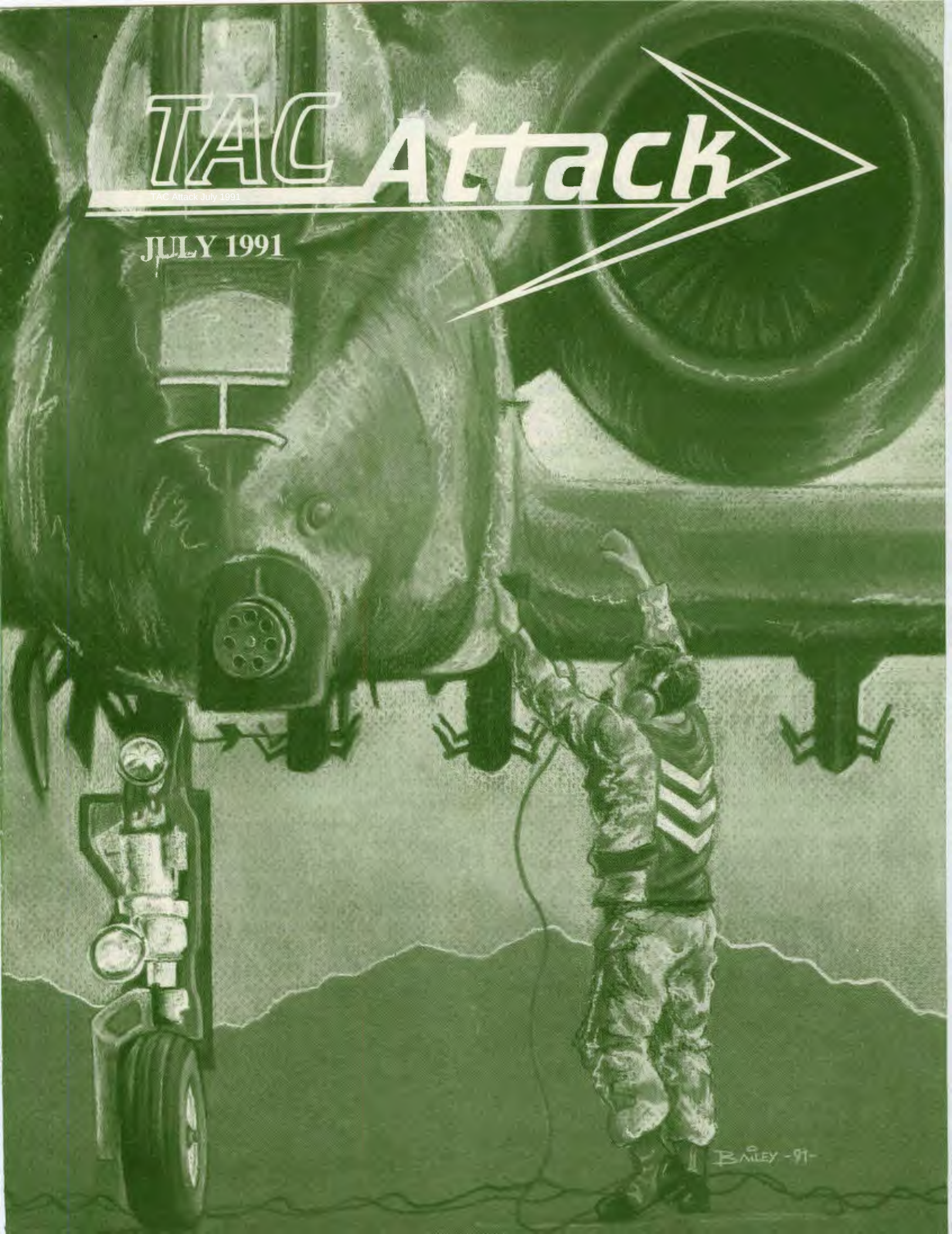

TAC Attack
TAC Attack July 1991
JULY 1991
BAILEY -91-

ANGLE OF ATTACK

GOOD LUCK. FLY SAFE. What meanings do these often used phrases have for us? My Random House College Dictionary tells me that **LUCK** is a combination of circumstances, events, etc., operating by chance to bring good or ill to a person. While **SAFE** is defined as free from hurt, injury, danger or risk, I say that we make our own **LUCK** through controlling the process that surrounds circumstances, events, etc. That changes chance from an unpredictable outcome to the predictable and changes the danger and risk in **SAFE** to a minimum.

What makes the difference between the unpredictable and the predictable and the minimizing of risk and danger is **DISCIPLINE.**

My definition of **DISCIPLINE** is a simple one; namely that **DISCIPLINE** is nothing more than a process of applying common sense. Common sense is nothing more than knowing right from wrong. Certainly everyone in an Air Force uniform knows right from wrong. Saying it another way, knowing right from wrong (common sense) and applying it equates to discipline.

The key word is to apply. If you don't consciously apply common sense while flying or supporting those who do, then you, in fact, will follow the book's definition of **LUCK** and leave things to chance. The process will allow an increase in the danger and risk levels associated with your flying or other duties.

There is plenty of guidance out there to provide us with the means for knowing right from wrong. Starting from UPT, there are basic flying rules and knowledge about regulations, weather, instruments, etc., that we are expected to carry with us and apply throughout our flying careers. Then there is the dash one, the 55-series, training rules, Chapter 8, etc., all of which provide guidance as to what is right and acceptable and what is not (common sense). Finally, there are the undefinable boundaries that call for additional discipline to cope with. How low **should** I go versus how low am I permitted to fly? How low should my wingman fly? How slow is slow in relation to the other jet; how much training, basic or tactical, am I gaining at slow speed or high AOA? The list goes on and on.

Whether flying, working in the squadron, driving or playing, if our hair is bristling on the back of our necks, or our stomachs are in a knot or we're "puckering," then we're most likely pressing the limit of our body, our machine, or some guidance. **DISCIPLINE** (the application of common sense) will back us off to a more comfortable, realistic level of operation; and we will be operating at an acceptable level of risk.

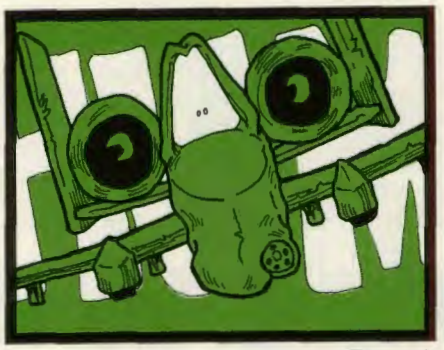
Remember, you cannot put ten pounds in a five pound bag; the bag will break or it will overflow; either way, it's called an accident. Put four pounds in the bag and give yourself room for options. Discipline gives you that room.

I want to say goodbye to Col Terry Markle, the Chief of the Flight Safety Division, and to Lt Col Hap Tucker, the editor of **TAC Attack**. Thanks to both of you for your outstanding contributions.

RICHARD C. BETHUREM
Brig Gen, USAF
DCS, Inspections, Safety and Security

TAC Attack

DEPARTMENT OF THE AIR FORCE



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DEPARTMENTS

AWARDS

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There I was

Capt Jim "Mongo" Harris
355 TTW/SEF
Davis-Monthan AFB AZ

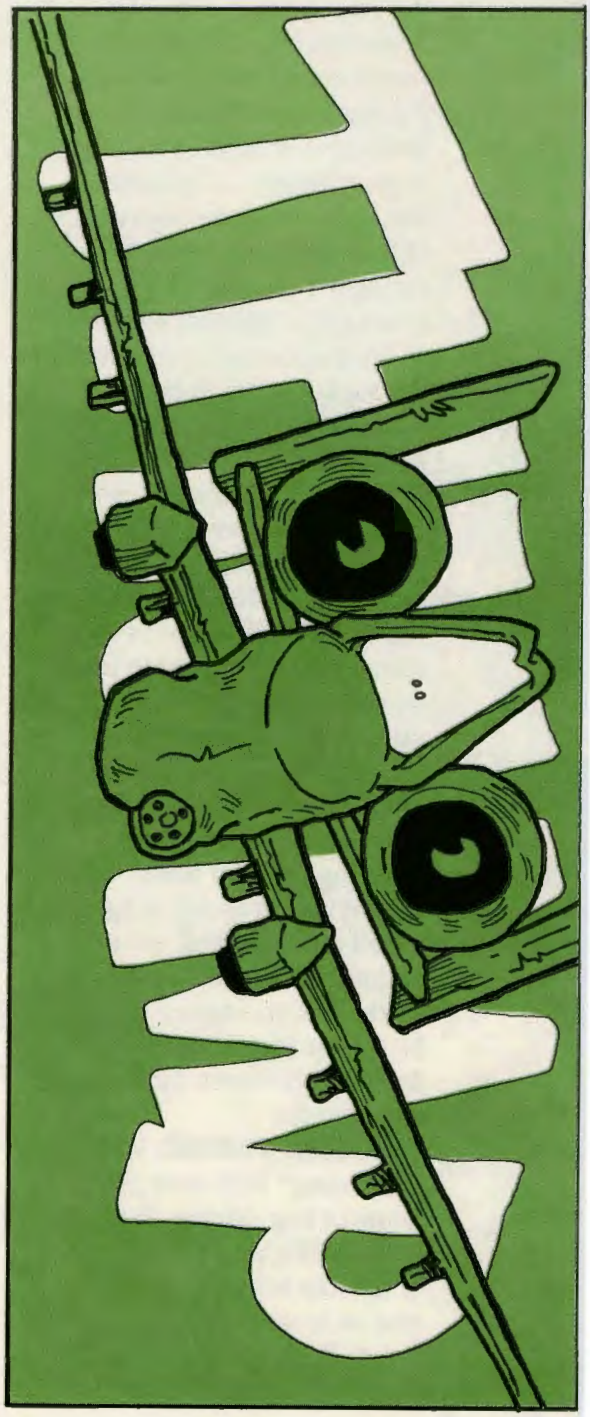
They told me it was going to be a simple flight...

A call from the Functional Check Flight (FCF) section broke up the monotony of yet another day in the office. They needed me for a "quickie" FCF; it was to be a sprint (as fast as a hog can sprint) to the MOA for a check of the manual reversion system (backup flight control mode), then RTB for a max braking landing to check the anti-skid system. Sounded fair enough; about a 40-minute flight, compared to the normal 2-hour FCF profile. Easy on both the buns and the bladder.

The jet failed the previous FCF due to a severe negative "G" pitch down when manual reversion was selected. Not too much of a problem though; maintenance usually tweaks whatever needs to be tweaked to give a smooth transition for the next flight.

Transitioning to manual reversion is quite simple. When the flight control mode switch is repositioned from "NORM" to "MAN REVERSION," hydraulic pressure is cut off to the flight controls. Stick inputs are transferred to trim tabs on the flight control surfaces by the old bellcrank and pulley method. The displacement of the tab, in turn, displaces the control surface, allowing the pilot to fly the jet. To get an idea of how this feels, jump in your car and drive down the highway. Just as you're exiting the highway doing 65 MPH on that 270 degree off-ramp that has a posted limit of 25 MPH, shut off the engine. Trying to control an automobile equipped with power steering/brakes with the ignition off is similar to flying a hog in manual reversion. Yet I digress...

ROUND ONE: So **THERE I WAS . . .** FL 180 (13,500' AGL), flipping the flight control switch into manual reversion. As I grit my teeth and readied for the impending pitch up or down, I felt nothing but the familiar "thump" of the hydraulics shutting off and the trim tabs taking over. Smooth transition ... beautiful ... I promised never to badmouth maintenance again. A couple of easy lazy eights and I could transition back to normal flight and go home. Not so fast.. On the bottom half of the lazy eight (10 degrees nose-low, 25 degrees left bank) I felt that familiar "thump." Huh? Make that HUH? A quick scan confirmed the flight control switch still in "MAN REVERSION," yet I had an uncommanded partial



restoration of the hydraulics (left hyd 2000 psi, right hyd 3200 psi). I flipped the flight control switch back to "NORM." Using right rudder to roll wings level and aft stick to recover from the dive, I got the nose back above the horizon. One of the peculiarities of manual reversion is that when transitioning into or out of it, the stick cannot be displaced sideways (no aileron inputs) for approximately 14 seconds, or the ailerons can be messed up. My rudder input, being a bit excessive, caused the jet to continue to roll past wings level; so after counting to 14, I moved the stick left to roll back to wings level.

ROUND TWO: NOTHING HAPPENED. Stick left, no roll . . . stick right, no roll . . . I don't recall just how quickly my head swiveled left to right to left to right, staring at these two huge ailerons that refused to move. I do recall several seconds of utter disbelief where I was probably incapable of doing anything useful; "frozen" would describe it pretty well. Re-entering the real world, I used the feet again to roll wings level, called a knock-it-off, set max endurance AOA and got to work. Max endurance gave me a little over four hours until flameout. So much for the buns and bladder.

ROUND THREE: What did I do wrong? With over 1500 hours of hog driving, four years flying FCFs, and reading stacks of mishap reports, I still had no clue as to what happened. When the A-10 breaks, it's usually something concrete. This jet has none of the queertrons or mystery IFEs that plague the pretty gray planes that fly at Mach 1.2, 40,000 feet in the sky. It's an honest aircraft; when it breaks, it usually yells at you. The Dash-1 checklist does contain guidance on roll control problems when transitioning into or out of manual reversion, but I didn't initiate the transition; the jet did it on its own. Gauge by gauge, I looked over each dial, wondering if I was missing something totally obvious. Impossible, since I am, pound-for-pound, the most powerful fighter pilot ever to grace the skies of the free world. Must be the jet. Still, it was time to bring in the cavalry.

ROUND FOUR: Fortunately, another FCF was on its way out to the area. Picking him up as a chase aircraft was invaluable. Another brain to pick plus a set of eyes to look me over. Stick forces were normal. Pitch and yaw response was normal. Side stick displacement resulted in the aileron tabs moving opposite stick throw, as they should in manual reversion; however, the tabs were not displacing the ailerons. From the position of the ailerons, the chase pilot felt they were under hydraulic power. On to the SOF. With a call to depot, the troubleshooting began. We discovered that there was no normal or emergency trim. The engineers were confident they had isolated the problem in the emergency flight control box, which contains the flight control mode switch. It also contains wiring for the trim, speedbrakes, and flaps; so they didn't want me using any of these items in flight. After a little over an hour of holding in the MOA, they concluded that nothing could be done to rectify the problem. It was time to move on to the next step.

After a little over an hour of holding in the MOA, they concluded that nothing could be done to rectify the problem.

ROUND FIVE: Could the beast be landed? Some said yes, some said no. At altitude it was pretty easy to control. Final approach altitude winds were a 15 knot right quartering headwind, with the surface winds near calm. After emergency extending the gear (due to partial left hydraulics) for the controllability check, the minimum airspeed at which the rudders provided adequate roll control was established at 180 KIAS, 50 KIAS above normal approach speed. One memory flashed into my noggin. About a year prior, I was in the simulator doing an annual FCF check. Finishing the profile early, I decided to try a few different types of approaches to see if I could land the plane with various systems inoperative. One of the approaches I flew was a no-stick approach using emergency trim for pitch control and rudders for roll control. Although I did "land" it, I probably pushed the struts

through the wings. But the jet flies a lot easier than the sim, right? Anyhow, various ideas were tossed around, from ejection to landing on the lake bed at Edwards AFB. Based on the favorable conditions (wind, runway length, and adequate control), I made the decision to attempt the landing at the home field.

ROUND SIX: Accomplishing the EJECTION PROCEDURES checklist is quite strange. Just in case. The approach was smooth until getting below 5000' AGL. Light turbulence that would go unnoticed any other day suddenly became a huge pain. Each required rudder input brought a slight yaw, then the desired roll. On short final, a thermal caused the left wing to drop about 30 degrees, but some heavy-duty footwork got it back up. I attempted a flare to get the airspeed down for touchdown, but runway behind you is runway lost, so I set it down. Speedbrakes were inoperative. No speedbrakes meant hot brakes, but I was on the ground. More important thoughts raced through my noggin, like . . . who can give me a ride to the BX so I can get some clean underwear?

HOWDITHAPPEN? A cannon plug on the bottom of the emergency flight control box failed. The hydraulic plunger, which shuts off the hydraulics in manual reversion, failed to the "NORM" position, returning hydraulic power to the flight control surface. However, with the loss of the electrical connection, the aileron tab shifters remained in the position they were at the time of the malfunction — connected to the aileron tabs. Side-stick displacement deflected the aileron tabs, but the aerodynamic load created by the tab was insufficient to overcome the 3000 psi holding the ailerons in the neutral position. Thus, useless ailerons, and no way to fix them.

LESSONS LEARNED:

1. Every now and then while sifting through the wreckage of a fatal crash, the ejection seat is found halfway up the rails due to a late ejection decision. I understand it now, at least I think I do. When I realized I had no roll control, I was shocked . . . my brain stopped functioning for just a few seconds while I absorbed the fact that I was in deep kimchi. I wasn't sure what my problem was or even the extent of my problem, but it was MY PROBLEM. I thought it so incredulous that THIS WAS HAPPENING TO ME that I stared at the gauges for a few seconds wondering what the . . . ? Low altitude flight takes away those few seconds of padding. If, after checking six for bandits, or noggin's down time for IP to target prep, you look up to see terra firma rushing at you through the HUD and there ain't squat you can do about it, don't admire the last few seconds of your soon-to-be final flight. Check out with the seat. Realize THIS CAN HAPPEN TO YOU, as it happens, on the average, to two or three hog drivers per year.
2. When strange stuff happens, get other opinions. Use chase aircraft and SOF/depot assistance. My chase was invaluable for pointing out details I couldn't or hadn't seen. The depot engineers were right on with their analysis; I was pretty impressed. Also, no need to rush back home to land. Take your time, analyze the raw data, then make an educated decision. Remember, IT IS YOUR DECISION.
3. Always stay ahead of the plan. While I knew what my intentions were (I want to land this beast), I didn't know where I could land it or even if I could land it. While burning circles in the air talking to the SOF, I was working fuel problems, calling metro for divert base winds, loading the INS for three areas, and reviewing ejection procedures.
4. I'm as guilty as the next guy of abusing sims or CPTs. They are a great opportunity to brush up on the basics and try new things. I've flown a lot of strange broken-jet approaches in the sim to include a rudder-only approach, never thinking it would happen in real life. Could Jean Dixon have predicted this?
5. Be prepared for anything . . . my 40 minute "piece of cake" FCF turned into one of the most challenging flights of my life.

Take your time, analyze the raw data, then make an educated decision. Remember, IT IS YOUR DECISION.

TRY HARDER AND HIS SWIMMING EXPERIENCE

Jimmy Campbell
HQ 1 AF/SE

The weather is really nice this time of year with warm days and cool evenings. Try Harder figured it was time to head out to that little pond on his friend's farm for some fishing — he'd been planning it all week. He would take along his dog, Buckshot, and ask his neighbor, Jim, to come also, provided he promised not to tell any of those boring stories.

Try put the top down on his 1966 Mustang convertible and loaded the trunk with fishing equipment. Buckshot jumped in the back seat beside a big cooler full of sodas and a few beers, along with a packed lunch. Try climbed behind the wheel and drove by to pick up Jim and his fishing tackle. They cut a flashy image as they headed for the country. Try was wearing his World War II flight cap with his World War I silk scarf wrapped around his neck and flapping in the breeze. Buckshot sat up in the seat and looked around with a wind-blown smile on his face.

They drove for about an hour before arriving. As they were parking about 50 yards from the pond, Buckshot saw a cottontail rabbit scurry across the path in front of them. He was so eager to chase it that he jumped out on the trunk lid of the car and left deep scratch marks in the paint as he dug for traction with his hind feet.

The pond was a small one, only about a hundred yards across. The near side had a

gentle slope with sandy beach area that was good for lying around in the sun. The opposite side was deeper with some trees and underbrush along the bank. Try knew from experience that the best fishing was over on the side where the water was deepest.

They sat down to have lunch on the sandy beach. Try turned up the music on the car radio, and they settled back to enjoy it while they ate. He popped the top on a beer and offered it to Jim. "No thanks," Jim said, "Someone has to be sober to drive us home." After lunch, Jim took his fishing tackle and walked around to the other side of the pond where he could do some serious fishing through the underbrush.

Try pulled off his shirt and sat back down on the sand bank. Man, did that warm sun feel good! He made a halfhearted attempt at fishing while drinking another beer. It wasn't long before he was asleep.

ARFF, ARFF! Try was awakened abruptly an hour later as Buckshot ran past, tripping over his feet. The dog hardly missed a step as he sped by. Buckshot came to a screeching halt in a cloud of dust next to a tree, about one hundred feet from where Try had been sitting. Try jumped up and ran over to where Buckshot was standing. **GRRRRAL!** The dog was looking at mother skunk in the eye with her four kittens in trail beside her. Try thought it would be neat to catch one of the kittens for a pet, so he wrapped his shirt around the closest one and started to pick it up.

Just then the mother skunk turned around and raised her tail while stretching her hind legs. **SSSSSS!** The skunk sprayed Buckshot in the face and hit Try in the chest. He dropped the kitten. **YELP, YELP!** Buckshot let out a howl as he and Try turned and ran for the pond hoping to get some of the smell washed off. After a few minutes in the water, they crawled back to the sand beach where Buckshot rolled in the sand and whined. Try sat down and had another beer while he thought about what had happened. He was really dumb for not keeping an eye on the mother skunk. But heck, he was probably going to hear a lecture from Jim about wild animals and rabies anyway.

TRY HARDER AND HIS SWIMMING EXPERIENCE

Jim looked out over the pond just in time to see Try's head go under the surface with his arms splashing in the water. Jim quickly looked around for something that would float. He couldn't find anything, so he dived in and swam out to Try.

After another beer, Try became aware that his shirtless back was really starting to hurt from the sun bearing down on it. But he knew how to make it feel better; he would do a little swimming. After all, he had been on the swim team while in high school. As he waded into the water, he thought, "WOW! does that cool water ever make my back feel better." He swam and played around in the water next to the beach for several minutes; then he decided to swim across the pond and sneak up on Jim. Maybe he could act like a monster and scare Jim a little. That would be the most fun he'd had all day.

Try wasn't doing very well as he swam across the pond. He had lost some of his old technique, was out of shape, and the beer was starting to take effect. But he had willpower. Besides, he had gone too far out to turn back. He was about three-fourths of the way across the pond when he developed a cramp in his leg. Man did it hurt, and he was just too tired to continue.

Jim was very busy trying to land a big bass when he heard a muffled sound. **Help, hel . . . , he . . . !** About the same time, Buckshot came racing up. **ARFF, ARFF!** Jim looked out over the pond just in time to see Try's head go under the surface with his arms splashing in the water. Jim quickly looked around for something that would float. He couldn't find anything, so he dived in and swam out to Try. Buckshot jumped in also. When Jim reached Try, he rolled him over on his back and pulled him back to shore. Buckshot swam back, crawled out of the water and shook himself off. Jim laid Try face down on the ground and started to administer artificial respiration.

COUGH, COUGH! Try choked and coughed enough to clear his breathing passage, so he could breath on his own. After a few minutes, he sat up. When he had regained some of his strength, he told Jim, "Thanks, I guess I overestimated my ability. If you hadn't been here, I wouldn't have made it."

Jim loaded their equipment into the Mustang, and Try climbed in the back seat where he could lean sideways and keep his sunburned back away from the seat. Buckshot, with his muddy paws and wet smelly coat, sat in the front seat wearing that windblown smile on his face again. As he drove away, Jim chuckled to himself and wondered how long it would take to get the skunk smell out of the car. >

Aircrew of Distinction Award

Captain Brian D. Dickerson, 48th Fighter Interceptor Squadron, Langley Air Force Base, Virginia, was on a basic fighter maneuvers mission in a left-hand turning engagement at 400 kts when his aircraft abruptly rolled and yawed to the right. He was able to recover the aircraft using opposite aileron and rudder, but any relaxation of the controls resulted in immediate roll and yaw to the right. A chase aircraft joined and confirmed that the right rudder was deflected outboard approximately halfway and did not respond to control movements. Capt Dickerson initiated a controllability check and determined that sufficient control was available to fly an 18 unit/165 kt approach (slightly shallower and faster than normal) and that an approach-end barrier engagement was warranted. Landing would also be complicated by an 18-20 kt crosswind. During the 60-mile recovery, the deflection of the right rudder increased to the point that full control deflection was required to maintain straight and level flight. Upon touchdown, the aircraft immediately started drifting to the right despite full left rudder. Capt Dickerson engaged the nosewheel steering to correct the drift and engaged the barrier successfully. The professional and timely actions of Capt Dickerson resulted in the recovery of a valuable USAF asset and earned him the TAC Aircrew of Distinction Award.

Captain Brian D. Dickerson
48 FIS
Langley AFB VA

"WE TRAIN THE WAY WE FIGHT" SAFETY TOO!

Maj Jonny J. Hepler
HQ TAC/ISEW

One of the real success stories of Operation DESERT SHIELD/DESERT STORM was "we train the way we fight!" Having participated in this extremely successful conflict at both the USCENTAF munitions staff level and as the squadron commander of the 4401st Munitions Maintenance Squadron (operating the largest USAF munitions depot in the theater), I had the opportunity to visit most of the air bases in the area of responsibility (AOR) and observe their munitions operations. It was extremely satisfying to see combat operations established using the tested and proven safety criteria IAW AFR 127-100.

Anyone who has been in munitions for any appreciable time has heard it said that "safety goes out the window when the war starts." That is a comment made by the uneducated and inexperienced individual. In fact, at **most** units the opposite was true!

Safety is a commander's responsibility. It is tasked at that level because of the importance of the program to mission accomplishment. It is directly related to mission success because it provides for the protection of resources needed to prosecute the war. We know it works and it was proven during Operation DESERT SHIELD/STORM. In one example a Hellfire missile malfunctioned and launched across the runway and into a stack of munitions stored on an open pad. The stack was destroyed; however, there was no propagation to other munitions because

Quantity Distance (QD) requirements were enforced IAW AFR 127-100. On the other hand, the Iraqi munitions personnel and their commanders did not pay attention to safety and QD separation criteria. They experienced a situation where one explosion destroyed an entire storage area. You may remember General Schwarzkopf's comments on an explosion in Iraq that "if on a scale of one to ten a ten was a volcano, this was a twelve" — that's what he was referring to!

Most of our weapons safety personnel were an integral part of the teams that set up bare bases and had more opportunities to interact with wing commanders than at their home units. They had an opportunity to help lay out flight line operations, aircraft parking, munitions storage areas and tent cities. To make this unusual situation more challenging, it was done within the constraints of host nation space allocations; it was also limited by existing facilities and constricted by an extremely short time line to be fully operational. Here again, most units set up their operations the way they had been trained and, as a matter of routine and established procedures, they met the safety requirements.

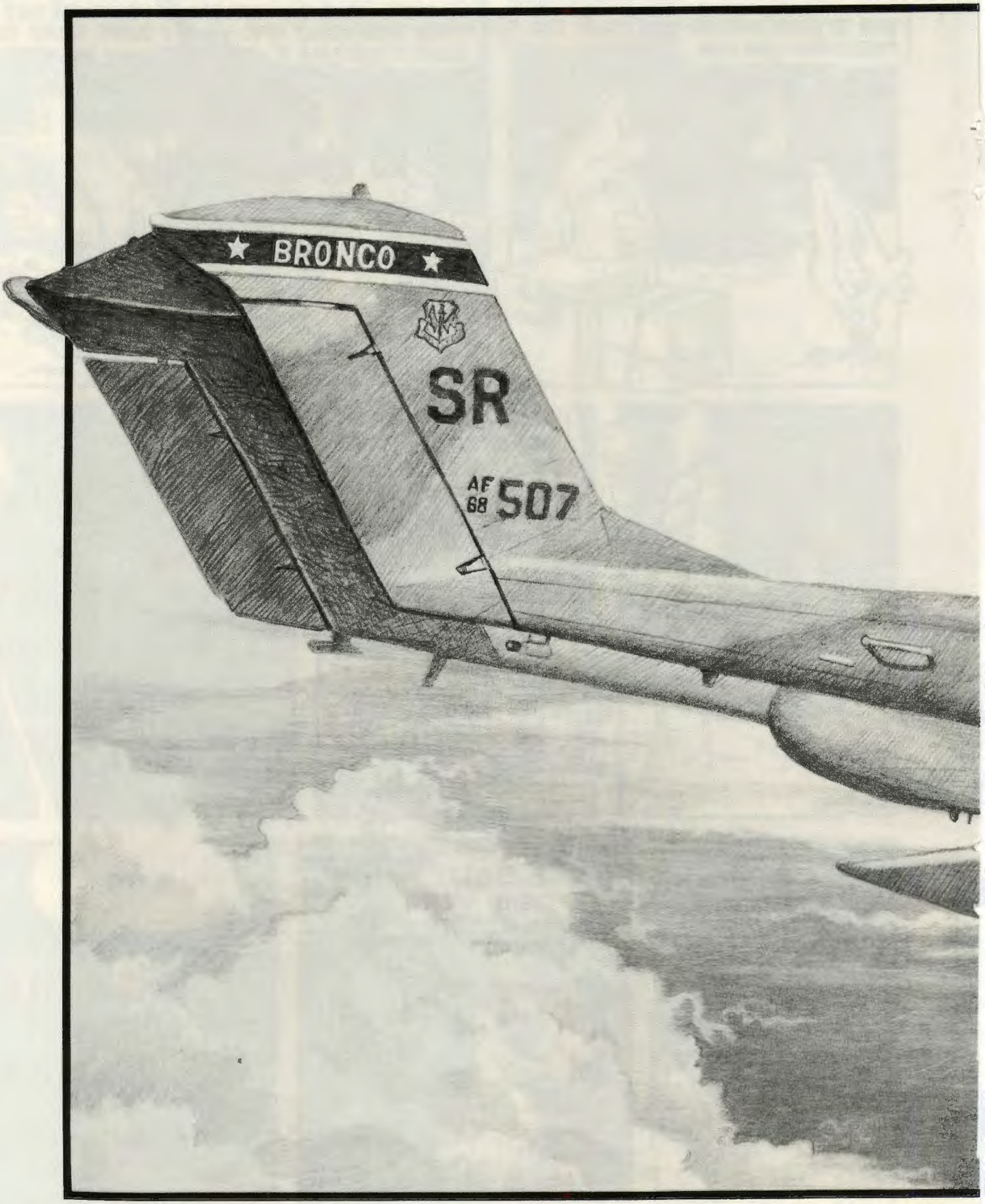
We all know that explosives are totally nondiscriminatory. They will kill or maim "good-guys" as well as "bad-guys" in any situation. An accident with explosives can be just as devastating as a planned attack. We handled well over 85 million tons of explosives (transporting, storaging, loading, build-up, inspection, etc.) during Operation DESERT SHIELD/STORM; we had only one Class B and four Class C explosive/missile mishaps, which means we were doing things right. Therefore, if we continue to "train the way we fight," we will continue to "fight the way we train." My hat is off to the personnel of the munitions community and the weapons safety personnel who participated in Operation DESERT SHIELD/STORM and to those same folks not in the AOR who supported those who were — **IT'S A JOB WELL DONE!**

Aircrew of Distinction Award

On 26 February 1991, Major Dennis M. Miller, 138th Tactical Fighter Squadron, 174th Tactical Fighter Wing, Hancock Field, New York, was leading a four-ship of F-16A Fighting Falcons on a close air support mission in support of Operation Desert Storm. Major Miller had come off his second strafing pass against tanks and ammo storage bunkers west of Kuwait when he saw a puff of smoke from an Iraqi surface to air missile (SAM). Major Miller quickly activated his chaff and flare dispenser and turned hard into the missile when he determined the missile was guiding on him. The missile exploded next to his right wingtip fragmenting the right wing and stabilator, the engine, and the fuselage right behind the canopy. Major Miller turned immediately for home base and signaled his wingman to join on him. His wingman confirmed the battle damage and noticed fuel was streaming from the aircraft. Major Miller was faced with the immediate decision of looking for a tanker or flying a minimum fuel profile to recover his battle damaged jet with the remaining fuel. Unsure of the total aircraft battle damage, Maj Miller elected to climb and expedite a recovery to home base. En route to base, his aircraft continued to lose fuel; but Maj Miller flew a flawless minimum fuel profile and landing. Once on the ground, a major fuel leak developed; so Major Miller quickly shut down his aircraft and egressed after initiating the appropriate emergency response. The preparation, quick actions, and sound judgment of Maj Miller saved a valuable combat asset and earned him the TAC Aircrew of Distinction Award.

Major Dennis M. Miller
138 TFS, 174 TFW
Hancock Fld NY


Fleagle
I HAS COME UP WITH A SAFE WAY TO SHOOT OFF MY FIREWORKS THIS YEAR.
HOW'S THAT?
TAYLOR AIR SERVICE
A LONG FUSE SO I'LL BE AWAY FROM TH' ROCKETS WHEN THEY BLAST OFF. WANT T' HELP ME?
COUNT ME OUT. I DON'T TRUST YOU.
WAREHOUSE
HARRISON
I'M GONNA BE ABLE TO LIGHT UP TH' SKY FROM A ZILLION MILES AWAY.
BREAK!
WIGGLE! WIGGLE! ROLL!
FLEAGLE, LIGHT YOUR...
© STAN HARRISON 1991
ROCKETS.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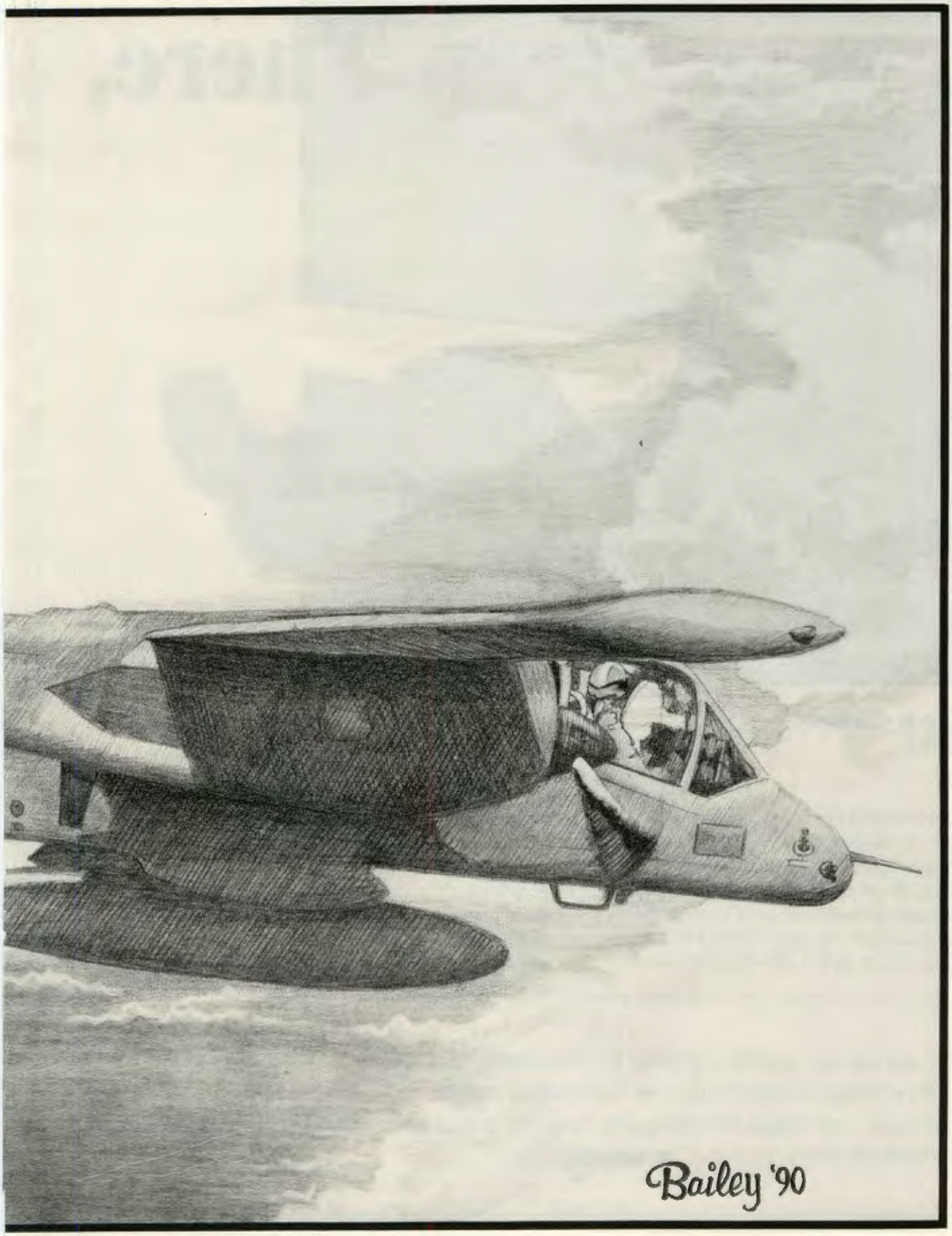
Bailey '90

Been There,

Major Ralph E. Gardner
HQ TAC/ISEF

How many times have fighter jocks sat around the bar or the duty desk and discussed a recent mishap? Having read the findings of the mishap board, do we understand what happened and how it might or might not have been avoided? How many times have we said, "Gosh, but for the grace of God, there go I"? Meaning, of course, that fighter aviation is as much a competition of inches as any NFL game on a fall Sunday afternoon. Yet another scenario might sound like "How stupid can you get? If I were his flight commander, I would have. . , etc."

We as supervisors have the responsibility of ensuring our charges are as ready as humanly possible for the myriad of challenges which face them on a daily basis in tactical aviation. If we fail our people, we also fail ourselves. For example, when we allow things to happen that we know

If we fail our people, we also fail ourselves. For example, when we allow things to happen that we know aren't exactly right, but are "close enough," we might be setting the stage for a sequence of events from which recovery may not be possible.

Done That

aren't exactly right, but are "close enough," we might be setting the stage for a sequence of events from which recovery may not be possible.

A well-liked junior captain was picked for a local upgrade in a new aircraft. He was a fairly meticulous and organized individual and, as such, was chosen to be the squadron safety officer. Although scheduled and conducted in accordance with appropriate directives, his transition to the new aircraft occurred at a time when the unit's manning was low and the tasking was high. Inevitably, some of the finer points of instruction were omitted or glossed over as our pilot seemingly breezed through his program.

A few trends, however, began to develop concerning his air-to-air capabilities in the new aircraft. He began to show a propensity for vertical maneuvering with less than desired energy, believing his new aircraft to be a "wonder jet" that could power its way out of anything. These trends manifested themselves more than once and were even documented in comments on gradesheets. Supervisors initialed his gradesheets, indicating they had read and understood all of the comments. Yet, our pilot was allowed to progress through his training as if no problems existed.

Upon successful completion of conversion training, he was ready for bigger challenges and was entered into local Instructor Pilot upgrade. As with his conversion training, all went well except for the continuing problems with energy management, judgment, and situational awareness in air-to-air. On one occasion, he attempted a vertical maneuver with insufficient energy, necessitating full concentration on recovering the aircraft. The recovery was performed to the exclusion of all else, resulting in his unknowingly entering a mature ACM engagement without a tally or visual and no "Blind" or "Knock-it-off" calls! Even though this situation was documented on his gradesheet, he was progressed with a "2".

Again supervisory review of the gradebook was accomplished with no specific comment about his seemingly continuing trend in energy management; he soon became a line IP in the squadron. It seemed all was going well until . . .

He was #1 of a two-ship continuation training BFM mission. Several perch engagements were flown without incident, except that #1 was having trouble maintaining energy on both his offensive and defensive sets. He clearly was frustrated by this situation. Number 1 then set-up for the briefed high aspect butterfly set up. After several high aspect passes, #1 was losing both nose position and energy. He elected to take it over the top, but did not have the required energy. He was forced to devote his entire attention to recovering the aircraft and lost sight of his wingman. Number 2 meanwhile misperceived #1's aspect and began an aggressive pitchback to bring ordnance to bear. After realizing #1's true aspect, #2 became confused as to just what his leader was doing, but did not terminate the engagement. With a mid-air collision now apparently inevitable, #2 rolled and pulled in a last ditch attempt to avoid a collision, but was unsuccessful. Number 1 collided with #2 and was fatally injured. Number 2 ejected from his out-of-control aircraft.

This entire sequence of events took some time to develop and may have been mitigated by some extenuating circumstances. Yet, the chain remained unbroken until the disastrous conclusion. Supervisory involvement at nearly any level prior to this could have prevented the tragedy. The junior captain's trends, while detected, went uncorrected and seemingly unnoticed by unit supervision. As supervisors, the people we "own" are our most important responsibility. When we see things that need action, we are obligated to act. Correcting problems at the lowest level will likely prevent larger problems and possible tragedies from occurring in the future.

CONVERSATION WITH AN

EAGLE

Maj Gen Chesley G. Peterson (USAF, Retired)

Reprinted from May 87 TAC Attack
Maj Don Rightmyer

Biography: Major General Chesley G. Peterson entered aviation training in 1939 and joined the Royal Air Force (RAF) in late 1940. He flew in the Battle of Britain and became the youngest squadron commander in the RAF when he assumed command of 71st Squadron, the first of the famed Eagle Squadrons. In 1942, he transferred to the U.S. Army Air Forces' 4th Fighter Group and became the youngest full colonel in the USAAF at the age of 23. During the war, he led the first combat sortie with the P-47's in Europe and flew over 200 combat missions with the USAAF and RAF. Following the war, General Peterson commanded the 137th Fighter Bomber Group, the 48th Tactical Fighter Wing and the 8th Tactical Fighter Wing. Before his retirement in 1970, General Peterson had logged over 6000 flying hours in such fighter aircraft as the Spitfire, P-47, F-80, F-86, F-100 and F-4.

CONVERSATION WITH AN EAGLE

TAC ATTACK: From your lengthy experience in both combat and peacetime, what do you think are the basic ingredients necessary to be a good fighter pilot?

PETERSON: You've got to absolutely desire to fly fighter-type airplanes. That's the first thing. You've got to believe in individual combativeness and a little bit of aggressiveness. You don't want to sit down and ride along on long stretches and take things cool and calm; it's all got to be in a rush. That's pretty well a typical fighter pilot.

TAC ATTACK: In James Saxon Childers' *War Eagles,* he talks about when you were commander of 71st Squadron. He mentions that you busied yourself between missions with preparations for the next sortie by reading the tactics reports that were provided. Can you discuss the kinds of things you tried to do in order to get ready for the next mission?

PETERSON: Any time you're leading more than a flight, you've got to think about the total overall mission. You just want to try and figure out what mistakes you made on your last mission and ensure that you can do better on the next one. The whole outfit, not just you, but the whole outfit.

Every mission was different. You had a different lesson learned. If you lived through it, well, by golly, you found out the reason why. I always had the feeling that if you didn't learn by your mistakes, then the whole outfit was going to suffer. I really think that, to a certain extent, it isn't all this hells, bells and glory thing all in one mission. It's a lot better to get a little bit less glory and live to fly ten or fifteen missions. Live to fly another day. Don't throw it all away on one. There's a lot of investment in a young wingman that you're responsible for. You don't want to put him in a position that he's not going to do the best that he can.

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TAC ATTACK: We want our people to fly realistic scenarios and a certain amount of aggressiveness and combativeness is necessary; however, we can't forget the overriding importance of living to fight the next fight.

PETERSON: That's right. You know, there's nothing more useless than a dead fighter pilot.

TAC ATTACK: Once you got airborne on a combat mission, what thoughts were uppermost in your mind in order to make sure that you were able to come back and fly another day?

PETERSON: Well, you've got to break it down into your flight position; whether you're a leader or a wingman, I think the most important thing is to ensure that you're in the proper position within the formation so that you can follow the leader's orders as he gives them.

If you are the leader, then you've got to be absolutely certain you had put your whole outfit in a position to attack the enemy. You certainly don't want to get in a spot where the enemy is going to have the advantage. Of course, that all depends on the weather, the sun, the speed and the type of airplane you're in. In my day, if you were in a Spitfire, you knew that you could always turn very rapidly and get out of trouble; but if you were in a P-47, you knew darn well you had to keep your speed up because you couldn't turn as fast. The F-4 in Vietnam was similar. You had a good speed advantage, but you couldn't quite turn with a MIG. In the F-100 or F-105, you didn't have quite the speed, but you could turn to a certain extent. So I think the main thing is just to look around the sky and see what's there. That's the big thing.

TAC ATTACK: Then you would say that it's very important for a pilot to know his aircraft; to know its capabilities as completely as possible.

PETERSON: Absolutely. As well as your own capabilities. Some guys

can see better than others. Some guys have a better feel for getting in a good position. I found that you always get shot down by the guy that you don't see. So you've just got to be real smart and stay out of the way and get help from your other people. That's the great thing. You're not just an individual there, you're part of a full formation. Everybody depends on each other.

TAC ATTACK: Your combat record was at least 9 confirmed kills and 9 more suspected or probable.

PETERSON: That's right.

TAC ATTACK: I'm sure it was different on each mission that you achieved a victory. What are some of the things you feel gave you a decisive advantage in those air combat experiences?

PETERSON: I think the biggest one was surprising the guy. That was really the key. It all came down to getting an advantage of altitude and speed that he couldn't cope with.

TAC ATTACK: You described your first victory as being fairly easy.

PETERSON: We'd had a bit of a melee and he rolled out right in front of me. He didn't have the faintest ideas that I was there. It was duck soup.

TAC ATTACK: Some of your other victories were not that easy?

PETERSON: They weren't, but that first one was a good confidence builder that helped get me going.

TAC ATTACK: What do you think is the importance of flight discipline?

PETERSON: Oh, it's absolutely imperative. You've got to follow your leader, that's all there is to it. It was drummed into us right from the very start—the wingman stays with his leader. If you do that, then you've got a good outfit and you're a vital part of it.

TAC ATTACK: So it's the very basis for a successful flying operation—good air discipline.

We'd had a bit of melee and he rolled out right in front of me. He didn't have the faintest idea that I was there. It was duck soup.

PETERSON: Yes, air discipline. Absolutely.

TAC ATTACK: We've experienced some problem with midairs during the last year. In the fighter community, you're usually flying with more than one airplane in a formation. How did you cope with that problem?

PETERSON: In the incidents I can think of, the midairs were caused by a lack of judgment. You've got to know your capability, and it takes both the wingman knowing where his leader is and the leader knowing where his wingman is.

I think a unit that's absolutely disciplined to the point where the wingman can stay with his leader, the flights can stay in position, the squadrons stay in position with the rest of it, no matter how tough the battle gets, you can still control it. I think probably the greatest fighter leader we ever had was Don

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Blakeslee who could take a hundred Mustangs and direct them all over Europe and, in the middle of battles, know where every one was. The 4th Fighter Group was a well disciplined outfit and they knew how to do it. They stayed together.

TAC ATTACK: What do you think were the qualities that made Blakeslee so capable? Was it something you could put your finger on?

PETERSON: Yeah, Don Blakeslee had trained his men to the point that he absolutely trusted them and knew that they could do the job. Because of that, he could afford not to worry about himself and be free to stand above the battle and direct. He was also a very capable pilot; absolutely marvelous. He knew how to do it.

TAC ATTACK: During the early years of your career you were the youngest squadron commander in the Royal Air Force and also the youngest colonel in the Army Air Forces at the age of 23.

PETERSON: Yes.

TAC ATTACK: Did you ever have the opportunity to serve in the lower leadership levels or did you jump to the squadron commander role right off?

PETERSON: No, I worked my way right up from pilot officer to section leader to flight leader and so forth.

TAC ATTACK: How does a squadron or flight commander go about getting the respect of his people, the fighter pilots in his unit, and leading them effectively?

PETERSON: Well, that's a pretty tough one. There's so many things in it. I think the first thing is that you've got to prove to them that you're never going to tell them to do something you wouldn't do yourself. That's the ultimate. They have to know that you'll always keep a cool and calm enough head and that you're not going to get them killed. I think the other part of it is to be confident enough in your own decisions that you can care less what somebody else says or thinks because you know you're going to be right. Several times I heard some mutterings in the background about "Well, the weather doesn't look too bad. I don't see why the old man scrubbed this one today." But I knew the weather wasn't good

enough for them to go, and so I scrubbed it. You've just got to know it, that's all. Don't put your people in a position where they're going to get in trouble. That's being a leader.

TAC ATTACK: One problem we have today is highly experienced pilots with several thousand flying hours having flying mishaps. When you look at their flying records, you think "This shouldn't happen." Did you have problems with people allowing themselves to be overloaded and losing sight of priorities? If so, how did you take care of it?

PETERSON: What I tried to do, as a squadron leader or group commander, was to do my best to keep their duties aligned to their primary duty of flying; even to the point of making somebody else do their duties. There's no sense in having a fighter pilot down inventorying the commissary or jobs like that. The flying job is just too important. That airplane and pilot are the primary mission and that's what he ought to be doing. You've got to do your best to ensure that the outfit knows what the primary mission is. It's absolutely imperative. You've got to be up on what you're doing all the time. And you've got to get flying time and have good training. You shouldn't have any extraneous problems, either official or unofficial, that would cause any pilot not to be at his best.

TAC ATTACK: What was your greatest challenge as a leader of fighter pilots?

PETERSON: Well, you don't necessarily have to be the best liked guy in the world. I think the greatest challenge of leadership is just to make sure that the guys you're leading know what the mission is, know that you're behind them all the time and that you are willing to do anything that is needed.

TAC ATTACK: Let's turn for a moment to the folks that worked with you. What sort of relationship did you try to establish and have with the crew chiefs and armorers, the guys that maintained and supported your flying and your aircraft?

That's a pet subject of mine. Absolutely, a team is a team. That goes down to the lowest airman that's working for you in any job.

PETERSON: That's a pet subject of mine. Absolutely, a team is a team. That goes right down to the lowest airman that's working for you in any job. Of course, I was raised in the crew chief system, I believe in it. I certainly understand that with the new equipment and technology that's come along, you have to ensure that you have a little more specialty. But the basic idea is that a pilot, an airplane and the crew that's crewing it, that's the team. You've got to ensure that they have empathy all the way with each other. There's nobody that I'd have greater affection for than my crew chief. There may even be some little specialist that isn't immediately available because he's off in one of the tech squadrons or something, but a pilot should get to know him just as well as he does his crew chief. I think that's a part of a pilot's business.

TAC ATTACK: So you feel like pilots should make it one of their priorities to go and spend some time on the flight-line and get to know those guys.

PETERSON: That's right. Absolutely. Take an hour or so, even on a day when you aren't going out to fly, and go get to know those guys.

TAC ATTACK: As you mentioned, your experiences ranged from being a new guy on up. What kinds of things did you try to teach a young guy when you took him out as your wingman?

PETERSON: I always tried to ensure that my wingman didn't have his eyes glued on me; that he also knew what the rest of the flight or squadron was supposed to be doing with the idea that in time, and during war it was somethimes an awful short time, he'd be leading and, therefore, he'd better know. I also made sure that he had a basic idea of all the tactics that had proven successful and that his training was complete. I didn't necessarily want his to be the finest marksman in the Air Force, but by golly, he'd better know how to shoot. He needed to know why you harmonized your guns in such and

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such a way and why you had to have your radar working just exactly right. I didn't want him jumping in the cockpit and saying, "Well, I'm sure it will work," because that's when you get in trouble. You've got to make sure it works. That's what your wingmen should know.

TAC ATTACK: What lessons did you learn from your combat experiences that you would care to share?

PETERSON: Well, I think that every pilot should have instilled in him a feeling of confidence that he can turn to his leader and say, "Boss, why don't we do it this way?" or "You put me in a bad position. I couldn't quite cope with it. Let's think about this." Don't be afraid to speak up. Every leader ought to recognize that this is a valuable learning experience. When you get to be leader, you've got to stand on your own two feet and tell your bosses up the line "Yeah, we can do this" or "No, we can't do that." Don't be put in a position where you would endanger your own people's lives, or careers or anything else. A leader is beholden to his men. I know that many times it's necessary for higher headquarters to say that you've got to do this or that. You've got to make them understand that there are some things that shouldn't be done or should be done in another way. That's very ticklish and there's a very fine line, but I think that's what a leader has to do. If you're successful at it, then you're a successful leader. If you're not, then you don't lead anymore or you lose people.

I remember one incident just after we got our P-47s. I called one of my top commanders and said, "The weather is bad and we can't take off." He said, "I order you to take off." I said, "I'm just not going to take off with the group (75 airplanes)." He gave me no choice. He said, "This is a direct order, you've go to do it." So I said fine. I marshalled the guys and I told them, "Now you wait until me and my wingman take off." When I got airborne and went into the weather at about 200 feet, I called back and said, "Scrub the mission." There wasn't anybody that could say anything about it because that's the leader prerogative. It shouldn't have to go that far. But you just don't endanger your people unnecessarily.

TAC ATTACK: Thank you, General Peterson, for sharing your thoughts with us.

PETERSON: Give my best to TAC. That's my old command, by golly. And it's a good command, it really is. It's really the best part of the Air Force, but you can't say that too loud.

TAC COMMANDER'S AWARD FOR FLIGHT SAFETY

The TAC Commander's Award for Flight Safety honors a numbered air force for promoting flight safety. Selection is based on the lowest command-controlled Class A and B flight mishap rate of active units in a fiscal year. First Air Force is the recipient of the **TAC Commander's Award for Flight Safety** for fiscal year 1990.

GETTING READY FOR SUMMER

MSgt Pete Cano
USAF TAWC/SEG
Eglin AFB FL

Yes, summer is just around the corner and with it brings the many activities coworkers, families and friends enjoy. It's quite a switch to be on the job one day and be on vacation the next. Sometimes, there's the temptation to do too much too soon. When we try and wring the last drops of enjoyment out of every situation, we may undercut the good times by overexerting ourselves.

The summer season is typically long, so there's plenty of time to enjoy it. We should plan our on and off-the-job activities and vacation plans accordingly. Here are a few tips for us to consider:

VACATION TRAVEL: More people will be taking leave during the summer. We must ensure that people who go on leave, PCS, or even TDY receive a special safety reminder. Topics such as pre-trip planning, seat belt use and the dangers of speed, fatigue and alcohol should be highlighted.

SUNBURNS: The sun gets very hot in the summer time. Watch your exposure time and use sunscreen lotions for added protection. A severe case of sunburn is a sure way to ruin your vacation.

WATER ACTIVITIES: Water activities such as boating, water skiing, swimming, fishing, scuba diving and snorkeling are very popular. Again, ensure our people know what they're doing and emphasize the dangers of mixing alcohol with these water activities.

SPORTS-RELATED ACTIVITIES: Most sports contain some element of danger, but proper preparation, warm-up and the right equipment can minimize the risk. Sports activities often involve a great deal of personal exertion, physical contact and quick decisions followed by fast action. Mishaps most often occur in the "heat of battle." If we try to go from couch potato to super star without some sort of conditioning program, there's a good chance we are going to hurt ourselves. Watch out for over-exuberance, over-exertion, and heat exhaustion/heat stroke and hyperthermia. Hyporthermia can be just as deadly on warm days, depending on the temperature of water and body age/conditioning.

Summer is a time for enjoyment, relaxation and fun. With a little bit of forethought, preplanning and common sense, it can be.

COMPLACENCY: THE HIDDEN MAINTENANCE FACTOR

Lt Col Richard Norton
114 TFTS/DCM
Klamath Falls OR

CHOCK TALK

As the Quality Assurance Chief and the head of Plans and Scheduling closed the door, the Chief of Maintenance looked up from the aircraft forms on his desk and exclaimed, "How do these aircraft forms and records get so messed up?"

Having been in aircraft maintenance for 34 years, I've heard this same phrase more often than I would like to admit; and if you've been around the flight line long, I'm sure you've heard it repeated. Although we have some of the most talented and professional people in the history of the Air Force, both in the active as well as the reserve components, we continue to see one area we can all improve. We find that area highlighted too often during mishap investigations, aircraft acceptance inspections, and even in routine work. Even our improved technology has not eliminated that ever present enemy "Complacency." Some examples which I've overheard are:

—The forms indicated the aircraft had been fully serviced with fuel; but when the pilot did his walk around, he discovered that during refueling operations the center line tank was inadvertently locked out and the tank was empty.

—Plans and scheduling notified egress that a certain serial number seat catapult was overdue a time change by two years. Evidently someone transposed the number in the computer some years ago, and it was just recently discovered.

—An aircraft returns from flight, and the chip detector was found incorrectly installed resulting in a nearly empty oil reservoir.

—An emergency power unit (EPU) cannon plug was disconnected to facilitate other maintenance. After completing the job, the in-process inspection failed to discover the cannon plug that had been tucked back behind an insulation blanket. The aircraft flew twice before the discrepancy was found.

—An inspector discovered a drogue chute improperly packed—the technician had never received proper training.

If we are honest with ourselves, each of us can think of similar incidents. But when they occurred, did we take the appropriate actions to minimize the possible recurrence? Did we notify Quality Assurance and get them involved? Were the aircraft maintenance officer and NCO informed so they could take steps to prevent similar incidents?

It is in the best interest of all of us in aircraft maintenance to "do it right the first time, all the time." But to make this more than just a slogan on the wall takes our individual dedication from the airman all the way to the top. During the past 34 years, I've never met a single individual who entered the flight line with the desire to inadvertently botch things up. The mistakes I'm aware of generally occurred when an individual didn't feel that his or her personal attention to detail was really that critical to safely accomplishing the mission. Complacency can easily creep into our attitudes unless the quality of work is emphasized, monitored, evaluated, and rewarded.

We all know the difference between emphasizing getting the job done quickly versus emphasizing getting it done right and in a timely manner. What's the priority in your shop when push comes to shove? Are workers pressured to take unauthorized shortcuts, to work without the proper supervision, or to sign off inspections in the interest of saving time? Or, do both Ops and Maintenance give "doing it right" a higher priority than just signing off the forms for an on-time takeoff?

Do our awards and recognition programs reinforce our emphasis on quality work? When was the last time we nominated one of our outstanding workers or recommended a coworker for the TAC Crew Chief of the Month Award or the TAC Outstanding Individual/Unit Safety Achievement Award. The awards are submitted through the safety channels IAW TAC Sup 1 to AFR 900-26. Many of the Air Force Association chapters work with their local community to provide additional monthly or quarterly awards for our top performers. Are we using these and similar programs to recognize our personnel and let them know they are an integral part of the success of the unit?

Emphasizing quality work, monitoring it, inspecting it, and giving recognition remains the best way to fight complacency.

Outstanding Individual Safety Achievement Award

SSgt Arlyn F. Wood, II
138 TFS, 4 TFWP

While accomplishing the post load arming procedures on a MK20 MOD 3 anti-tank cluster bomb, Staff Sergeant Arlyn F. Wood, II, 138th Tactical Fighter Squadron, 4th Tactical Fighter Wing Provisional, stopped the potential arming sequence on the installed MK-339 bomb fuze. The fuze arming wire appeared to be installed in the impeller; instead, a cotter pin, which closely resembled the arming wire, was installed. The cotter pin had a red arming flag that apparently was wrapped inside the fuze safety pin arming flag. When the load crew removed the fuze safety pin, the cotter pin was removed with it. The impeller was now released and, due to high winds, started to rotate freely. Sgt Wood noticed the start of the fuze arming sequence and manually held the impeller in place. His quick action prevented arming of the fuze. Explosive ordnance disposal technicians were called to the scene, completed the render safe procedures and removed the fuze. Sgt Wood's action prevented any possibility of an explosive mishap on an extremely crowded and busy combat aircraft parking ramp. Sgt Wood's individual act has earned him the TAC Outstanding Individual Safety Achievement Award.

TAC TALLY

	TOTAL			TAC			ANG			AFR		
	MAY	THRU MAY		MAY	THRU MAY		MAY	THRU MAY		MAY	THRU MAY	
		FY91	FY90		FY91	FY90		FY91	FY90		FY91	FY90
CLASS A MISHAPS	1	19	11	0	9	12	1	10	4	0	0	3
AIRCREW FATALITIES	0	5	8	0	1	4	0	4	2	0	0	2
* IN THE ENVELOPE EJECTIONS	1/0	14/1	15/0	0/0	5/0	7/0	1/0	9/1	6/0	0/0	0/0	2/0
* OUT OF ENVELOPE EJECTIONS	0/0	0/2	1/1	0/0	0/0	1/1	0/0	0/2	0/0	0/0	0/0	0/0

* (SUCCESSFUL/UNSUCCESSFUL)

CLASS A MISHAP COMPARISON RATE

(CUMULATIVE RATE BASED ON ACCIDENTS PER 100,000 HOURS FLYING

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TAC	FY 91	0.0	0.0	0.7	1.8	2.2	2.2	2.2	1.9	0.0	0.0	0.0	0.0
	FY 90	1.8	2.8	2.7	3.0	2.4	2.7	2.8	2.9	2.8	2.7	2.8	3.2
ANG	FY 91	3.8	2.0	1.3	3.9	3.2	4.0	5.2	5.0	0.0	0.0	0.0	0.0
	FY 90	0.0	0.0	1.6	1.2	0.9	0.8	1.3	2.2	2.4	2.2	2.0	2.2
AFR	FY 91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	FY 90	20.4	11.2	8.2	5.9	4.7	7.7	6.4	5.5	4.8	4.4	4.0	3.6
TOTAL	FY 91	1.2	0.6	0.8	2.3	2.4	2.6	2.9	2.7	0.0	0.0	0.0	0.0
	FY 90	2.4	2.5	2.7	2.6	2.1	2.4	2.6	2.9	2.8	2.7	2.6	3.0

TAC'S TOP 5 thru MAY 1991

1st AF

"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"

139	48 FIS
64	57 FIS
24	325 TTW

9th AF

"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"

47	1 TFW
26	56 TTW
18	31 TFW
17	33 TFW
13	23 TFW

12th AF

"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"

49	479 TTW
41	355 TTW
40	366 TFW
35	27 TFW
21	49 TFW

ANG

"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"

460	119 FIG
436	147 FIG
246	110 TASG
220	138 TFG
193	112 TFG

AFRES

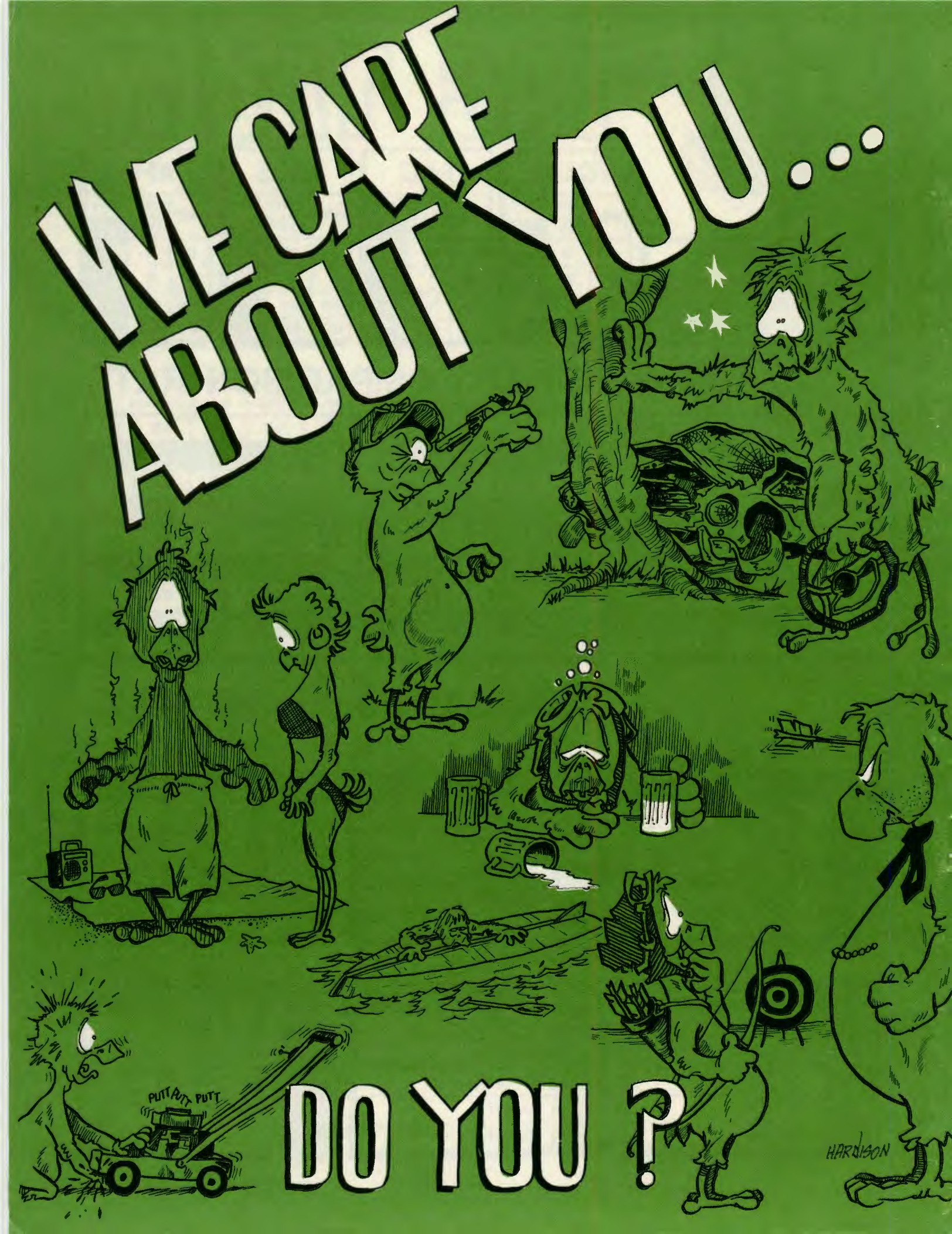
"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"

158	301 TFW
121	482 TFW
118	924 TFG
106	906 TFG
81	507 TFG

DRUs

"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"

176	552 AWACW
67	28 AD
46	USAFTAWC
38	USAFTFWC


WE CARE ABOUT YOU...
PUTT PUTT PUTT
DO YOU ?
HARRISON