

The North Vietnamese thought they were attacking bomb-laden F-105s. What they ran into was Robin Olds and the Wolfpack, flying Phantom F-4s.

MiG Sweep

ON Jan. 2, 1967, with aircraft losses in Southeast Asia on the rise, the United States Air Force resorted to an elaborate combat sting. The mission, called Operation Bolo, constituted an electronic Trojan Horse concealing the hard-hitting F-4 Phantoms of USAF's 8th Tactical Fighter Wing within a radiated image that simulated bomb-laden F-105 Thunderchiefs.

Despite adverse weather and a few surprises, the "MiG Sweep" did what it was designed to do: trick the increasingly elusive MiG-21s of North Vietnam into engaging F-4s rigged for aerial combat.

Until the latter part of 1966, MiG aircraft had not been as great a threat to USAF strike forces as the Surface-to-Air Missiles and anti-aircraft fire. Ironically enough, the introduction of the QRC-160 (ALQ-71) electronics countermeasures pod on the F-105s changed this. The QRC-160 was effective in neutralizing the radar controlling the SAMs and flak, and the resilient North Vietnamese responded by increasing their use of MiG fighters to prey on vulnerable F-105s configured for bombing.

Operating under ground control, and making maximum use of both cloud cover and the almost benevolent American rules of engagement, the enemy aircraft were adroitly employed. The MiGs, especially the later model MiG-21s armed with heat-seeking missiles, sought to attack the strike flights and make them jettison their bomb loads prior to reaching the target areas. Their mission was fulfilled if the Thuds were forced to drop their bombs prematurely, but they tried to score kills wherever possible.

The air war in Southeast Asia, while unique in many respects, harkened back to earlier conflicts in terms of the relative missions, forces, and equipment. As in World War II and Korea, the mission of US forces was to obtain air superiority, destroy the enemy air forces, and conduct long-range bombing operations. The mission of the enemy forces was to defend their most important targets by choosing to engage the American bombers on a selective basis.

Thud, Phantom, Thud

There were other parallels. To achieve the air superiority mission, the American fighters had to have a long-range capability and still be able to defeat the enemy fighters over their own territory. What the Mustangs and Sabres did in their wars, the F-4 Phantom II was required to do in Southeast Asia. Flights of F-4s, carrying a mixed ordnance load of bombs and missiles, would be sandwiched in between Thud flights at four- or five-minute intervals. If the F-105s in front or behind were attacked, the F-4s would drop their bombs and try to engage. If they were not, the F-4s would drop bombs right along with the Thuds.

A final, tragic parallel is the price paid to execute the missions that were often laid on for statistical rather than tactical reasons. Flying Phantoms or Thuds was dangerous work. As a single example, by late 1967, more than 325 F-105s had been lost over North Vietnam, most to SAMs and anti-aircraft fire.

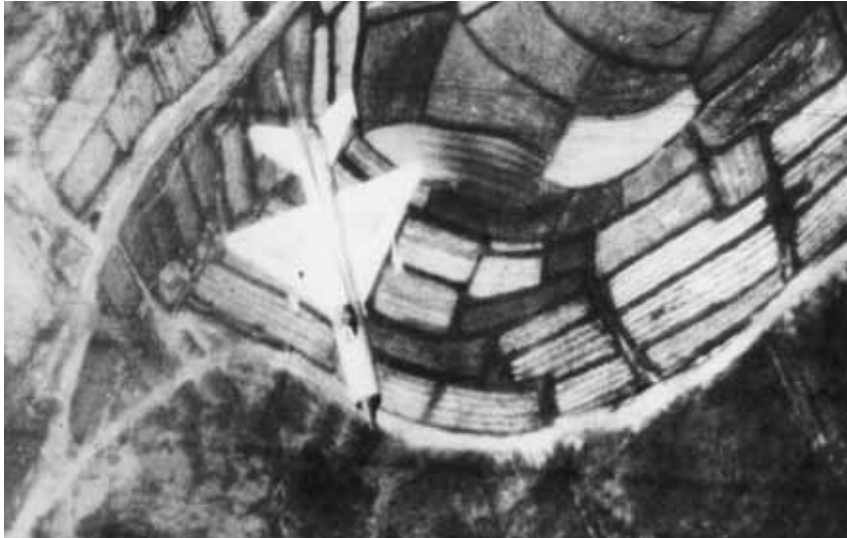
The North Vietnamese air force consisted of slow but heavily armed and maneuverable MiG-17s and a handful of modern delta-wing MiG-



Col. Robin Olds came up with the strategy of luring North Vietnam's MiG-21s into battle with F-4s that were masquerading as the more vulnerable F-105s. In the painting "MiG Sweep," at right, aviation artist Keith Ferris portrayed a successful encounter in Operation Bolo, as Olds and his backseater rolled out of the vertical and acquired a MiG-21 above the cloud deck.

By Walter J. Boyne





The MiG-21 was about half the size of the F-4 and a formidable opponent. Only 16 were estimated to be in the theater, and Operation Bolo aimed to either destroy as many of them as possible or run them out of fuel.

21s. The MiG-17s were semiobsolete but still effective in their defensive role. (The MiG-19 did not enter service with the North Vietnamese air force until February 1969.)

The MiG-21 Fishbed was roughly half the size of the Phantom and was designed as a high-speed, limited all-weather interceptor. It could carry two cannons and two Atoll infrared homing air-to-air missiles which had been developed from the US AIM-9B Sidewinder. At altitude, the MiG-21 could outfly the F-4 in almost all flight regimes. It had spectacular acceleration and turning capability. At lower altitudes, the F-4s used their colossal energy in vertical maneuvers that offset the MiGs' turning capability, for they lost energy quickly in turns at low altitudes. The MiG-21s were operated under tight ground control. They typically sought to stalk American formations from the rear, firing a missile and then disengaging. If engaged, however, its small size and tight turning ability made the MiG-21 a formidable opponent in a dogfight.

The Phantom had been intended originally to be a fleet defense aircraft, but it proved to be versatile in many roles, including reconnaissance, Fast Forward Air Control, Wild Weasel, bombing, and air superiority. The F-4Cs were armed only with missiles, although gun pods could be fitted.

The air war in Southeast Asia had grown progressively intense,

and Dec. 2, 1966, became known as "Black Friday" when the Air Force lost five aircraft and the Navy three to SAMs or anti-aircraft fire. Air Force losses included three F-4Cs, one RF-4C, and an F-105. The Navy lost one F-4B and two Douglas A-4C Skyhawks.

These ground-fire losses were accompanied by the marked increase in MiG activity during the last quarter of 1966. Because the rules of engagement prohibited airfield attacks, the men of the 8th Tactical Fighter Wing were determined to blunt the enemy's efforts by luring the MiGs into air-to-air combat and then destroying them.

The reluctance of the MiG-21s to engage did not mean that the North Vietnamese pilots were lacking in either courage or skill. At the time, the US estimated that there were only 16 MiG-21s in the theater, and the enemy had to employ them selectively to maximize their utility.

The New Boy

Brig. Gen. Robin Olds, USAF (Ret.), recalls himself as the proverbial "new boy on the block" with the 8th TFW, as yet unproven in the jet air war of Southeast Asia. When he arrived at Ubon RTAB, Thailand, as a colonel, to assume command of the Wolfpack on Sept. 30, 1966, Olds, who was 44 and stood six feet two, struck some as more the Hollywood concept of a combat commander than an Air Force regular officer. This

was, at least in part, because he was married not to the girl next door but to film star Ella Raines.

Son of Maj. Gen. Robert Olds, one of the most influential generals in the Army Air Corps, the new commander of the 8th was a World War II ace. Olds would later remark that he never flew one mission over Germany that was as tough as any mission over Hanoi.

Olds' war-ace status was marred somewhat by a reputation for being a maverick. Olds had often argued forcefully against contemporary Air Force training. He was an outspoken advocate of intensive training in the arts of war he learned in Europe. Unable to wangle his way into the Korean conflict, he had continued to press for training in strafing, dive-bombing, and other conventional warfare techniques at a time when US fighters were being adapted to carry nuclear weapons and fight a nuclear war. His advice, though not well received, was a realistic forecast of what would be required for war in Southeast Asia.

Olds knew he would have to prove himself to the combat-hardened veterans of the 8th as a leader in their war. He wished to use his past beliefs in a plan that would confirm his present status. He had first presented his idea for a MiG ambush to Gen. Hunter Harris Jr., Pacific Air Forces commander. Harris ignored him. Olds next went to the commander of 7th Air Force, Gen. William W. "Spike" Momyer. It was in early December 1966, at a cocktail party in the Philippines, that Olds edged next to Momyer. After a few polite remarks, Olds said, "Sir, the MiGs are getting pesky" and went on to describe ways to bring them to battle. Momyer's expression of deep disinterest didn't change. He moved away, leaving Olds with the uncomfortable impression that he had blown a good opportunity.

He Listened

However, Momyer had listened after all, and a week after their conversation, Olds was called to Saigon to discuss the concept of tricking the MiGs into combat. Momyer told Olds to develop a plan, one that specifically excluded attacks on North Vietnamese airfields for political reasons.

By Dec. 13, Olds was working closely with four top veterans of the 8th, striving to develop his idea. In

brief, the concept called for F-4s to simulate F-105s, and Olds gave his planners specific guidelines to work by. Central to the concept was that, while no North Vietnamese airfields could be attacked, the MiGs would be prevented from landing; flights of Phantoms would orbit above the airfields, cutting off MiG escape routes to China. Olds hoped either to engage the MiGs in combat and destroy them or to simply run them out of fuel by denying them access to their airfields.

The planning group included Capt. John B. Stone, Lt. Joe Hicks, Lt. Ralph F. Wetterhahn, and Maj. James D. Covington, a wing staff officer. They worked under the tightest security; those aircrews that would fly the missions were themselves not briefed until Dec. 30.

It was a perfect combination—Olds providing the overview and the major decision elements, and the younger officers, more experienced in the theater, breathing life into a concept. The team worked long hours to develop key details on force structure, refueling points, and altitudes, ingress and egress routes, radio communications, flak suppression, electronic countermeasures, and all the other details the mission required.

The planners determined that, if the MiGs engaged in combat, their endurance from takeoff to landing would extend only for about 55 minutes. F-4 flight arrival times were set five minutes apart to ensure maximum

opportunities for engagement. The group planned for a concerted strike by a “west force” of seven flights of F-4Cs from the 8th at Ubon and an “east force” made up of five flights of F-4Cs from the 366th TFW at Da Nang AB, South Vietnam.

Everything hinged on getting the MiGs airborne, where they could be destroyed. Luring the MiGs into battle would not be easy, for the communists often declined to attack if they thought the weather would seriously impair the bombing accuracy of US attacking aircraft. The North Vietnamese had many advantages. All of the targets were in the midst of the most heavily integrated air defense system then in existence. Their geography and the onerous rules of engagement under which American forces operated had severely reduced the F-105s’ options in Rolling Thunder missions. The number of approach routes was limited, as were the targets permitted to be attacked.

The Pod Deception

Olds took these factors into account and called for a plan that depended upon a basic deception. The strike force would imitate the route, speed, and radio chatter of a normal F-105 mission. However, the force would comprise not bomb-laden Thuds but rather F-4Cs, each armed with four AIM-7E Sparrows and four AIM-9B Sidewinders. Maj. Gen. Donavon F. Smith, chief of the Air Force Advi-

sory Group in Vietnam, suggested the Phantoms carry the QRC-160 electronic countermeasures pod that the Thuds had been carrying.

Simply acquiring the necessary QRC-160 pods was a logistic effort that extended all over Southeast Asia and all the way back to the United States. It was the first of a series of events that engaged many disparate elements of the Air Force.

Also at play was another factor, one that Olds hoped would be the key factor in success. The first three flights entering the combat area would have “missile free” firing options. For a few precious minutes, the Americans would know exactly where all friendly aircraft were. Any other aircraft could be assumed to be hostile and be fired upon without visual identification. This gave many advantages, including surprise, isolation from counterfire, and, most of all, time to let the missile do what it was designed to do under the most favorable conditions, without excessive g forces to trouble the missile systems.

On Dec. 22, Olds briefed Momyer in Saigon. The commanding general accepted the plan without a change. Execution was set for Jan. 2, 1967. The force would contain 96 fighters—56 F-4Cs, 24 F-105s, and 16 F-104s. The force also would include KC-135 tankers, EB-66s electronic countermeasure-support aircraft, EC-121 Big Eye surveillance aircraft, and rescue forces.

Eight days after briefing Momyer, Olds canceled all leaves at the 8th TFW and postponed the New Year’s Eve party. Then, bad weather moved in, and it was obvious that the mission would not be flown on Jan. 1. Most thought it probably would not occur on Jan. 2, either. The party was reinstated for the evening of Jan. 1—a mistake, for soon the mission was reset for the morning of Jan. 2. Olds agreed to go forward, despite the probability of bad weather, because the QRC-160 pods were “on loan” to him for only seven days.

Normally, the computers at 7th Air Force developed the code words assigned to flights, targets, and routes. Because timing was so critical, however, code terms for Operation Bolo were carefully picked. The Wolfpack flights were given the names of cars, with mission commander Olds leading Olds Flight. (Olds was dismayed by this; he felt that the flights should



MiGs armed with heat-seeking missiles had been attacking strike flights of bomb-laden F-105s and also forcing the Thuds to jettison bombs prematurely. Operation Bolo F-4s mimicked the route, speed, and radio chatter of an F-105 mission.

have been given names similar to those used by the F-105 flights. In his pre-mission briefing he told his pilots to use first names for their radio calls.) MiG base locations were identified by the names of US cities. Phuc Yen, northwest of Hanoi, was called “Frisco,” while Gia Lam, south of Phuc Yen, was “Los Angeles.”

Distillation

It had required a massive Air Force-wide effort to bring Bolo into being. The entire 8th TFW’s energy was thrown into overcoming last minute problems, with the support troops working all night long. (A typical glitch involved the sway braces on the F-4C. They were located differently than on the F-105, and the shell of the QRC-160 pod had to be reinforced in order to fit well.) However, as the aircraft rolled for takeoff, the long days of nonstop planning, the assembly of resources, the intense training of munitions crews, crew chiefs, pilots, and backseaters now began to condense into a 13-minute dogfight. The historic battle would be fought in a slice of sky that ranged from 10,000 to 18,000 feet in altitude and within a 15-mile radius of Phuc Yen airfield.

Olds carefully emulated the F-105 flight profile, flying a fluid-four formation at 480 knots until reaching the Red River. At that point, he accelerated to 540 knots and assumed

the QRC-160 pod formation. This was similar to the standard fluid four but with a separation of about 1,500 feet. The aircraft would weave up and down, and the combined effect of the pods was to jam the enemy acquisition radar.

The force maintained this Thud feint for a full three minutes after the Olds Flight arrived at its target. By that time, Olds expected the North Vietnamese to have realized what they were dealing with. Olds arrived over Phuc Yen at 1400 Zulu, exactly on schedule, but he was disconcerted to find that the MiGs were not airborne. There was a complete undercast, with tops at about 7,000 feet, and the communist ground controllers had delayed the MiG takeoffs by about 15 minutes. Olds had no way of knowing this and had to contemplate calling the mission off for the inbound flights.

He passed over Phuc Yen airfield to the southeast and then made a 180-degree turn to the northwest. The first sign of enemy activity proved sterile as Olds 3 picked up and then lost a bogie moving swiftly in the opposite direction. Knowing that Ford Flight, led by his longtime friend Col. Daniel “Chappie” James Jr., was due over the target, Olds now canceled the missile-free option and made another 180-degree turn.

Ford Flight burst into the battle area exactly on time and simultaneously with the first appearance

of MiG-21s popping up out of the undercast. Ford 1 called out a MiG-21 closing on Olds Flight. Olds turned to throw off the MiG’s aim and attacked another MiG that appeared in his 11 o’clock position, low and a little over a mile away.

First Trip

It was Olds’ first trip to the Hanoi area, and his first engagement with a MiG. With his backseater, Lt. Charles Clifton, he set up for a Sparrow attack as he closed to get positive identification. When he saw the silver delta shape of the MiG he fired two Sparrows and a Sidewinder—but none of them guided. Olds sighted another MiG—they were appearing everywhere now—and used the Phantom’s power and energy to vector roll behind it. This time he fired two Sidewinders and the first one made impact, blowing the MiG-21’s right wing off and scoring the first of the MiG kills. The pilot did not eject.

Wetterhahn, one of the key planners, had been disappointed to be flying as Olds 2, but in the course of Olds’ attack he was able to slide behind a MiG-21. Working with his GIB (the Guy In Back), 1st Lt. Jerry K. Sharp, he salvoed two Sparrows. They lost sight of the first one, but the second Sparrow caught the MiG just forward of its stabilizer and blew it up. Two down.

Olds 4, flown by Capt. Walter S. Radeker III, with 1st Lt. James E. Murray III in the back, saw a MiG-21 tracking Olds 3. Radeker experienced some difficulty getting a solid tone on his Sidewinder before firing, yet the missile guided perfectly, striking just forward of the MiG’s tail and sending it spinning into the undercast. Three down.

The next MiG fell to Capt. Everett T. Raspberry and 1st Lt. Robert W. Western in Ford 2. Two MiGs had closed on Ford 3 and 4, overshot, then pressed an attack on Chappie James in Ford 1, overshooting him as well. The MiG broke into a hard left turn, and Raspberry rolled to wind up at the MiG’s six o’clock position. He fired a Sidewinder that guided up the MiG’s tailpipe, blowing it up. Four down.

Rambler Flight had arrived exactly on time, to find itself in the midst of the MiG melee. One of the most important of the planners, Stone,



This version of the F-4 participated in Operation Bolo. Note its inboard pylon ECM pod. The F-4’s initial lack of an internal gun put it at a disadvantage in a close-in fight, but this one’s two red stars indicate success over enemy MiGs.

was the Wolfpack's tactics officer. He was flying with Lt. Clifton P. Dunnegan Jr., as the backseater. Over Phuc Yen, Stone picked up two MiGs, 4,000 feet below and two miles away. Uncertain of his lock-on, Stone fired three Sparrows. The second missile struck the MiG's wing root, and the pilot ejected. Five down.

Two young first lieutenants, Lawrence J. Glynn Jr. and Lawrence E. Cary, in Rambler 2 had been on Rambler lead's wing all through its combat maneuvers. Just after Rambler 1 scored, Glynn locked on to a MiG-21 and fired two Sparrows. The second missile hit the MiG in its wing root, the debris damaging Rambler 2 slightly. The enemy pilot ejected and Glynn saw his parachute open. Six down.

Maj. Phil Combies in Rambler 4 was flying with Lt. Lee Dutton in the backseat. After Dutton had locked on to a MiG-21, Combies tracked a fighter carefully, pulling no more than 4g's, and fired two Sparrows. He didn't observe the first missile at all but was able to track the second from launch to impact. It struck in the tail section. So swiftly did the parachute appear that Combies later speculated that the pilot must have ejected when he saw the missile coming.

That made seven MiG-21s down. It was the final confirmed victory of the day.

Combies and Dutton had latched on to a second MiG and had fired four Sidewinders. They saw the first two detonate just below the enemy's tailpipe, with the last two tracking well, but then they had to break hard right when they heard "F-4C, I don't know your call sign, but break right." The message was intended for Stone, but the break caused Rambler 4 to claim only a probable. (Maj. Herman L. Knapp in Rambler 3 also claimed a probable.)

It's Over

Suddenly, the MiGs were gone, and the four remaining Wolfpack flights (Lincoln, Tempest, Plymouth, and Vespa) arrived to find the action was over. The 366th, out of Da Nang,



The F-4 carried four close-range AIM-9 Sidewinder heat-seeking missiles and four radar-guided AIM-7 Sparrows like those shown here. In the opening moments of Operation Bolo combat, Olds scored his first MiG-21 kill with an AIM-9.

had flown up the coast to a point off Haiphong, evaluated the weather, and elected not to participate in the western part of the mission. Operation Bolo was over.

Seventh Air Force was elated with the Wolfpack's results. Twelve F-4Cs had engaged 14 MiGs and shot down seven, with no losses. It is worth noting that of the 14 crew members who scored victories, only one, Glynn, had ever seen a MiG in air combat before. (Olds had seen MiGs at a distance.) The Phantom crews, despite their relative inexperience in combat and their lack of dissimilar aircraft combat training, used vertical maneuvers to put themselves in firing position.

For dogfighting, the F-4C proved clearly superior to the MiG-21, and the AIM-7E Sparrow and AIM-9B Sidewinder proved to be highly effective weapons. Only 10 Phantoms had fired their missiles. Eighteen Sparrows had been launched; of these, only nine guided, but these nailed four MiGs. Twelve Sidewinders were launched, seven guided correctly, and they destroyed three MiGs.

The QRC-160 ECM pods had apparently worked very well, although the presence of MiGs in the combat

area undoubtedly inhibited both missile and anti-aircraft fire. Only five SAMs were spotted and a light burst of 85 mm anti-aircraft fire seemed to be aimed at random.

The battle proved beyond doubt the importance of the largely unsung GIB, the backseaters, who locked the radar on the target and who, despite the continuously changing g forces, kept their heads on a swivel watching out for enemy aircraft and SAMs.

Finally, the battle proved Olds to his men. He made sure that all who participated in Operation Bolo, whether in the air or on the ground, were given full credit for their contributions. The general effect of Bolo on Air Force morale was positive, in Southeast Asia and the US.

There was a postscript. The MiG force had retaliated by attacking an Air Force RF-4 reconnaissance airplane, and this inspired 7th Air Force planners to use another deception.

Two F-4Cs, fully armed, were to fly in close formation so that they would appear as a single blip. They flew a mission as a reconnaissance aircraft would on Jan. 5, without any enemy reaction. They did it again on Jan. 6 and were rewarded by being bounced by four MiGs. The F-4Cs shot down two of the North Vietnamese aircraft, meaning that nine of the 16 MiG-21s had been shot down. The MiG-21s went through a three-month stand-down, during which both sides studied the lessons of the battle. ■

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