



### Titan Stories



3 Titan I missiles topside

#### Titan I and II - by Col (Ret) Charlie Simpson, Executive Director, AAFM

The Titan family of missiles has a long and distinguished history. The Titan I was developed at the same time as the Atlas to provide a two-track deployment of our first intercontinental ballistic missiles. We have documented the history of Titan I in previous issues of our newsletter (July and October 1993, January 1994, October 1995 and June 1997), so this issue is made up of some personal stories about the missile and its follow-on, the Titan II. We featured articles and stories about the Titan II in June 1997, March 1998 and March 1999.

Titan I was a maintenance-intensive system that was complex and difficult to keep on alert. The two stage, liquid oxygen and kerosene propelled missile was housed in a giant underground site, with three missiles at each location. Titan I units were at Beale AFB, Ellsworth AFB, Larson AFB, Mt Home AFB and Lowry AFB. The system was operational for only three short years, with

all the units closed in 1965. The Titan I and Atlas D, E and F ICBMs did their job, but the more efficient and effective Titan II and Minuteman replaced them all.

The Titan II was a hypergolic fueled, two stage missile deployed in six squadrons of nine missiles each, with two squadrons at Davis-Monthan AFB, Little Rock AFB and McConnell AFB. The Titan II carried the largest warhead of any US ICBM, and was in service from 1962 until 1987.

The first female missile crewmembers served in Titan II, well before women were assigned duty in Minuteman. The missiles were a key part of our nuclear deterrence, and the Titan family of spacelift vehicles are the workhorses of today. From the old ICBMs still being used to lift satellites into space to the heavy-lift Titan IVs still manufactured by Lockheed Martin in Denver, the Titan has and continues to be a key part of our space and missile force.

#### Titan II Launches QuikScat - reprinted from the Lockheed Martin Astronautics News of July 19, 1999.

An Astronautics-built Titan II rocket launched the QuikScat satellite for the Jet Propulsion Laboratory and NASA on June 19 from Vandenberg. QuikScat will provide climatologists, meteorologists and oceanographers with approximately 400,000 detailed measurements daily of the speed and direction of winds that blow above the ocean's surface. Winds play a major role in every aspect of weather on earth. With information from QuikScat, scientists expect to better understand the affect of winds on oceans and improve weather forecastitng.

"Titan II's proven eight-for-eight record of reliability is a credit to the Air Force-Lockheed Martin Titan II team," said Tom Marsh, Astronautics president. "We are pleased to have played a role in launching this important satellite that will enable scientists to better understand ocean winds and improve weather forecasting." The satellite is planned for a two-year science mission

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## A Word from the Association

**National Meeting** - Plans are progressing well for our May 2000 National Meeting in Colorado Springs. Jim Knapp has worked with AF Space Command and local tour people to set up some great tours of AF facilities and local attractions. The hotel is a superb facility - make your reservations now. General Richard Myers, commander of Space Command, will be our featured speaker at the Saturday banquet, and the general meeting will include some excellent briefings from the Air Force on space and missile issues. Get your registration form in soon - the form is on the back on this issue.

**Logo Items** - We get many requests for items with the AAFM logo. We recently ordered new golf caps - the last ones were all on the small side. They will be available for a donation of \$15. Some of you have asked about logo shirts - if you would like an AAFM shirt, let us know - the cost will be around \$30 for a good quality short sleeve golf shirt. We recently ordered a sample AAFM wall clock, with the logo on the face and with a chrome case. These can be ordered if there is enough demand, for a donation of \$12. Let AAFM know if any of these interest you, or if you would like to see other items. Note the two letters about rings and models on the following pages.

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**AAFMM Web Page** - We have a new web page at a new address - [www.afmissileers.org](http://www.afmissileers.org). Member Bob Notman has volunteered to dress up our page - we now have more graphics and photos, and will add more as Bob (who is in the web page business) works on the page. We will keep our old page on line for a while (the server is changing policies) so visitors will be led to the new page. Our e-mail address is [aafm@afmissileers.org](mailto:aafm@afmissileers.org) or [afmissileers@compuserve.com](mailto:afmissileers@compuserve.com).

## Letters to the Association

Address your letters to AAFMM, Box 5693, Breckenridge, CO 80424, or send by e-mail to [AFMISSILEERS@compuserve.com](mailto:AFMISSILEERS@compuserve.com). Letters may be edited to fit - content/meaning will not be changed.

**WD-40** My first duty station was the 576SMS at Vandenberg in December 1961. A missile mechanic, I was assigned to the Missile Assembly Building (MAB) working for Chief Warrant Officer Cox. Mr. Cox ran a very tight ship. Our first responsibilities were to receive Atlas E and F missiles at the the flight line when they came in by C-133B from General Dynamics. After arriving at the MAB, we installed and leak tested all fittings on the vernier engines. Then we were introduced to WD-40. All areas of the missile skin were polished with it to prevent corrosion of the stainless steel. The hardest job was yet to come - installing the heavy fiberglass flame boots on the three main engines before taking the missile to a site. There was no way this could be done without severe skin irritation from the fiberglass. As I look back almost 40 years, I recall those times as some of the best time of my life spent with some great people. *John Martin, mbr no A1513, Harwinton, CT.*

**More WD-40** When I was assigned to the 567SMS in September of 1962 I had no idea of what WD-40 was. When I reported for duty I found out that everyone new had to spend a few weeks with "Purdey's Raiders". As it turned out this was a detail that was devoted to corrosion control - you painted whatever needed painting. Every time the Raiders visited a site they took gallon cans of WD-40 (not spray!), and cheesecloth and wiped down the entire surface of the missile tank section. SSgt Purdey was really an easy going guy, I have no idea why he got stuck with heading this detail. *David Dobbs, member A1519, Brookfield, IL*

**Thor UK** My technical studies of Thor are progressing well, albeit slowly due to the day job. I am receiving much help from LCol Tom Hafner who, coincidentally, was an AO on Thor at the base near my home where I observes practice countdowns from a nearby road. *Geoff Goodchild, member SA045, Northhampton, UK*  
(Continued on page 3)

**Letters (cont) -Warble Tone** Just as I have been searching for a Titan I Dash one, Jess Ohlsson has been searching for a recording of the SAC Primary Alerting System warble tone. He is correct that his 5 second recording isn't dead on. It is a trifle fast and pitched a bit too high, but it is close enough to make the hair raise up on the back of my neck. *Bill Huey, member A0376, Montgomery, AL.*

*If you would like the sound bite of the PAS tone, ask AAFM by e-mail.*

**Thanks** Fairchild AFB Heritage Museum has received your Grant Application Form, and are very appreciative of the grant sum of \$1,000 approved by the AAFM last year for the 567SMS Display. This year it is hoped to be able to secure assistance to actually recreate the Countdown Sequence! During the 567SMS Reunion here in January 1999, former members of the 567SMS worked out the schematics and plans to reinstall the sequence. *Fred Brown, Director, Fairchild AFB Museum*

**Atlas E Site** The Greeley site cleanup is complete and now I'm looking forward to work on the museum at the site. One of the things that I'm working on is a full size Atlas E warhead. Another is a mannequin with missile uniforms from the Atlas days (white coveralls and fatigues) with the insignia and patches worn then. I am having a full length drawing of the missile done by students at the UNC in Greeley. I'm also working on the Civil Defense aspects of the cold war and could use old books, posters or photos. that I could use. I know I ask a lot of questions but I need help because I'm not an expert in this field. Everything I'm trying is mostly for the first time so if anyone can give me a helping hand to get this museum going we can dedicate it to the missileers who served here. *Pete Ambrose, mbr no SA050, e-mail pambrose@uswest.net, Greeley, CO.*

**Wanted** Book titled "Atlas: The Story of a Missile" by John L. Chapman, Harper & Brothers, NY 1960. Please state condition of book and asking price or trade terms. Greg Ogletree, (805) 737-9453, GregOgletree@juno.com. A Copy of the Titan I dash one, Bill Huey, e-mail hueymott@mindspring.com  
A Titan II dash one circa 1966-69, Kelly Ward, e-mail ward@texas.net

**Desert Storm** I enjoyed the article on the Desert Storm decoys. I heard a Northrop executive talk about the program about a year ago. It was interesting to gain the view of the operators. The message I got from the Northrop presentation was that it was a real "back of the envelope" operation. They acquired vehicles off the local car lots and paint and other goodies from local hardware stores. Not a mil spec in sight! It just shows what can be done by people who know what "Can Do!" means. *Keith Smith, member A0482, Canyon Country, CA.*

**The Dogs** The photo of the Minuteman console in the Malmstrom museum brought back a few memories. I was a member of the 10M S, but pulled many alerts in the 12MS. When I arrived in 1993, the Minuteman IIs were off alert. Except for the 564MS "Deuce" squadron ("The Odd Squad"), the only squadron to have MMIIIs was the 12MS. So, to stay proficient with "on alert" sorties, everyone in the Mod side of the wing pulled at least 1 alert per month in the 12MS.

I enjoyed alerts in the 12MS because it gave one a sense of purpose to see a few "clean and green" sorties instead of a whole squadron "red and dead". The 12MS being the "Red Dawgs" also made for fun alerts since some of the facility managers kept dogs at their missile alert facilities as mascots (hence the dog painted on the commander's console). When I was scheduled for alert in the 12MS, I made sure I was packing some dog treats in my TO bag.

I was partial to a happy-go-lucky mutt at Hotel 01 (where I pulled my first alert) named Cokie. I'd be willing to bet that the console in the museum was taken from Hotel and the caricature may be Cokie. I remember a couple of alerts when Cokie would accompany us down the elevator and into the launch control center for crew changeover (although I've since wondered how I'd explain to the squadron commander how my capsule lost comm from a misconfigured power supply switch or how we broke a positive enable seal when it is was due to the wagging tail of an excited dog).

If Cokie was the squadron sweetheart, Bear at India 01 was the squadron knucklehead. Rumor had it that Bear, a St. Bernard-size, midnight black mutt, had twice been bitten by rattlesnakes and was once run over by one of the cops' armored peacekeeper vehicles. And they say cats have nine lives!

(Continued on page 4)

**Letters** (cont) - Anyway, I believe that particular museum piece in the photo was operational until 1995 or 1996 when all the old equipment was removed by Loral to reconfigure the LCCs for REACT. Incidentally, the caption states it was a Minuteman I console. Although that may be true, it was a Minuteman II and III console as well. *Larry Woods, member A1582, Hanscom AFB, MA*

**More Desert Storm** As a hobby I'm a freelance military photojournalist living in Canada, and I've flown with the Air Forces of the US and Canada. I recently co-authored a book depicting the B-52 Stratofortress published last November. One of my co-authors, Anthony Thornborough is now under contract to produce a book to be titled "Iron Hand - the complete Suppression of Enemy Air Defense Story" and I'm assisting.

The hardback book with 200 illustrations will profile the history of the Suppression of Enemy Air Defense mission and its operational employment by way of numerous firsthand accounts from veteran and current aircrew. "Iron Hand" will be published in the fall.

I'm researching the Northrop BQM-74 drones that were employed during Desert Storm. I received a copy of your newsletter - it is one fine looking newsletter that your association produces. The GLCM article was fantastic! Interestingly, the "Air Staffer," now Col. Brian "Buck" Rogers that briefed Col. Livingston is a friend of mine so I sent him a copy of the article.

I'll forward my findings to the author of "Iron Hand" in the hope of expanding the BQM-74 aspect and take advantage of your offer of additional help. I had already acquired a few images from Northrop, mind you none were taken in theater! *Tony Cassanova, 2503 Folkway Drive, Mississauga, Ontario, Canada, L5L 2J7*

**Models** I recently met with Greg Weipert, an FM with the 321MS. We discussed how to make an affordable Minuteman II, III and Peacekeeper model of display quality. We think it can be done, but we want to assess the demand from our membership. How many people are interested in each missile, how much are they willing to pay, would they want the models to be limited in number (like an artist proof), and do they prefer a model that looks like one in a silo on alert, or white with U.S. Air Force and the AF symbol? We hope to have examples ready by the next Convention. Greg isn't sure about a Titan II, but I think it might be doable. If you have had

requests for this missile as well, you might ask about it too. There is now a 9" resin model of the Tomahawk GLCM available from Cavalier Model Productions. *Scott Mattson, member A0924, Cheyenne, WY*

*Contact AAFM if you are interested in these models.*

**After Missiles?** The newsletter and Email updates continue to be great. They bring back a lot of fond memories. It might be interesting to find out what we have all done post missiles and how our AF and missile training has benefited our subsequent careers. *Steve Forbes, member A0627, Gales Ferry, CT*

**Lowry Igloos** Lowry had two Titan I squadrons, with four sites within the Lowry Bombing and Gunnery range. Just east of these four sites is an igloo complex north of the main road. Were these igloos related to the Titan operations? Where were RVs stored during PLXs? It does not seem like the Lowry WSA was very large. *Ron Plante, member SA015, Bettendorf, IA*

**Rings** I wonder if there would be any interest in a "missileer ring". Several jewelry companies currently offer military rings with the USAF, SAC, or other command or unit emblems. One or two companies also offer pilot or navigator rings. Maybe if enough people from individual systems were interested the logos could reflect the particular weapon system such as Atlas, Titan II, GLCM, etc. Another possibility might be an 8th or 15th AF ring. Mitchell Allan Lang Design, Inc. of Portland, Oregon 1-800-872-2856 says that they can make a ring if they get enough requests. *Duffy Liebenguth member A1353, Pensacola, FL*

*Let AAFM know if you are interested in a ring*

**Kirtland Thor** Status report on your grant items - we  
(Continued on page 5)

## Reunions

**AMMS 2000** - A new organization, the AMMS Missileers, will meet in Cocoa Beach, FL, April 27-29, 2000. Primarily for those who served in Hound Dog or Quail, they met this year in Georgia. Contact Lee Dunkin, 1504 Overlake Ave, Orlando, FL 32806, 407-859-5164, e-mail donut56@aol.com.

**SAC 2000** - July 12-16, 2000, Omaha. Many activities at the new SAC Museum. Society of the Strategic Air Command, PO Box 1254, Omaha, NE 68005.

**Letters (cont)** - have had our MK2 RV for the Thor at a local "large fiberglass fabricator" for several months now - He seems to be the best we can get locally, but is awfully slow, he will be making a mold of the RV shape, which, hopefully would allow us to make many copies from it. Obviously, the first one goes to our Thor - but both the Pima Air and Space Museum, and the AF Museum have said that they would be interested in getting copies. The local Seabee reserve unit, using our materials, and their time as available, have agreed to repaint the missile and transporter-erector. They have already sanded the erector down, and photographed it for the stencil wording and locations, but haven't gotten to the painting and stenciling yet.

I have written all of the 11 handouts, and have most of the photographs for our AF missiles. I expect that we will have them published in about a month. Will send you several sets as soon as they are ready. If you need more, like sending copies to the people memorialized, just ask. *Hal Behl, National Atomic Museum, Albuquerque, NM*

**MMI or MMM?** Am I the first to let you know that the Launch Control Console on page 12 of the June newsletter is not correctly identified? That is a Minuteman F "Force Mod" Launch Control Console. As I recall, Malmstrom squadrons 1-3 went Mod in the early seventies. You can identify this console by the five "Flight Selector" buttons on the Alarm Monitor Panel (where the handset is plugged in). MMI did not have the Flight Selector buttons, because in MMI you could only monitor the ten missiles in your flight. (In Mod you could monitor all fifty missiles in the squadron.) The Program Control Panel under the Launch Control Panel (where the launch key was inserted) also identifies this as a Force Mod set up. The Program Control Panel in MMI just had two big rotating selector switches, rather than the four small knobs on this panel.

There is a GREAT discussion group for

missileers. You don't have to be hanging on your computer all day to participate. You post your comment or question. Your input goes immediately onto the discussion group board. Then others with experience in Atlas, Titan II and Minuteman add to your comments over the next couple of days. So far we don't have anyone with Titan I experience. Getting to our discussion group takes a couple of steps. Go to Siloworld at [www.lostboy.com](http://www.lostboy.com), select "links" from Siloworld. Select the link to Mike Currin, then "Enter the Silo". You will find a selection for "The Discussion Group". Four old Atlas F vets, one Atlas D guy, one with a wealth of information from Atlas, and a couple of Minuteman folks from the early sixties will be the main participants. *Bill Huey, member A0376, Montgomery, AL*

**Titan II Site** One of our AF Missileers is hard at it and doing a great job. Take a look at John Womacks Web Site and the book he wrote about the Titan II "Titan Tales" - address is [home.earthlink.net/~pathways/](http://home.earthlink.net/~pathways/). *Walter Kundis, member A0640, Milani Town, HI*

## Taps for Missileers

Col (Ret) Donald H. Sherman, member A0902, died in August. He served as a Titan II Combat Crew Commander at Davis Monthan AFB in the early 1960's, as a Squadron Commander at the 390SMW and at the Ballistic Missile Office, Norton AFB. He lived in Redlands, CA.

Col (Ret) George F. Bennett of Horseshoe Bay, TX, was Vice Wing Commander of 90SMW at Warren and Wing Commander of the 44SMW at Ellsworth.

Maj (Ret) Lee Hudson, member A0152, died in August. He served in the 321SMW, the 351SMW and at SAC Headquarters.

Everett Hadley was involved in the design of Atlas, Titan and Thor Guidance. He spent over 28 years at Norton AFB, CA.

**Missile Heritage Fund** AAFM grants to museums continue to grow, thanks to the generosity of our members. Contribute and receive an AAFM memento to recognize your donation.

**\$5** - choose an AAFM lapel pin, AAFM patch, Subterranean Sentinels Patch, Bill McKee's "Missile Business Cartoon" Book, Bob Wycoff's poems ("Missileer") or 1993-1994 newsletter reprints.

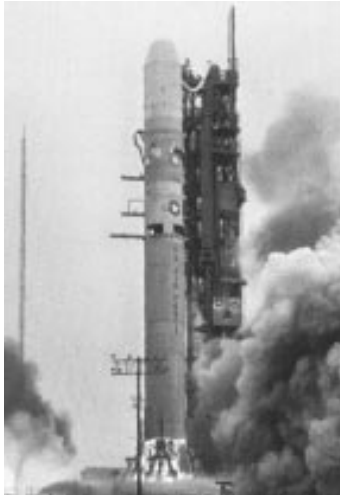
**\$8** - choose an engraved AAFM ball point pen, AAFM mug, mug honoring the anniversaries of AFSPC (10), the competition (30) and the USAF (50), 1995-97 Newsletter reprints or Greg Ogletree's "History of the Missile Badge"

**\$10** - choose an AAFM golf cap, 1998 Guardian Challenge AAFM coin, 321OSS Patch or AAFM Desk Clock.

**\$20** - the 44th Missile Wing Commemorative Book.

**\$60** - USAF 50th Anniversary Book

Mail your check to AAFM, Box 5693, Breckenridge, CO 80424.



QuikScat Launch (Lockheed Martin Photo)

**QuikScat** (cont) - from its circular, near-polar orbit 500 miles above the earth. The cost of the QuikScat mission was \$93 million. NASA's Goddard Space Flight Center, Greenbelt, MD, managed development of the satellite, which was designed and built by Ball Aerospace and Technologies Corp in Boulder, CO. QuikScat is managed for NASA's Office of Earth Science by JPL. Astronautics provided the booster under contract to the USAF. Astronautics and the Air Force provide launch services to JPL and NASA.

This was the eighth consecutive successful launch of a Titan II space launch vehicle and the first since May 13, 1998. As intercontinental ballistic missiles (ICBMs), Titan IIs served as key elements of the nation's strategic deterrence for more than two decades. Titan IIs also launched 10 manned and two unmanned missions for NASA and the Gemini program in the 1960s. The Titan II launched is one of 14 former ICBMs Astronautics refurbished for space launches.

**On Target** - by W. F. (Rob) Roberson, member A1471, Bellevue, WA.

The Titan 1 site was at the far reaches of the Columbia Basin project in central Washington, some 45 miles SW of Larson AFB in a depression between two ridges, Frenchman's Hill to the north and the Saddle Mountains to the south. To the west is the Columbia River and to the East rolling farm land.

After a long night working underground I remember going topside to catch some fresh air. As I

stepped out into the cool morning a movement caught my eye. Something off on the far horizon. For a few moments I am unsure. Then there it was, a B-52 bearing down on the missile site at 1000 to 1500 feet. Standing there in the early pre-dawn light I was mesmerized by the oncoming silhouette. As it closes in it is getting lower and lower, heading directly at the missile site. A quarter of a mile out and at just a squeak higher than the power lines, closing faster now, following the terrain and still centered on my location. Now an 1/8 of a mile and still on course for the missile site, there is movement under the aircraft...The Bomb Bay doors are opening!!!

I am sure that for one split second I could see a smile come over the faces of the pilot and copilot. The thunder and smell of the jet engines working at full power to keep the war bird in the air. As the aircraft passes exactly overhead the entire bomb bay can be inspected in detail, Zinc Chromate, Serial numbers, Safety wire and all. Now the black exhaust settles to earth as the aircraft makes a tight nose high climbing left turn to the north. The right wing almost at a 45 degree angle to the earth and all the engines screaming to answer the pilots' commands...

Almost 40 years have passed and still the recollection is there. I can still almost taste the jet exhaust and feel the shaking of the earth. It may not have been anything more than an exercise to the crew of the BUFF, but to this 19 year old Airman it was a grand show and now an even better memory.

B-52 Overflying a Titan I site at Beale





Titan II Warhead emplacement

## Three Titan II Crew Tales - by Mark

Clark, Former Senior DMCCC, 373 SMS, member L173. Mark lives in Louisville, KY

### The Farmer

As Titan II deactivation was winding down at Little Rock AFB, it became more rare to pull alert at a site that actually still had a missile in its silo. One fine summer day in late 1986 saw my crew heading back to base after a rather boring alert. As we closed the gate and began to drive back down the access road to the main highway, the farmer whose field our site was located on flagged us down.

Thinking he might have an emergency, we immediately pulled over and asked what we could do to help. What followed was an exchange I will remember for the rest of my life!

"Thank you boys for stoppin', I'd like to ask you a question" he drawled, the Arkansas accent thick in the air. "How can we help you, sir?" asked my crew commander. "Well, there's a question I've had on my mind for some time now, but just never had the time to ask any of y'all, and now seems like a purty good time, seem' as how y'all are getting' rid of all these missile silos."

"Yes sir, what would you like to know?" said my MCCC. "Well, I've been watchin' you fellas out here for almost twenty-five years it seems, and there's somethin' I just don't understand. How come y'all's time here is so short?" We weren't quite sure what the farmer meant, so we asked him for a little more detail. "What do you mean short, sir? We come out on alert for 24 hours, give or take

an hour or so."

"No, ya don't! I've been watchin' ya for 25 years! Ya come in, drive around and park your truck, wander around for a few minutes, put some bags in that elevator ya got, then go down underground. You're there for about an hour or so, then the elevator pops back up, ya throw your bags back into the truck and go like crazy back down the road!"

At that point, it became nearly impossible to hold back the laughter, so we tearfully thanked him for his concern and drove back to LRAFB. I could only WISH alerts were that simple!

### The New Lieutenant

When I graduated from the Titan II course at Vandenberg in early 1984, I supposed I must have been the "typical lieutenant" - full of excitement and wonder at the arcane world of missiles, ready to go out and be the best deputy I could be. Sometimes, the phrase "attention to detail," which DOV used all too frequently, really gets up and bites you, just as it did to me on one particular alert.

In the Summer of 1984, tensions between the US and the USSR were running higher than usual. Soviet missile subs were playing many games off the northeast coast of the US, and that tended to make the folks at HQ SAC rather nervous, given the large number of tankers and bombers at Pease, Plattsburgh, and Loring AFBs. As we sat through interminable pre-departure briefings, we were always given a slide on SLBM warning times. An estimate, who knew how accurate, of how long it would take an SLBM launched from a Soviet sub hovering just

Titan II Crew

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**Three Titan Tales** (*cont*) - outside the international 12-mile limit off our coast, to reach sunny Kansas and eliminate us from the SIOP. These times seemed mighty short to me, and made me more than a little nervous about the possibilities of a crazy sub commander doing the unthinkable.

With that in mind, I was a close student of EWO message traffic on alert, and responded eagerly to messages. I had been in the trainer enough times to understand thoroughly that there were lots of messages that we could ignore, but "the devil was in the details," as they say. One night, after I had been on crew for about three weeks, the message traffic seemed very heavy. All of a sudden, here it came - a message directing a higher alert posture and action! My heart pounded in my chest as I decoded the message a second time to make sure I knew what it said. "Ohmygosh!" I blurted out, startling the MFT, who was engrossed in the television. "I've gotta go wake the commander!" I shouted, and rushed past him as I went up the stairs to the bedroom.

I threw open the door with a bang, and found the sleeping form of my commander. Shaking his shoulders, I yelled at him to wake up. He cocked one eye open, and sleepily yawned, saying "What the heck is the problem, Dep? I'm trying to sleep here..." I thrust the message at him, saying "It's a real important message, boss! Get up, we've got things to do! Real EWO stuff, let's go!" Sitting up, he took the message from my hands and took a long look at it. He asked me just what it decoded to, and I told him. He then asked me if I was sure that WE needed to do anything about it. Confidently, full of that "I done good" pride that young 2Lt's seem to exude, I said yes, and that we needed to process the checklist right away.

Looking at me, he circled the top part of the message with his fingers, and asked me if I saw anything that didn't look quite right. I answered no, then the light sloooooowly dawned... there, in bold OCR type, was the phrase "For Pease, Plattsburgh, and Loring, message follows..." I took the message and backed out of the room, closing the door behind me. I couldn't believe I had done that! He didn't say much the next morning, but paid me back with the same trick two alerts later. Ah, the lessons a young lieutenant must learn!

### The Visitors

As Titan II deactivation grew to a close at McConnell AFB, we had gotten used to all sorts of

strange sights, people, and phone calls at both active and deactivating complexes. I never realized we were thought of as a "tourist attraction" until this happened.

My crew and I had just arrived at our home site, 532-6, deep in the Kansas heartland. We were getting ready to start deactivation that week, but were still fully on alert and conducting business as usual. My commander had left the vehicle to call the LCC, and the rest of us were stretching our legs, when out of the blue a vehicle came barreling down the access road. Not expecting a surprise visit from DOV, we were curious to see who was joining us that morning.

Imagine our surprise when the "typical family station wagon", straight out of the 1960s, pulled up. A bright blue Ford wagon with fake wood grain on the sides, it could have come out of any 60s family sitcom. As it pulled to a stop about twenty feet from our blue goose, the driver stepped out, and what a sight she was!

I guess Capri pants hadn't quite gone out of style yet in early 1986, because she had on the brightest pair of pink ones I had ever seen. Capping the ensemble was a floral print blouse, sunglasses, huge curlers and a scarf holding it all together. As she stepped out of the car, her husband joined her, and he too was something to see. Bright plaid shirt, tan shorts, black knee socks and sandals made him something that would kill Calvin Klein on sight. He let out a breath and yelled 'Hooee, ain't that somethin'!"

As we recovered and tried to make sense of all this, "Mom" spoke up. "Hey! Is this the Air Force secret missile site? You must be the boys that run this place! Wow! The folks back at the cafe told us it was here, but I've never seen anything like this in my life! Can we come in and have a look around?"

My commander finally gathered his wits and asked for an explanation. "Pop" told him that the friendly folks at the cafe, about two miles down the road, had told them that we were taking down the old missile sites, and that they might be able to come take a peek if they hurried to catch us!

Needless to say, our MCCC sent them packing, politely but firmly. We had a security team coming to join us that day, and we wondered what would happen if we allowed them to be caught, but decided that discretion was indeed the better part of valor, best to just press on...

I spent several more years in missiles after this incident, but never saw anything else quite like it!

## The Dawn Patrol - by Rob Roberson, member

A1471, Bellevue, WA.

A time long ago.... (spring 1916)....The fields of France..... The dawn breaks on the western front... As has been done so often in the last few months they walk out to their trusted air machine to fly once more into the face of the enemy.... Dressed against the cold, fur lined leather helmets, gloves and coats, their guns well oiled and fully loaded... a fast adjustment of the white flying scarf and off they go to once again hunt down the Hun...

Forward now into a later time.... (spring 1966)...The fields of Kansas.. The dawn now breaks over the 381ST missile hanger...Three intrepid airmen (Strickland, Ackenhausen, Roberson) from the propulsion shop now adjust their black cloth hats, and fatigue shirts awaiting just the right moment for take off...(being stared at by Sergeant Hack usually works)..... The guns (Daisy pump action ) are once more well oiled and fully loaded... And as Ackenhausen hums the Air Force song the others climb the ladder to the upper reaches..... to ride once more their flying machine (the overhead crane) to once again hunt down the Hun... The dawn pigeon patrol starts anew....



Titan II Launch Sequence



## Titan II Crew Duty - by Craig C. Henschen,

member A1038, who served at McConnell 1972 -1976. Craig lives in Alliance, OH.

### On Alert, Keys Inserted

I was a DMCCC on my first crew in the 532SMS at McConnell AFB Kansas . In mid 1973, sometime after they had installed carpet and TVs on level two, we were on alert. I was up with one of the enlisted crew members on level two. It was around midnight when we

got the PAS warble tone and a message came in that required decoding. We both copied and decoded a message that put us at SAC's highest readiness. For a missile crew it called for EWO documents out and keys inserted. For the bombers, it would have put them at the end of the runway, awaiting takeoff.

We got the MCCC up, he double checked everything, and did not believe us. He called a buddy at another complex and asked if they got what we got...they had. Everyone was trying to call the command post and they told us to hold all calls. We were not aware of any particular world tensions, except we were in the height of the cold war. Could this be the "bolt from the blue??" . Usually there was a good deal of routine traffic over the PAS. It was silent for about 20-30 minutes. All of our training told us the next message would be the launch message. There were many thoughts going on at the time...do you call home and tell your wife???....when we get "hit" will it be over fast or will we be buried alive under radioactive rubble??? We turned on the TV to see if there were any special reports, but the Tonight show was still on and nothing special seemed to be happening. After what seemed like an eternity, the warble tone came over the PAS again....I think we all prayed .....the message was decoded and it brought us back down to our normal alert posture.

As far as I am concerned we never got a good explanation of what happened that night. From the official and unofficial explanation it was because of an surprise Soviet test shot combined with some of our early warning systems being down.

### Launch Enabled?

It was known among crews of the late 1960's and early 1970's who desired to study their "system knowledge" that it would be far too easy to launch. There was no real safeguard except for the crew reliability. This was before the butterfly valve lock system installation in the mid 1970's. Prior to that there was the LES or launch enable system.

With the LES, when a real launch command came, both the Command Post and the alternate command post had to send an enable signal to the sites in order for the launch sequence to go forward. If a site tried to launch without the enable, the launch sequence would shut down or go on hold. The LES system operated

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**Titan Crew Duty** (cont) - on AC power, so as long as the site had either commercial AC or the generator going the system worked fine.

The Titan II system was able to launch on battery power alone. Most crew members will recall that if all AC failed at the complex the command post would lose the LES signal and would call for both officers to be on level two, presumably for additional security.

The danger came in that there was a circuit breaker on level three that if turned off would put the complex on battery power, thus bypassing the LES. If two people (or maybe one if they could figure a way to turn both keys) at the site had wanted to start WWII.... well it is/was a scary thought. Thank goodness we had good people and the personal reliability system worked until the Air Force came along with the coded switch system (the butterfly lock).

#### Titan II Launch



## 791MXS at Grand Forks Closes -

by Airman Jason Lake 319th Air Refueling Wing Public Affairs (a USAF News Release)

After receiving the order almost one year ago to begin dismantling the 321st Missile Group, members of the

791st Maintenance Squadron say the process is nearly complete. "The dismantling process for the missile facilities is going very well," said TSgt Stewart Reynolds, missile site supervisor. "As of right now, we are nine months ahead of schedule." The deadline for completely dismantling the 100 missile launch facilities and the 10 alert facilities is set for September 2001, but Reynolds said the project should be completed much sooner. "Because we are running nine months ahead of

schedule, we hope to complete the dismantling process by January or February, but that depends on how harsh the winter weather is this year," said Reynolds.

Besides running ahead of schedule, Reynolds said the safety record of the dismantling team has been flawless due to job experience. "Everything has been running very smooth, and that's because most of the dismantling teams are seasoned technicians," Reynolds said. "Our safety record is perfect, and there haven't been any injuries during the process."

TSgt Dan Akers, logistics operations section noncommissioned officer-in-charge, said two separate teams of technicians from the 791MXS do the dismantling. "Team one comes in first and removes hazardous materials like the silicon from the missile suspension system, umbilicals that were attached to the missile, and the lockpin to the closure door of the missile facility," Akers said.

When the first team finishes, the second team comes in a few weeks later to remove oil from the diesels and air conditioner, freon from the air conditioner and any electrical filters that may contain hazardous waste, Akers said. Removing hazardous waste from the area is a top concern for the two teams dismantling the silos and alert facilities, he said. "The number one priority of the teams is to take out all of the hazardous waste and materials that can damage the environment," said Akers. "We want to make sure the area is safe before we hand it over to civil engineering." After the second team finishes cleaning out all the hazardous waste from dismantling various machines, they go through a list of items to save for reuse at other sites, Akers said.

When all the items to be saved have been removed from the site, the civil engineers and quality assurance technicians ensure that all tasks are finished with the site. "The last step of the process is the shutdown of the 10 missile alert facilities, which alerts us if there is a problem with any of the missile launch facilities," Akers said. "Every 10 missile launch facilities are connected to a single missile alert facility that monitors activity at each launch facility. "Some of the problems that can occur at the launch facilities are sump pump failures, which means the missile launch facility floods with water," he said. "Commercial power failures may also be a problem and the security of the site is also monitored by the missile alert facility."

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**791MXS** (cont) - Once the launch facility is ready for demolition, the missile alert facilities will be shut down, dismantled and demolished, Akers said. Currently, 48 of the 100 launch facilities are dismantled and the remaining 52 are being dismantled. "All 10 missile alert facilities are still operational, but they are in the final stages of being dismantled," Akers said. After working on the missile sites here for 17 years, Reynolds said the dismantling process is strange to him.

"It's kind of weird to see us tear these apart after 17 years," Reynolds said. "These facilities have been operating 24 hours a day, seven days a week since the early 60s. Now they are being shut down permanently."

### MMIII Guidance Replacement

*from the Air Force Space Command News Service*

Maj. Gen. Thomas Neary, 20AF commander, certified the first new guidance system installed in the Minuteman III. The Guidance Replacement Program replaces the 35-year-old technology currently used in the weapon system.

"The need for a strong nuclear deterrence has not disappeared with the end of the Cold War," said 341SW Commander Col Greg Pavlovich. "We are modernizing our ICBMs to maintain their reliability and keep them on alert so they can continue to form part of the backbone of our national defense well into the 21st century." The acquisition cost of the program is approximately \$2.4 billion, and the program will last between eight and 11 years.

### March Minuteman Moved - thanks to

*Bill Gavitt, member A0157 and Paul Trainor, member A0572. Both are involved with the March Museum.*

On July 15, 1999 a small gathering of volunteers at the March Field Air Museum held a dedication ceremony for the completed restoration of a Minuteman II missile. The white-painted missile had been standing for over 20 years along the main road of March Air Force Base. Since that property was part of the base that is being converted to civilian use, the missile had to be moved. With \$3,000 was donated by the AAFM, and another \$15,000 from museum funds, the missile was moved to the Museum. A black granite plaque was placed on a pedestal near the missile with the words "Minuteman II, dedicated to all Missileers and Cold War Victors" .



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