

Newsweek—Robert R. McElroy

ICBM silo in North Dakota: New crop beneath the wheat fields

## Life With the Minuteman

The Nixon Administration's recent decision to build the first of the Safeguard anti-ballistic-missile installations in North Dakota and Montana has focused world attention on some flat American acreage previously known only for its wheat yield. Now this land bears a different crop. Between 1962 and 1967 the U.S. Air Force sowed 1,000 Minuteman and 54 Titan 2 intercontinental ballistic missiles beneath the protective soil of eight states west of the Mississippi River. These missiles are under the constant control of highly trained Air Force crews in special blast-resistant command posts also below ground; in the event of a nuclear strike by another power, these men would then fire the Minutemen and Titan 2s in retaliation. Newsweek's Science and Space editor George Alexander recently accompanied a Minuteman missile crew on a regular 40-hour tour of duty in their underground North Dakota launch-control center. Here is his report on what the ABM's are intended to guard:

We had been on the road out of Grand Forks, N.D., for more than half an hour before the driver of the Air Force staff car—and my crew commander—Maj. Charles D. Belt, suddenly pointed a finger off to the left.

"There's one there," he said. "Not much to see, is there?"

It was a Minuteman silo. I caught a brief glimpse of four telephone poles, topped by floodlights, and four small radar antennas inside a cyclone fence. Piled-up snow blocked my view of the 80-ton concrete lid covering the three-stage Minuteman ICBM in its 80-foot-deep, reinforced silo. It was one of the 150 missile sites of the 321st Strategic

Missile Wing at Grand Forks Air Force Base—and it could have gone unnoticed from the highway.

Major Belt, a 33-year-old Kansan, Capt. Eugene L. Tattini, 25, and I were headed for "Mike" flight, a launch-control center for ten of the 321st Wing's Minuteman missiles; it is one of fifteen such underground centers, all designated alphabetically, positioned among the missile silos.

'Mike': About 80 minutes after we had left the main base, we pulled up at a fenced, one-story, green-shingled building that, from the highway, looked like a state trooper's station. This was Mike's support building—and no one gets past the front gate without an authorizing number, assigned by the main base and transmitted by radio to the guards at the site. If you forget it, the guards won't let you in; one maintenance sergeant has taken to writing his code on the back of his hand, like a college student's crib note.

Inside the building was a guard room with three airmen, carrying pistols, a large dining-and-recreation room, a fully equipped kitchen and seven bedrooms. Directly below the building, reached by one of the slowest elevators in the world, was the launch-control center, or "capsule," where two Air Force officers are always on duty. After a quick, but excellent, hot meal prepared by the duty cook, the crew and I headed downstairs for our shift.

At the bottom of the elevator shaft is a foyer. To the right, an equipment room containing a diesel generator and supplies sufficient to keep a crew alive for weeks in the event of a war. To the

left, an enormous 8-ton, blastproof lid. It opened ponderously, revealing a tunnel not more than 5 feet high. Hunched over, we entered the capsule.

I felt that I had entered a Pharaoh's tomb, for the launch-control center is really a huge, unlit concrete vault, 100 feet long and 30 feet across. The center is simply a platform partially closed by acoustic panels and suspended from the ceiling of the vault by four gigantic shock absorbers. If an enemy nuclear warhead should explode close to the capsule, the shock absorbers would hold the floor steady along with all the electronic racks, communication equipment, computer and the two crew consoles bolted to it—or so the theory goes. "Everything in here would really shake," says Belt, the crew commander, as he shows me how he and Tattini would strap themselves into the big reinforced stuffed chairs in front of their consoles "but it would all stick together."

SS-9: Although Air Force officers here refuse to discuss the ABM system, or the specific damage that a 15 to 25 megaton warhead of the Russian SS-9 ICBM could do to Minuteman silos or launch-control centers, one colonel said pointedly: "We can take everything but a direct [nuclear] hit. And when the dust settles, we'll be ready to go."

Belt and Tattini, in dark-blue uniforms that make them look more like policemen than Air Force officers, each carry a snub-nosed, .38-caliber revolver in a holster. The purpose? Tattini laughs nervously and says: "They're really nervous about themselves." What he means is that either man would shoot the other if he went berserk and tried to wreck the control center—or tried to launch the missiles without authorization.

The missiles are launched only when Charley Belt and Gene Tattini follow a carefully prescribed series of actions. Belt takes a coded command from the President, relayed down through Strategic Air Command command posts, to start that series. The "go" command is divided into sections; Belt must decode half and Tattini the other half. Then they must check the authenticity of the command by phone or radio with other officers like themselves in neighboring 321st Wing capsules to see if they, too, received the same messages. Only then would the two officers break out the two shiny keys stored inside a padlocked, bright-red safe welded to a frame above Tattini's console.

**Fast Count:** The keys, inserted into special locks on the consoles and then turned, start a 32-second countdown for the selected missiles. These commands are sent out over heavy, black cables that snake upward from the top of the consoles and run out to the launch silos from 4 to 30 miles from the capsule. Even if these buried lines should be severed by a nuclear attack, Belt and Tattini could still dispatch their missiles through radio circuits.

"The keys have to be turned simul-

taneously to start the sequence," explains Belt. "That's why our consoles are 15 feet apart. It is a physical impossibility for Gene to turn his key and then hustle over here and turn mine in time. Once we turn them together, however, that's it."

The keys unlock the door to a nuclear Armageddon at T-minus-zero. The massive lids on the launch tubes fly open and the ICBM's streak upward. Although the warheads can be disarmed by a radio command shortly after launch, \* nothing can stop the missiles' flight.

**Tests:** Again, that is the theory. Despite a successful flight-test program at Cape Kennedy, the Minuteman has worked in only one of four special test shots conducted from silos in the field. Three times, between 1966 and 1968, the Air Force failed to get the test Minuteman ICBM's out of silos in North Dakota for brief, seven-second demonstration flights. The Air Force says it is correcting the problems uncovered and intends to resume the tests this year.

The Air Force also worries about the theoretical possibility of U.S. officers launching missiles without Presidential command—although it insists the chances are no greater than that of an asteroid falling on New York City. But the fact is that all of the information and all of the equipment required to launch Minuteman missiles are available to the men who sit at the consoles. The safeguard is that two men alone are not sufficient, for when a crew sends a "launch" command to its ICBM's, the missiles will not move until a second, confirming command is received from another control center.

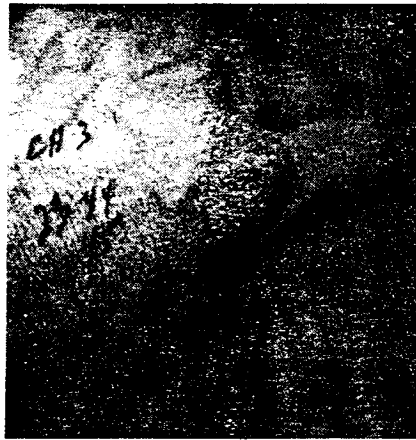
Should confirmation be withheld, the single launch command, also called a "vote," can still have profound consequences, for it does set in motion a firing process. However, launching is delayed by a timer for at least two hours. The timer has a dual purpose: it prevents a "hawk" crew from firing ICBM's before saner officers could intervene, it bars a "dove" crew from indefinitely stopping the missiles in the event of real war.

**Screening:** To prevent such a Dr. Strangelove nightmare, the Air Force constantly screens the individuals selected for the missile program; it holds that it is all but impossible that four psychotics could slip unnoticed through the six months of training preceding an assignment to a control center. It is also most unlikely that four such individuals would come together at the same base at the same time, or that they would draw the same work shifts. (The work shifts, usually, are chosen at random by independent officers; for them to be in any conspiracy increases the chance of exposure and arrest.)

The screening procedure, called the reliability program, consists of

daily observations of a man's behavior by his supervisors and co-workers. At the first signs of stress, the man is interviewed by his commanding officer and physicians at the base hospital, and then either temporarily re-assigned to work not involving nuclear weapons or permanently transferred to a non-nuclear organization. Last year at Grand Forks, two officers were removed from combat-crew duty. One, a missileman, doubted that he could fire a nuclear weapon and voluntarily resigned from the service. The other, a flier with the B-52 bombers also stationed there, had marital difficulties; he was given a less demanding job.

"The buddy-watching system is probably more valuable than a single psychological test," said Dr. Howard Berens, 32, a psychiatrist now on active duty with the Air Force at Grand Forks. "The military are much more suspicious of each other than people are in civilian life. They're more likely to report any odd



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Crib note: No number, no entry

behavior on the part of a guy they have to work with."

Many civilian experts agree on the value of buddy-watching. Dr. Robert Hewitt, a psychiatrist and deputy director of the State of California's Department of Mental Health, says: "If you want to determine how the person really acts in a crisis, observation is best. His strength or weakness may come out in a test, but to find out how he acts, you should observe him."

How do Belt and Tattini observe each other? "It's a pretty nebulous thing," says Belt, "but what you look for are any differences in the other man's performance from what you've come to know. Actually, we worry less about ourselves as individuals than we do about our performance as a crew."

**Status Lights:** They work together smoothly. As they sit in the capsule talking, a buzzer sounds and lights flash on and off. The status of each missile in Mike flight is easily told by a column of nine green, red, amber and white lights; if the green bulb at the top of the column is lit, the missile is in working condition. But now Minuteman No. 25

is showing a white light at the bottom of its column; something is wrong.

Tattini pulls out a checklist manual and quickly begins turning switches and punching buttons to start a computerized investigation of the problem. There is a pause, and then the computer prints out the numbers "534." Tattini looks up "534" on another document. "A flood alarm," he says tersely. While Tattini calls the main base to have a maintenance crew dispatched to correct the problem, Belt explains that heavy winter snows of North Dakota are beginning to melt and water occasionally seeps into a launch silo. "It could be a faulty sensor, or it could be real," he says, "but maintenance will get on it right away."

This is the only significant event in an otherwise uneventful eight-hour shift. "Well, it's not an exciting job," says Belt as he prepares to hand over the capsule to the relief crew of Maj. Gerald E. Parr and Capt. Theodore L. Tower. "There is a computer here talking to a computer out there in the missile. I interfere only when something goes wrong."

In one month, Belt and Tattini can expect to draw four or five 40-hour duty assignments at some capsule within the wing. Would they be willing to take another four-year hitch as missile crewmen when their present tour is over? They both shake their heads: "No."

**Relief:** A 40-hour baby-sitting session with ten missiles is, frankly, boring. After eight hours in the capsule, drinking endless cups of coffee from the Thermos pitchers, or nibbling on meals brought down in special "hot" cans, I felt exhilarated by the prospect that the guard upstairs would soon call Belt on the telephone and announce: "Relief crew preparing to come down, sir."

Upstairs, the crew has eight hours of free time. At least part of that time is spent sleeping—for another eight-hour shift will soon be here—but there is a television set, magazines (Esquire, Time, NEWSWEEK), paperback books (General Giap's "People's War, People's Army" and "Big Victory, Great Task"), or a pinochle game looking for a fourth hand. "The only thing wrong with upstairs," says Tattini, patting his stomach, "is that you have a tendency to eat four meals a day. You've got to watch the weight."

Three times during a 40-hour tour, Charley Belt and Gene Tattini ride the slow-speed elevator down to the capsule for an eight-hour work shift. They are not much given to introspection about themselves, their jobs or the war machines under their temporary control. I asked Belt, an articulate, thoughtful speech and drama graduate from the University of Kansas and an eleven-year veteran of the Air Force, if he ever thought about the destructive power that had been entrusted to him. He paused for many seconds before he finally answered. "Nuclear war is like a billion dollars all my own, or the size of the national debt," he said. "I just can't comprehend it."