, one of 50 HH-3Es converted from CH-3B and C models for SAR.
25. [^] The 6010th Wild Weasel Squadron was formed 1 November 1970 from aircraft and crews of the inactivating 355th TFW at Takhli.
26. [^] All times are [UTC+7](#) (+12 [Eastern Standard Time](#)).
27. [^] Takhli (C-130E(I)), Korat (EC-121, F-105G), Udorn (helicopters, HC-130,F-4), Nakhon Phanom (A-1), U Tapao (KC-135), and Danang (EKA-3).
28. [^] [CVW-19](#) (NM) embarked. Aircraft from VA-153, VA-155, [VF-191](#), [VF-194](#), [VAQ-130](#), and VAW-111 participated.
29. [^] [CVW-2](#) (NE) embarked. Aircraft from [VA-25](#), [VA-113](#), VA-145, [VF-21](#), [VF-154](#), [VAQ-134](#), and VAW-111 participated.
30. [^] [Hancock](#), [CVW-21](#) (NP) embarked, had arrived on the line that day and provided only two EKA-3B tanker aircraft of its [VAQ-129](#) detachment to the diversion. Both staged before the raid to Danang Air Base, where TF77's Skywarriors were based during their carriers' rotations. *Oriskany* launched 25 aircraft and *Ranger* 26.
31. [^] An additional support aircraft, an A-7 scheduled to be the last of six SAM suppression aircraft, was a deck abort aboard *Ranger*.
32. [^] Battle simulators were firecrackers encased in plastic sleeves and attached to a droppable pallet.
33. [^] Gargus has a detailed timeline, all times based on the time of the Alpha execute code (02:18).
34. [^] 1LT George Petrie landed on his feet near the east gate, which was his personal assignment to secure.
35. [^] The casualty was Air Force TSG Leroy Wright, who continued his participation despite the broken ankle and received the Air Force Cross for his effort.
36. [^] This assault phase confirmed 42 North Vietnamese killed at the prison site by cross-checking individual *Blueboy* and *Redwine* personnel accounts at debriefing. All other counts are estimates.
37. [^] Traditionally, the troops are identified as Chinese or possibly Russian (Schemmer, pp. 171 and 214). However, one raider states they were NVA (Buckler, interviewed *Vietnam* magazine June 1997--see external links), while another (Powell, also linked) asserts that their nationality was never determined.

38. [^](#) Schemmer noted that *Apple 01* made three combat assault landings in nine and one half minutes. The disengagement was supported by fire from the team's M-60 machine gun, which used all [tracer rounds](#) to intimidate the opponents.
39. [^](#) LTC John V. Allison.
40. [^](#) Meadows himself did not enter any cellblock but coordinated his team from the center of the courtyard.
41. [^](#) Sources are near-unanimous that the code was "items", not "packages".
42. [^](#) The convoy was engaged separately by the teams, four minutes apart.
43. [^](#) Participants anecdotally put the number of SAMs much higher, with three or more in the air continuously for eleven minutes.
44. [^](#) Raid time calculated from 02:19 (first landing) to 02:45 (last extraction).
45. [^](#) SFC Joseph M. Murray was hit from behind as he prepared to grenade the first structure he encountered after debarking *Apple 02*. His assailants were killed by team leader MSG Herman Spencer.
46. [^](#) The F-105G lost was *Firebird 05*, s/n 62-4436, nicknamed *Fat Fanny*.
47. [^](#) As a security measure, insignia of rank was not worn by the raiders in Thailand until after the raid was launched. Also note the scaling ladder in the upper left and three extra fire extinguishers carried aboard the assault helicopter.
48. [^](#) Thigpen notes, however, that the senior POW in North Vietnam, Air Force MG John Flynn, contends that the move was due to construction at the camp to improve its security, after which the prisoners were to have been returned.
49. [^](#) Moorer advised Nixon at their November 18 meeting that the next window would be in March 1971, four months hence.
50. [^](#) DSCs were awarded to Simons, Sydnor, Meadows, MSG Thomas J. Kemmer (*Blueboy*), SFC Tyrone J. Adderly (*Redwine*), and SSG Thomas E. Powell (*Greenleaf*). Schemmer (1976), p. 259.
51. [^](#) AFCs were awarded to MAJ Herbert D. Kalen (*Banana*), LTC Warner A. Britton (*Apple 01*), LTC John V. Allison (*Apple 02*), MAJ Frederic M. Donahue (*Apple 03*), and TSG Leroy M. Wright (*Banana*). Schemmer (1976), p. 260.
52. [^](#) The likelihood that more than 85 Silver Stars were awarded as a result of *Kingpin* is due to an apparent incomplete listing by Schemmer of SS recipients. He lists all of the crew members of *Cherry 02* but only two members of *Cherry 01*. His list of helicopter crewmen omits the seven who were added to the mission at the last minute from units already stationed in Southeast Asia. Likely these are omissions in research and those 17 crewmen were also awarded Silver Stars, making 102 total.
53. [^](#) Schemmer devotes an entire chapter to the positive effects of the raid on the prisoners' situation.

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1. [^](#) [a b](#) Schemmer (1976), p. 91.
2. [^](#) Thigpen (2001), p. 142
3. [^](#) Gargus (2007), pp. 269-271.
4. [^](#) Gargus (2007). p. 279.
5. [^](#) [a b c d e f](#) Manor, Brig.Gen. Leroy J.. "[The Son Tay Raid, November 21, 1970](#)". Air Commando Association. Retrieved 10 February 2009.

6. [^] [a b c d](#) Thigpen (2001), p. 141.
7. [^] Schemmer (1976), p. 36, 153.
8. [^] Schemmer (1976), p. 153.
9. [^] Glines, Carroll V. (1995). ["The Son Tay Raid"](#). *AIR FORCE Magazine* 78 (11). Retrieved 10 February 2009.
10. [^] [a b](#) Schemmer (1976), p. 206.
11. [^] Schemmer (1976), pp. 27-28.
12. [^] Gargus (2007), p. 111.
13. [^] Schemmer (1976), p. 31.
14. [^] Schemmer (1976), p. 36.
15. [^] Schemmer (1976), pp. 51-52.
16. [^] Schemmer (1976), pp. 61-62.
17. [^] Schemmer (1976), pp. 261-262, Appendix IV.
18. [^] Schemmer (1976), pp. 73-74.
19. [^] Thigpen (2001), p.168.
20. [^] Thigpen (2001), pp. 142-143.
21. [^] Gargus (2007), pp. 23, 49.
22. [^] Schemmer (1976), pp. 252-254.
23. [^] Gargus (2007), pp. 269-271, 280-283.
24. [^] Gargus (2007), p. 276.
25. [^] Schemmer (1976), p. 62.
26. [^] Gargus (2007), p. 46-46, 61, 64.
27. [^] Schemmer (1976), p. 86.
28. [^] Thigpen (2001), p. 148.
29. [^] Gargus (2007), p. 32.
30. [^] Gargus (2007), p. 63-64.
31. [^] [a b](#) Thigpen (2001), p. 145.
32. [^] Gargus (2007), pp. 58-59.
33. [^] Gargus (2007), p. 48.
34. [^] [a b](#) Thigpen (2001), p. 147.
35. [^] Gargus (2007), p. 75.
36. [^] Schemmer (1976), p. 94.
37. [^] Schemmer (1976), p. 115, quoting Manor.
38. [^] Gargus (2007), p. 106.
39. [^] Schemmer (1976), p. 120.
40. [^] Gargus (2007), p. 111.
41. [^] Gargus (2007), p. 116.
42. [^] Thigpen (2001), pp. 150-151.
43. [^] Thigpen (2001), p. 150.
44. [^] Gargus (2007), p. 267.
45. [^] Gargus (2007), p. 207, reference the call signs.
46. [^] ["A-1 participation in the Son Tay raid, 21 November 1970"](#). Jolly Green.org. Retrieved 10 February 2009.
47. [^] Schemmer (1976), pp. 159-160.
48. [^] Schemmer (1976), p. 104.
49. [^] Thigpen (2001), p. 152; Gargus (2007), pp. 108, 278–280.

50. [^](#) Gargus (2007), p. 58.
51. [^](#) Gargus (2007), p. 52.
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54. [^](#) [a](#) [b](#) Gargus (2007), p. 155.
55. [^](#) Gargus (2007), p. 156.
56. [^](#) [a](#) [b](#) [c](#) [d](#) [e](#) [f](#) [g](#) [h](#) [i](#) [j](#) [k](#) [l](#) [m](#) [n](#) [o](#) Gargus (2007), pp. 284-288.
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58. [^](#) Gargus (2007), p. 181.
59. [^](#) Gargus (2007), p. 72.
60. [^](#) [a](#) [b](#) [c](#) Gargus (2007), p. 70.
61. [^](#) Gargus (2007), p. 58.
62. [^](#) Gargus (2007), pp. 56-57, 71.
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64. [^](#) Gargus (2007), pp. 57-59.
65. [^](#) Gargus (2007), p. 131.
66. [^](#) Gargus (2007), p. 175.
67. [^](#) [a](#) [b](#) [c](#) [d](#) Thigpen (2001), p. 154.
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70. [^](#) Gargus (2007), p. 186.
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72. [^](#) Gargus (2007), p. 188-189.
73. [^](#) Gargus (2007), p. 192.
74. [^](#) Gargus (2007), p. 200.
75. [^](#) Gargus (2007), pp. 197-204.
76. [^](#) Schemmer (1976), p. 172.
77. [^](#) Gargus (2007), p. 187.
78. [^](#) Thigpen (2001), p. 155.
79. [^](#) Gargus (2007), P. 202.
80. [^](#) Gargus (2007), p.203; Schemmer (1976), p. 172; Thigpen (2001), p. 156; and Glines.
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82. [^](#) Gargus (2007), p. 297.
83. [^](#) [a](#) [b](#) Gargus (2007), p. 287.
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86. [^](#) Gargus (2007), p. 208.
87. [^](#) Schemmer (1976), p. 179.
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89. [^](#) Gargus (2007), p. 227.
90. [^](#) Campbell and Hill (1996), p. 120.
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92. [^](#) Schemmer (1976), p. 160.
93. [^](#) Schemmer (1976), pp. 66, 223.
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98. [^](#) [a](#) [b](#) Thigpen (2001), p. 157.
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- [Son Tay Raider Association](#)
- [Rescue Attempt: The Son Tay Raid](#), exhibit page at the National Museum of the United States Air Force
- [Interview with Sergeant Terry Buckler About the Son Tay Prison Camp Raid During the Vietnam War](#), republished from *Vietnam Magazine*, June 1997. Sgt. Buckler was a radio-telephone operator (RTO) with the *Redwine* group and the youngest participant.
- [Account by Thomas Powell for The Patriot Files](#) SSgt. Powell was an [M60 machine gunner](#) with the *Greenleaf* group and was awarded the DSC.
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