



**M. Ross Shulmister**

***First Intercept of Russian  
Bears from a CONUS Base***



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*By M. Ross Shulmister, LtCol, USAF (Ret)*

Tuesday, May 13, 1969, started off just like any other day at the 27th Fighter Interceptor Squadron (FIS), Loring AFB, Maine. Morning commander's call was held in a theater style room, where daily assignments were handed out, usually consisting of proficiency flights, flight briefings, and general duties.

Breakfast was served from a food line by a cook assigned to the squadron. He was talented, and there were no complaints.

Four pilots would not be scheduled to fly that day. Two, Capts. Tom Gerken and Neil Blake, were assigned to nuclear alert. They had no chance of flying, because planes equipped with nuclear missiles were not allowed to launch without Presidential authority. The two "nuclear birds" were in the alert hangar, just off the departure end of Runway 36, and connected by a high speed taxiway.

The other two alert pilots were relatively new captains, M. Ross Shulmister and Vance Hedin. Their alert birds were also in the alert hangar, but loaded with conventional missiles. The Convair F-106 Delta Dart was, after all, an interceptor designed to achieve air superiority against other aircraft, be they fighters or bombers. Or, I suppose, UFOs.

The alert birds almost never flew, but they were all preflighted and hooked up to electrical carts and an air compressor used to start the jet engines. Avionics were on standby, and parachutes were in place. They were configured for a 15 minute scramble, and alert pilots had to be

within a range to get into their assigned bird and launch within 15 minutes of a scramble alert. The pilots therefore spent alert nights in dormitory rooms on the second floor of the squadron building, which was only a few hundred feet from the alert hangar.

There were three operational bases responsible for initial defense of northeastern North America, CFB (Canadian Forces Base) Chatham, CFB Bagotville, and Loring AFB. The Canadians were flying the McDonnell F-101 "Voodoo". It was a two-seat, twin-engine century-series jet that first went operational in 1957. It had a subsonic range of just under 2,100 nautical miles.

Subsonic, the Voodoo flew at 0.9 Mach (595 kts) or less. But at 0.9 Mach, it was subject to buffeting, had stability problems, and had to be handled gently. It could fly a lot faster (985 kts or Mach 1.5), but it was a 3,800 pound heavier airplane, and the afterburners (two of them) were either on or off. Full F-101 afterburner drinks a LOT of fuel.

While the F-101 had some stability problems at high speeds, the F-106 did not. But F-101 crews generally did not shy away from transonic or supersonic flight. F-106 pilots did avoid supersonic flight over land because of problems from shock wave damage, which tended to annoy people on the ground, especially if they were standing close to a window.

The single engine F-106 had a max speed of 2.0 mach (plus maybe a little), and an official subsonic range of just under 1,700 nautical miles. The F-106 was a very stable airplane, and could cruise very comfortably at 0.93 Mach (615 kts) without the afterburner, and with good fuel efficiency at higher altitudes. The afterburner settings were variable. But there was only enough fuel for about 15 minutes at Max Afterburner. Min Afterburner drank fuel, but much more slowly. The F-106 was very fuel-efficient at low supersonic speeds – well, to the extent afterburner can be.

In 1969, there was no such thing as GPS. Instead, defense fighters were part of a control network called Semi-Automatic Ground Environment, or SAGE for short. For the time, SAGE was a very modern and robust radar and control system, which linked ground computers electronically to participating aircraft.

The F-106 had advanced avionics, which included links to SAGE, as well as the ability to allow remote control of the aircraft by SAGE. When a fighter was “paired” with the SAGE system, the SAGE system sent electronic information and directions to the fighter. The pilot had to control power settings, but could allow SAGE to steer the plane by selecting the autopilot. Fire control (launching missiles) was strictly under the pilot’s control, linked to the plane’s radar and computer system. Or, in the case of the heat-seeking missiles, the Infrared Sensor, a silvery ball just in front of the canopy.

On May 13, 1969, as on many other days, the USSR launched a squadron of Tupolev TU-95 “Bear” bombers. They were assumed to be carrying live gun ammunition, and probably live bombs, although we never knew for sure. As was their usual flight plan, they flew from the Mediterranean area across the Atlantic toward the Virginia-DC area.

The Air Defense Identification Zone (ADIZ) is an imaginary line around the US and Canada. The distance from land varies, but 100 miles isn’t too far off when it comes to the Washington, DC, area. Any plane crossing the ADIZ must have clearance from Air Traffic Control, or it is subject to interception. As long as the Bears didn’t penetrate the ADIZ, they had nothing to worry about.

Their typical probe would be to fly directly toward the ADIZ, in the Mid-Atlantic States area, and then turn northerly just outside of, and paralleling, the ADIZ until approaching a point abeam Gander,

Newfoundland. As they approached a waypoint abeam Gander, they would penetrate the ADIZ, and see how long it took for an interception to be launched, and then turn east away from the intercepting aircraft.

On May 13, 1969, CFB Bagotville was undergoing an Operational Readiness Inspection (ORI), where Canadian military inspectors tested the squadrons to insure compliance with regulations and readiness standards. An ORI involves flying simulated intercepts, in a simulated wartime setting, so it was all hands on deck. Bases involved in ORIs did not sit alert.

That meant that during the ORI, CFB Chatham had the responsibility of handling intercepts.

The North American Air Defense Command (NORAD) had intelligence that a squadron of Bears was inbound toward the US Atlantic Coast, and NORAD was geared up for the usual Bear maneuvers. The NORAD commander for the Northeast Sector was alerted. He in turn alerted the CFB Chatham squadron sitting alert.

But one of the Chatham alert Voodoos reported a flat tire, and the other reported a crack in the canopy. Those planes weren't going to fly.

NORAD put out the scramble call to the 27th FIS based at Loring. The 27th had no prior actual intercept launches, so a "this is not a drill" scramble was unusual. Shulmister and Hedin, in full gear, headed for the alert hangar, strapped on their parachutes, started their engines, did a high-speed taxi to runway 36, and launched without slowing down. Wheels up, they were given vectors to Goose Bay AB, Labrador.

Shulmister outranked Hedin by a few months, so under USAF protocols, there being no other designated flight lead, Shulmister was it.



It was a brisk trip to Goose Bay, about 500 nm to the northeast. When they landed they were told to expect a rapid turnaround (refueling, installing a new drag chute), and to be off the ground within 15 minutes. And they were.

Meanwhile, Capts. Gerken and Blake launched their alert birds, sans nukes, to Goose Bay as backup. Back at Loring, two new alert birds were brought on line, with nukes. It was all part of standard operating procedures (SOPs) when there was an alert scramble.

Back in Canada, Shulmister and Hedin, fully fueled, were off the ground from Goose Bay and headed for Gander, their assigned holding point, about 345 miles to the southeast, and the most easterly part of North America. It was only a short time before they arrived at Gander. The Bears would be almost due East by then, some 90 miles away.

Bears have four powerful reciprocating engines, with counter-rotating props. They cruise quite efficiently at 400 knots.

At 0.9 Mach, the F-101 would have a closing rate on the Bears of 195 knots. At 0.93 Mach (615 kts), the F-106 would have a closing speed of 215 knots. The 90 mile difference would have been covered subsonic by the F-101 in roughly 27 minutes, and by the F-106 in roughly 25 minutes. The Bears would have traveled 155-165 miles or more, putting the intercept point some 250 miles East of Gander.

Voodoos, like the 2-engine F-4 Phantom, drink a lot of fuel to getting into, and sustaining, supersonic flight, and this intercept was not going to be made subsonic without getting within range of Iceland. NORAD had tried it before, and, out of fuel considerations, the Voodoos had to turn back before intercepting.

But neither NORAD nor the Russian Bears had been faced with an F-106 intercept from the Continental United States or Canada. The F-106 weighs about 3,800 pounds less than the F-101, empty weight, and has greater fuel efficiency, especially in supersonic flight.

At Gander, the 27th FIS Delta Darts were directed to turn due east. While still in the turn, NORAD called to say the Bears had turned east, so the 6's might as well return to base.

But Shulmister said, "How bad do you want to catch them?"

"It's a ninety mile tail chase," NORAD responded.

"I didn't ask you that. How bad do you want to catch them?"

"We've never been able to catch them."

"I didn't ask you that. How bad do you want to catch them?"

After a pause, NORAD called back, "We'd REALLY like to catch them!"

"Pair us," Shulmister directed.

As the Delta Darts' avionics became linked with the SAGE system, instrument needles jumped, and then settled down showing an easterly heading and about 90 nautical miles distance.

Shulmister looked at his wingman and gave the signal for afterburners. As the afterburners lit, the two fighters abruptly accelerated, and as the throttle in the lead plane was adjusted just above minimum afterburner (to give the wingman some leeway with his throttle), the two planes settled down at 1.3 Mach.

Long ago, Mach (the speed of sound) was mysterious, and even called “the sound barrier.” Now it’s just a speed at which shock waves are created, and they can damage structures on the ground. Mach varies according to air density (which is affected by temperature). At the altitude they were flying, Mach was probably around 630 kts. so 1.3 Mach would be around 820 kts. This intercept would take only 13-15 minutes.

At supersonic speeds, the F-106 generates three shockwaves, one major wave off each of the two large air intakes, and a lesser wave off the nose. While the waves themselves are transparent, they bend light, and you can “see” the shockwaves as a sort-of shimmering surface. An airplane in front of a shockwave will feel a push as the wave overtakes the plane, or as a resistance if the plane tries to penetrate the shockwave. The push and the resistance are very minor for any plane with the power of a combat fighter. Shockwaves are an impressive sight, but are not like the condensation clouds on a fighter’s wings as it flies by a Navy ship in a high speed high-G turn. But back to our story.

After less than 15 minutes of afterburner, Shulmister saw what he identified as 27 to 29 radar targets (the Bears). “Make sure your radar is not on the classified setting,” he said to Hedin.

“My radar’s not working,” Hedin responded, as he raised his Infrared Sensor, a silvery ball just in front of the canopy.

“Ah, you might want to put that down. Don’t want them to interpret it as a hostile gesture.”

As they dropped out of afterburner, Shulmister called to NORAD, “Um, we have maybe 29 targets on radar. What do you want us to do?”

NORAD: “Pick one.”



As they approached the targets, one of the planes popped a bundle of chaff, shredded tin foil which creates a radar target, clearly for the purpose of identifying the interception location to a probable trawler down below. It had been 2 hours and 33 minutes since the launch from Loring.

Nearing the first radar target, it turned out to be the third plane in a cell of three, with the other two in front and lower. The twin tail guns, that had been pointed rearward, raised, pointing upwards. Leaving them pointed rearward toward the intercepting F-106s would be considered a hostile gesture.

"Okay," Shulmister called to NORAD, "we have a target. It's number three in a flight of three. Now what do you want us to do?"

After a pause: "Call us the tail numbers."

He called the tail number for the rear Bear. "Okay, now what?"

"Call the numbers for the other two."

After the tail numbers for all three were called, NORAD advised, "Return to base when you are ready."

The Tu-36 has a large bubble window in the rear of the fuselage, and the crew was busy taking photos. "They're taking our picture," Hedin said.

"Okay, smile for them," Shulmister said. "How about you moving up in close formation, and I'll take a picture for our Squadron Christmas card."

After a minute or so in close formation with the lead Bear, Hedin called, "You might want to hurry. The captain is giving me a mighty dirty look."

They played with the Bears for about 15 minutes, and probably could have stayed an extra 15 minutes, but pilots without arctic gear tend to get antsy flying over a huge expanse of cold North Atlantic Ocean.

After climbing into thinner air (jets are more efficient and burn less fuel at higher altitudes), it was a leisurely subsonic flight for a bit more than 620 miles back to Goose Bay.

When they landed, the NORAD regional commander waited for them ecstatically. It was an historical event for NORAD, the first successful interception launched from the Continental United States, and also for the 27th. An Armed Services news reporter and photographer waited with the NORAD commander, but neither the story nor the pictures seemed to have been published. At least they didn't make their way to Loring.

When Shulmister and Hedin returned to Loring, they were told the whole incident was classified by the State Department, because the US didn't want to embarrass the Canadians, who were supposed to have conducted the intercept and had failed on this and all previous attempts.

But the Canadians didn't see it that way. The Bagotville squadron threw a party for the 27th, at which they rowdily razed the Chatham squadron with a poem, called Ode to the F-106.

Maybe someday someone will find a copy, and post or publish it.

