

+ ARCTIC HOUSE CALLS: AIR FORCE MEDICAL TEAM BRINGS HEALTHCARE, EDUCATION TO ESKIMO VILLAGES



MAGAZINE OF THE UNITED STATES AIR FORCE

Airman

WWW.AIRMANONLINE.AF.MIL

NOVEMBER-DECEMBER 2010



**CHUCK
YEAGER**
MASTER OF THE SKY



VETERANS DAY
NOVEMBER 11, 2010



10

TUCSON AIR GUARD

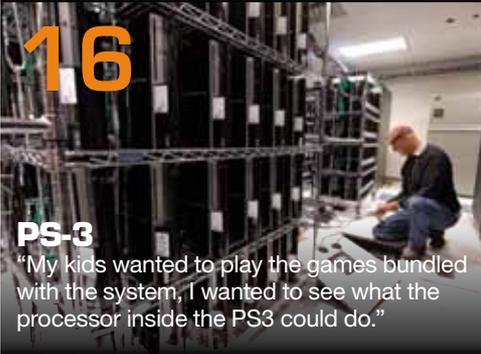
"I've been here for the basic course, The same people are here from then. It makes it easier to focus on flying and learning."



16

PS-3

"My kids wanted to play the games bundled with the system, I wanted to see what the processor inside the PS3 could do."



20

NEW HORIZONS

"They know we're here to improve the quality of life for them and their children, and they appreciate what we do."



24

CESSNA CRASH

"I think that needed to happen, because five seconds after he did it, [the aircraft] mushroomed into flames [and] cleared everyone out of there."



26

GLOBAL HAWK

"Flying over Canada has lightened the load on our manpower."



28

ARCTIC CARE

"We move from the villages to our camps in the wild. It's where we learn to be Eskimos."



36

TURTLE RESCUE

"If we left the hatchlings to fend for themselves, they would face a certain death."



FEATURES

10 TUCSON AIR GUARD

Many U.S. allies fly variations of the F-16. Most of their pilots learn how to fly them from Guardsmen in Tucson.

16 PS-3

When the conventional computing solution was too expensive, these scientists brought an off-the-shelf alternative to the game.

20 NEW HORIZONS

Deep within one of the most pristine jungles in the world, Airmen work together to improve the quality of life for people who live there.

24 CESSNA CRASH

When a small private aircraft crashed into the side a building, Airmen got busy helping with the rescue.

26 GLOBAL HAWK

A shortcut across Canada cuts travel time to Southwest Asia as well as the time it takes to return these systems from maintenance.

28 ARCTIC CARE

Airmen find rewards in bringing house-call health care to remote Eskimo villages above the Arctic Circle.

36 TURTLES RESCUE

Eglin AFB's white sand beaches are home to an endangered species of turtle. The question now is if they will like Cape Canaveral better.

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On the Cover

Retired Brig. Gen. Chuck Yeager became the first man to break the sound barrier on Oct. 14, 1947, less than one month after the Air Force became a separate service.

photo support by Tech. Sgt. Bennie Davis illustration and design by Luke Borland



COMMENTS

Got something to say about Airman? Write us at airman@dma.mil, or visit www.AIRMANonline.af.mil, to share views with fellow readers.



The Best of Jake

One of the best things about Airman magazine was the cartoons by Jake Schuffert featuring the events at Boondock AFB. I was wondering if there are any plans to do once again a "Best of Jake" in the magazine? Thanks, Sam.

Sam Garland

Editor's Note: Not at this point. Mr. Schuffert, a retired Air Force master sergeant who produced terrific single-panel cartoons in Airman for many years, died in 1998.



"Let's see your club card."

facilities that supported the Titan II complex. On behalf of all the former MFTs and BMATs who served alongside the commanders and deputies, it would have been good to expand on the make-up of a Titan II crew.

Anthony Rush, MSgt (Ret)
Aerospace Science Instructor
Air Academy School District

I have always enjoyed reading Airman first as a CAP Cadet, then an Air Force Officer, and now as an AFJROTC instructor, but I was impressed and pleasantly surprised to see the articles on missiles and in particular the Titan II. As a crew commander in the 374th Missile Squadron, 308th Wing, at Little Rock AFB, we often felt alone on a huge C-130 base and even in the Strategic Air Command little recognized, as most associated guys on missile duty as being on a Minuteman crew with a master's program and support hut up top.

I pulled 317 alerts under Arkansas and there were no luxuries or special incentives in Titan II. The missile was just down the long cableway with liquid fuels that kept your day interesting. Your interview with Yvonne Morris was spot-on in that we were under an incredible amount of stress as the Titan and all of the support equipment demanded our constant attention, as well as we guessed the Soviets had two SS-20s targeted against us on a ground burst. If that wasn't enough, we were constantly scrutinized and tested, and forgiveness was not "SAC policy."

The article and acknowledgement of the Titan crews was long overdue and I have called all my old crew buddies about it. I hope one day to take my children to visit the site in Tucson and show them what the "old man" did, but the thought of paying \$1,000 a night to spend the night in crew quarters makes this old crew dog howl!

Paul A. Willard II

SPECIAL OPS THANKS



I just wanted to take a moment to thank you for the editor's note on the CV-22 article ["Air Commandos," July-August 2010]. That was a very tasteful note and I think all of us here at the 8th Special Operations Squadron appreciate you keeping these guys from being forgotten.

TSgt Chris Dawson
8th SOS Flight Engineer

BALANCING LIFE

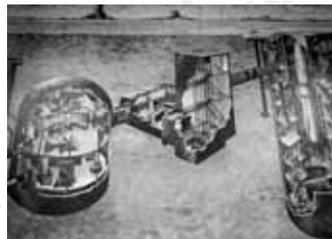


My husband works for a contractor at Vandenberg Air Force Base and picked up a copy of Airman. We were very excited to see an article about the task of balancing a life of service and personal life ["Balancing Life," July-August 2010] featuring our former neighbor, 2nd Lt. Andrea Patrick.

Those of us in the neighborhood who had the privilege of meeting her have often wondered how she was doing with her new assignment. She and her dog were great neighbors and she is an amazing person. I would not want anyone else in a position to keep me safe. We in Orcutt wish her well on her journey through the Air Force and send her our continuing thanks.

Rey-Ann Higley
Orcutt, Calif.

TITAN II FAN



I just read the article about "Remember the Titan II" ["Remember the Titan II," July-August 2010] and it is good to see that Titan combat crew members have not been forgotten. However, as one of the few enlisted crew members, the article did not get the enlisted perspective. I served as a missile facility technician and the other enlisted member was a ballistic missile analyst technician. MFTs were responsible for all of the

HOLIDAYS IN THE HOLE



["Feeding the Mission," July-August 2010] I just wanted to thank you for the article, and thank Staff Sgt. John Shirley for taking such good care of his MAF "family."

I have always appreciated, and enjoyed a good home cooked meal, but perhaps I did not always appreciate how good food affects our health, until recently.

Staff Sgt. Shirley's answers made me realize that there is more to the issue than good nutrition — morale plays a big part.

Also, I enjoyed the segment about the holiday meals. My father served in the Air Force for many years, and it brought back memories of the Thanksgiving following my mother's death of cancer. Even as a kid, I remember how the staff, and my father's friends went

out of their way to make us feel cared for. It certainly helped to fill the void.

May God bless you all, and all of yours.

Josie Grus Dwyer

I recently read the articles concerning life in the missile field that highlighted FMs, chefs and the capsule crew. Why were Security Forces not highlighted? We are the majority of individuals deployed to the missile field. We all work together to complete the mission so why would you exclude a part of the team? If there has recently been an article about Security Forces in the missile field that I might have missed, then please disregard.

Thank you,

SrA Jacqueline Mayfield

FORGOTTEN H-MODEL



While reading the article on the AC-130 Gunships ["Maintaining Camaraderie," July-August 2010], I found some glaring errors on your part. First it gave way too much credit to the AC-130U. You forget the AC-130H (which is still in service) has been around since Vietnam and has a very rich history. Secondly you were quoted as saying that the AC-130U is the only aircraft in the Air Force that has a 105mm howitzer on it. The AC-130H is equipped with a 105mm and I am pretty sure it has had it installed before the U model was even a glimmer in someone's eye. If you want to see a real gunship go to Cannon (oh wait a place the U model can't go) and do a full spread on the AC-130H.

Respectfully-

Spectres of the Past, Present, and Future.

Joshua Cota

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U.S. Air Force Chief of Staff **Gen. Norton Schwartz**
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photo by Master Sgt. Jeremy Look





Senior Airman Jonathan

Ordonez prepares to cover a KC-135 Stratotanker engine after a refueling mission during the Rim of the Pacific 2010 exercise at Hickam Air Force Base, Hawaii. The exercise included 14 nations, 34 ships, five submarines, about 100 aircraft and more than 20,000 participants. Airman Ordonez is a crew chief with the 507th Aerial Maintenance Squadron at Tinker AFB, Okla.

1 An F-22 Raptor pitches out for landing while an F-15 Eagle flies the approach at Nellis Air Force Base, Nev. The aircraft are from the U.S. Air Force Weapons School at Nellis AFB.

2 A pararescueman secures a sector of the landing zone before assisting "injured" personnel during an exercise at Bagram Airfield, Afghanistan. The exercise tested the rescue squadron's ability to provide medical aid to U.S. and coalition forces.

3 Senior Airman Patrick Garner, a patrolman with the 316th Security Forces Squadron at Andrews Air Force Base, Md., fires a practice round out of a grenade launcher at Marine Corps Base Quantico, Va.

4 Airman 1st Class Hunter Rains, a crew chief assigned to the 33rd Expeditionary Helicopter Maintenance Unit at Bagram Airfield, Afghanistan, inspects the tail rotor blade on an HH-60 Pave Hawk helicopter.

photo by Master Sgt. Kevin J. Gruenwald



photo by Staff Sgt. Christopher Boltz



photo by Senior Airman Melissa V. Brownstein



photo by Staff Sgt. Christopher Boltz





1

1 An Air Force paratrooper jumps from a C130J Super Hercules over Marnheim, Germany. The combined U.S. forces airborne jump was conducted to maintain proficiency and to inspire esprit de corps among paratroopers.



2

2 Air Force Basic Military Training trainees begin the monkey bars obstacle at the confidence course at Lackland Air Force Base, Texas. In BMT, trainees learn the critical importance of discipline, teamwork and foundational knowledge needed to succeed as Airmen.

3 A B-1B Lancer begins a training mission at Ellsworth Air Force Base, S.D. Aircrews complete training sorties to meet certifications and to improve the skills necessary to save lives in combat.



3

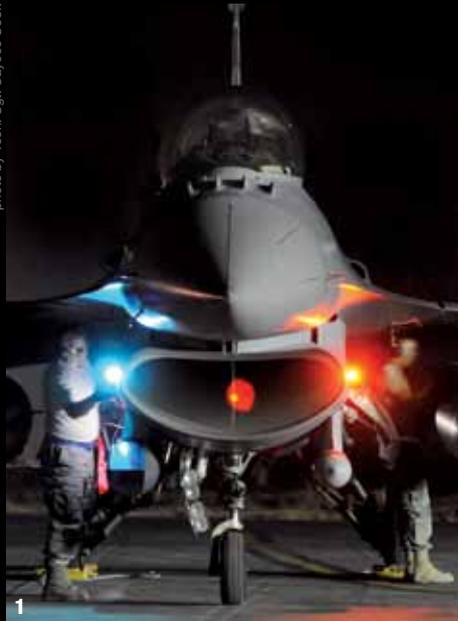
4 Airmen assigned to the 455th Expeditionary Logistics Readiness Squadron unfurl a new fuel bladder at Bagram Airfield, Afghanistan. The new fuel bladder can hold 200,000 gallons of jet fuel.



4

1 Airmen perform a post flight check on an F-16 Fighting Falcon from a flying mission after its return to Joint Base Balad, Iraq. The Airmen are assigned to the 169th Maintenance Group at McEntire Joint National Guard Base, S.C.

photo by Tech Sgt. Caycee Cook



2 A firefighter from the 886th Civil Engineer Squadron responds to a "building fire" during an operational readiness exercise at Ramstein Air Base, Germany. An ORE incorporates a series of scenarios to evaluate a base's ability to execute operational duties under simulated wartime conditions.

photo by Senior Airman Caleb Pierce



3 Sixteen members of the U.S. Air Force Honor Guard Drill Team perform for members and families at Holloman Air Force Base, N.M. The drill team shows off Air Force precision, discipline, teamwork and professionalism.

photo by Airman 1st Class Joshua Turner



4 Airmen from the 86th Airlift Wing participate in a wing run at Ramstein Air Base, Germany. The wing run was designed to promote esprit de corps and unity as well as to emphasize the importance of fitness.

photo by Airman 1st Class Deshae Esposito



5 Airmen and Soldiers from the North Dakota National Guard gathered at Camp Grafton South for a two-day marksmanship contest. The North Dakota National Guard Adjutant General's Combat Marksmanship Match is held annually to promote marksmanship training and proficiency.

photo by Senior Master Sgt. David H. Lipp



6 U.S. Air Force Academy Basic Cadet Elizabeth Hicks navigates the assault course in Jacks Valley, Colo. Basic cadets spend about two weeks in Jacks Valley learning how to work as a team to conduct military operations.

photo by Mike Kaplan





1

1 A 36th Airlift Squadron C-130H Hercules from Yokota Air Base, Japan, deploys flares over Alaska as part of a training exercise during Red Flag Alaska 10-3.



2

2 Airmen at Andersen Air Force Base, Guam, work with the crew from Helicopter Sea Combat Squadron 25 to unload two Navy MH-60S Knighthawks from a C-17 Globemaster III. The aircraft arrived as part of an air asset rotation.

3 Senior Airman Jose Rodriguez climbs into a fire tube boiler at Eielson Air Force Base, Alaska. Airman Rodriguez is a heating, ventilation and air conditioning technician with the 354th Civil Engineer Squadron.

4 The crew of a ski-equipped LC-130 Hercules from the New York Air National Guard's 109th Airlift Wing takes off from a remote science research site on Greenland's ice sheet. The 109th AW is the only military unit to fly such aircraft and has flown missions to Greenland since 1975. The unit now provides airlift support to the National Science Foundation's polar research program there.



3



4

Fighting Falcons

GUARDSMEN BUILD INTERNATIONAL PARTNERSHIPS THROUGH F-16 FLIGHT TRAINING

STORY BY STAFF SGT. PAUL CROXON
PHOTOS BY MASTER SGT. JACK BRADEN

The 162nd Fighter Wing occupies just 95 acres off the Tucson International Airport. In this small strip of land Air National Guard instructor pilots train nearly every air force that flies a version of the F-16 Fighting Falcon, building pilot-to-pilot and military relationships in the process.

The goal for the wing, which has trained international pilots in the F-16 since 1989, is to produce continuity in F-16 tactics so U.S. pilots and their allies have a common ground for joint operations. To accomplish this, the wing employs some of the most experienced instructor pilots in the Air Force and, unlike traditional Air Guard wings, about 95 percent of them are full-time Guardsmen — compared to less than 20 percent at most wings.

TOP GUN INSTRUCTORS

The wing is set up in much the same way a university is. Countries that send pilots to the 162nd FW for training pay tuition that covers flight time, cost of living and fuel costs, among other things. They also have instructors with one-of-a-kind resumes.

The weapons school patch Lt. Col. Chuck Blank wears on his flight suit makes him instantly identifiable as an expert. He's a graduate and instructor of the Air Force Weapons School and was also an instructor at the Navy's Top Gun program.

"As far as I know, I'm the only pilot who's been an instructor for both programs," he said.

According to Colonel Blank, the two programs differ in a lot of ways, but both have made him a more diversified and experienced pilot,

something he applies every day teaching foreign pilots.

"Weapons school is a six-month program that teaches the best Air Force pilots the latest tactics for their weapons system," he said. "Top Gun is a six-week course that teaches Navy pilots to be fighter pilots. I flew F-18s there and F-16s at weapons school."

As the director of operations for the 152nd Fighter Squadron, Colonel Blank easily fits into the role of instructor and is responsible for tailoring training programs to specific countries.

"Each student gets a lesson plan tailored to his experience," Colonel Blank said. "Some of these guys have only basic flight training; some have been to UPT in the States; and some have hundreds of hours of fighter time in a different airframe.



We can't push them through the same basic course, so we tailor it to their needs."

Colonel Blank isn't the only instructor pilot with time in different aircraft. In the wing's three flying squadrons there are former Navy and Marine Corps fighter pilots and other Top Gun and Air Force Weapons School graduates.

It's not just the instructors who are advanced. The 148th Fighter Squadron trains the United Arab Emirates on their Block 60 F-16E/F Desert Falcons, the most advanced F-16 produced and a generation 4.5 fighter in terms of capability.

"On the outside, it looks like a regular F-16, except for the fuel tanks," said Lt. Col. Andrew MacDonald, 148 FW commander and former Marine Corps fighter pilot. "We have a unique

relationship with the UAE in that we have 14 of their jets on loan to us to train their pilots since the U.S. doesn't fly block 60s."

**WEAPONS SCHOOL
IS A SIX-MONTH
PROGRAM THAT TEACHES
THE BEST AIR FORCE
PILOTS THE LATEST
TACTICS FOR THEIR
WEAPONS SYSTEM.**

— Lt. Col. Chuck Blank

In addition to training pilots, the wing also trains maintenance personnel on the F-16. When it comes to the F-16E/F, maintenance is strictly segregated.

"All the equipment used to

maintain the block 60 belongs to the UAE," said Lt. Col. Kenneth Gavre, 162nd Aircraft Maintenance Squadron deputy commander. "By law we can't use U.S. tools to maintain another air force's planes. The UAE provides all the tooling necessary to maintain these jets."

STUDENT SUPPORT

For students, training with the 162nd FW offers a number of perks. For Polish major Pawel Marcinkowski, the continuity among instructors and staff allows him to focus on flying. His focus is of the utmost importance since he is one of the first Polish pilots graduating the 162nd FW's instructor pilot course. He'll take back what he learned in Tucson and begin teaching Polish students as the country's fledgling F-16 program grows.

A 162nd Fighter Wing F-16 Fighting Falcon releases a flare during a training mission in southern Arizona. The 162nd FW is based in Tucson and trains international pilots.



(above left) U.S. and UAE F-16s assigned to the 162nd Fighter Wing in Tucson, Arizona, line up at the end of the runway to finish pre-flight safety checks prior to a training mission over southern Arizona.

Lt. Col. Chuck Blank, left, and **Maj. Pawell Marcinkowski** walk to their jets before a training mission. Lt. Col. Blank is the director of operations and an instructor with the 152nd Fighter Squadron and Maj. Marcinkowski is a Polish air force student in Instructor pilot upgrade training. After graduation, Major Marcinkowski will return to Poland and train pilots there.

“I’ve been here for the basic course,” Major Marcinkowski said in a thick Polish accent. “The same people are here from then. It makes it easier to focus on flying and learning.”

Flying isn’t new for Major Marcinkowski. He’s logged hundreds of hours in the MiG-21 and the TS-11, a Polish jet trainer. He flew T-38 Talons during undergraduate pilot training in the United States as well. However, even with this flight experience he finds the curriculum at the 162nd FW a constant challenge that forces him to think about F-16 tactics almost around the clock.

“I’m always thinking about flying. We fly six days per week,” he said. “It’s only when I’m with my family that I stop thinking about it.”

I’M ALWAYS THINKING ABOUT FLYING. WE FLY SIX DAYS PER WEEK.

— Major Pawel Marcinkowski

The wing is prepared to take care of students from the day they are selected to train. Everything falls on the international military student office to work out.

“We are the single point of contact for student issues,” said Maj. Donna Wolslagel, IMSO chief. “We function in much the same way as a university’s registration or student office.” Major Wolslagel said the IMSO

office works directly with different nations to make sure the documentation, lesson plans and logistical considerations are in order so students can begin training immediately.

“Many students, like Major Marcinkowski, bring their families with them,” she said. “We help their children enroll in schools and even organize trips as part of the State Department’s foreign studies program where students learn about American culture.”

FUTURE

The wing is always changing. Some countries send their students through training on a case-by-case basis while others, like the UAE, contract so an entire squadron is devoted to training their pilots. As contracts expire or openings become available, student loads change.

“Next year the UAE F-16s will be gone and the Dutch will take their place,” said Brig. Gen. Gregory Stroud, 162 FW commander. “The Dutch trained here before, and when they come back, many of the people they worked with before will still be here. It’s that continuity that makes this wing such a great place to train.”

The wing has carved out a niche for international pilot training on the F-16 and the unit’s selection

as a candidate base for the F-35 Lightning II may add another airframe to the curriculum.

“We’ve proven ourselves to be experts in training foreign pilots,” General Stroud said. “The F-35 began as a multinational program and those nations will need to train their pilots. It seems like a perfect fit and the wing will embrace it if we are chosen, but the F-16 community is also growing and we’re still committed to training on it.”

Whether in the newest fighter or the tried and versatile F-16, the Airmen at the 162nd FW will continue to produce quality pilots throughout the world. ✈️





U.S. and UAE F-16s
assigned to the
162nd Fighter Wing in
Tucson, Arizona, form
up during a training
mission over southern
Arizona.

CREW CHIEF, F-16E/F DESERT FALCON

Staff Sgt. Danny Pacheco

👏 I really like being a crew chief for one of the world's most advanced F-16s, the block 60. It is such a unique aircraft and there are very few people who have had this experience. But what I think I like most about my job is that I play an important role in our country's efforts to build up and train an important partner-nation air force, the United Arab Emirates. That gives me tremendous job satisfaction. And of course serving in the Guard affords me the privilege of serving my nation and state from right here in my hometown – Tucson. 🇺🇸🇺🇸

HOME UNIT/BASE:

ARIZONA AIR NATIONAL GUARD BASE,
TUCSON INTERNATIONAL AIRPORT,
162ND FIGHTER WING

HOMETOWN:

TUCSON, ARIZ.

JOINED AIR FORCE:

SEPTEMBER 1997

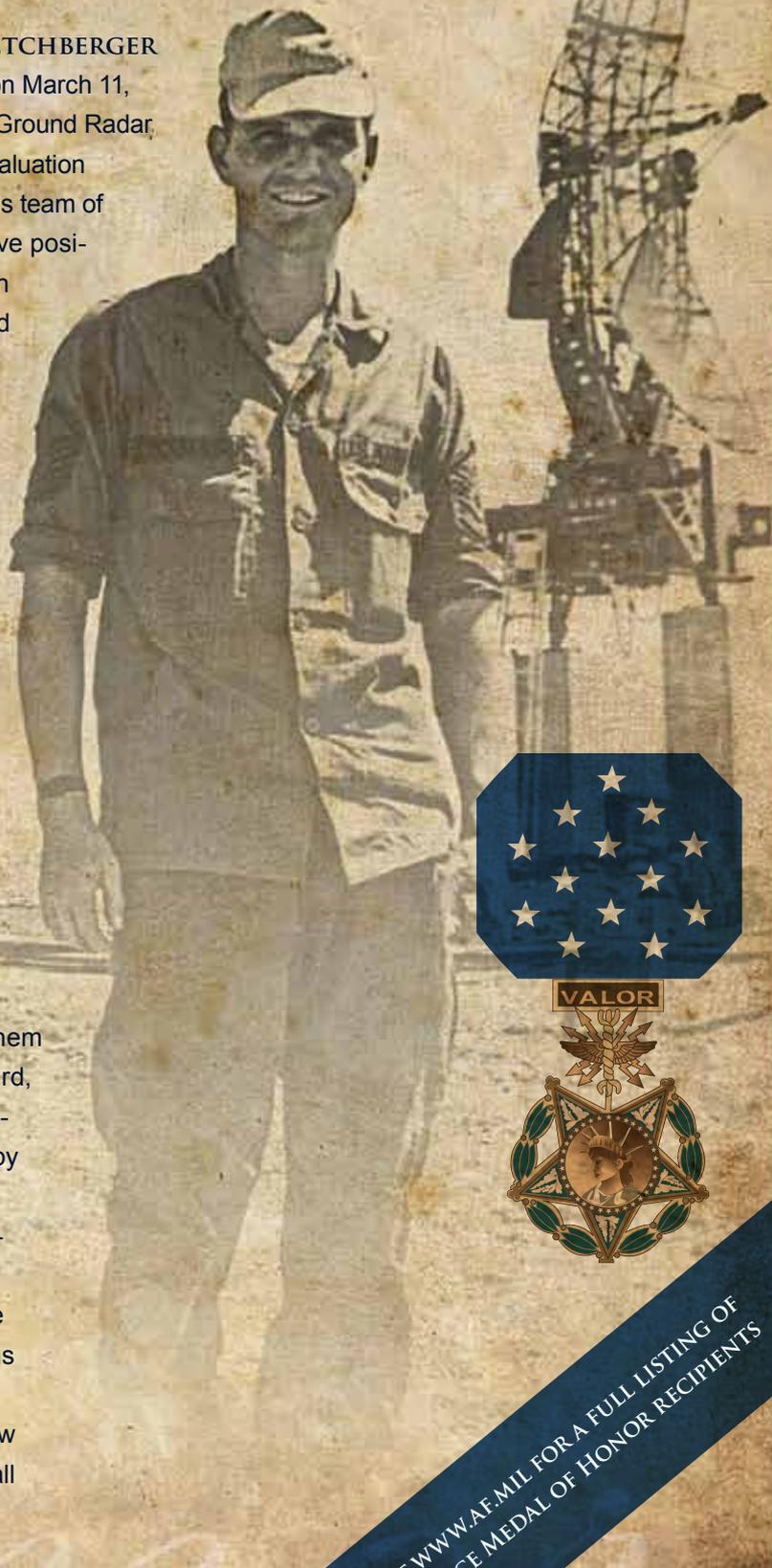
PRIMARY AFSC:

2A373, TACTICAL AIRCRAFT MAINTENANCE

MEDAL OF HONOR

CHIEF MASTER SERGEANT RICHARD L. ETCHBERGER

CHIEF MASTER SERGEANT RICHARD L. ETCHBERGER distinguished himself by extraordinary heroism on March 11, 1968, in the country of Laos, while assigned as Ground Radar Superintendent, Detachment 1, 1043d Radar Evaluation Squadron. On that date, Chief Etchberger and his team of technicians were manning a top secret defensive position at Lima Site 85 when the base was overrun by an enemy ground force. Receiving sustained and withering heavy artillery attacks directly upon his unit's position, Chief Etchberger's entire crew lay dead or severely wounded. Despite having received little or no combat training, Chief Etchberger single-handedly held off the enemy with an M-16, while simultaneously directing air strikes into the area and calling for air rescue. Because of his fierce defense and heroic and selfless actions, he was able to deny the enemy access to his position and save the lives of his remaining crew. With the arrival of the rescue aircraft, Chief Etchberger, without hesitation, repeatedly and deliberately risked his own life, exposing himself to heavy enemy fire in order to place three surviving wounded comrades into rescue slings hanging from the hovering helicopter waiting to airlift them to safety. With his remaining crew safely aboard, Chief Etchberger finally climbed into an evacuation sling himself, only to be fatally wounded by enemy ground fire as he was being raised into the aircraft. Chief Etchberger's bravery and determination in the face of persistent enemy fire and overwhelming odds are in keeping with the highest standards of performance and traditions of military service. Chief Etchberger's gallantry, self-sacrifice, and profound concern for his fellow men at risk of his life, above and beyond the call of duty, reflect the highest credit upon himself and the United States Air Force.



VISIT WWW.AF.MIL FOR A FULL LISTING OF
AIR FORCE MEDAL OF HONOR RECIPIENTS



3

WHAT'S UNDER THE HOOD?

AIR FORCE SCIENTISTS BUILD SUPERCOMPUTER USING GAME CONSOLES

STORY BY STAFF SGT. J. PAUL CROXON
PHOTOS BY MASTER SGT. JACK BRADEN

When Sony and IBM released the cell processor for the Playstation 3 game console, a scientist at the Air Force Research Laboratory Information Directorate saw a promising platform for a supercomputer. His children were excited when he brought one home, but the new PS3 under his arm wasn't just for playing games.

"My kids wanted to play the games bundled with the system," said Dr. Richard Linderman, AFRL Information Directorate chief scientist. "I wanted to see what the processor inside the PS3 could do. I already knew it had the potential for high-performance computer applications."

After researching the processor, Dr. Linderman and fellow scientists realized they had the backbone for a new take on supercomputer design. However, with a limited budget and cell processor servers costing thousands of dollars apiece, the scientists working out of the Rome Research Site in New York realized the reality of building such a supercomputer seemed unlikely.

That was until the scientists thought outside the box, or rather, off the shelf, and managed to build one of the world's most powerful computers for a fraction of the cost.

In what Dr. Linderman refers to as a \$2 million side bet, the directorate spent about \$300,000 on off-the-shelf Sony Playstation 3s and proved they could connect the consoles' cell processor into a computer cluster.

"With 336 consoles, we reached 53 TFLOPS [Tera Floating Point Operations per Second]," said Dr. Linderman. "With an additional \$2 million in funding from the Department of Defense's High Performance Computing Modernization Program, we increased the cluster to 2,016 consoles and 500 TFLOPS in performance."

Approximately 3,500 Playstation 3 game consoles are being installed at the Air Force Research Laboratory in Rome, N.Y. The consoles provide a low cost solution for the computing power required for research at the facility.

EYE IN THE SKY

The cluster, known as the Condor Cluster, includes servers with general purpose graphical processor units. It is intended for a persistent surveillance role using the synthetic aperture radar and algorithms developed for a sister project, the GOTCHA synthetic aperture radar. With the power of the PS3 cluster and aerial surveillance, scientists will be able to monitor a 25-km area in real time.

"By using the cell processors in the PS3s and the GPGPUs in unison, we've produced a system that does a very good job at handling this kind of information," said Mark Barnell, the project engineer for the cluster and AFRL high performance computing director. "We've developed the most powerful heterogeneous supercomputer in the world for a fraction of the cost of building it using individual chips and servers."

The Condor cluster looks more like a PS3 storage room than what some might imagine a supercomputer should look like. Thousands of consoles are stacked side-by-side on bread racks with homemade power management and mounting brackets. However, there is function

and purpose in this construction.

"The PS3s arrive stacked on pallets," said Mr. Barnell. "We store them in one of the lab's warehouses and, after cataloging and testing each unit, we install them in racks

ONE SHOT

The Condor cluster exceeded Dr. Linderman's expectations the day he brought that first PS3 home. However, only one version of the console can be used in the system, and Mr. Barnell



of about 24. These modular racks can then be connected to the cluster as needed."

PUTTING IT IN PERSPECTIVE

A floating point operation is a single operation done by a computer. The PS3 cluster is capable of performing 500 trillion operations every second. That's about a third of the speed of the third fastest computer in the world, the IBM Roadrunner computer used by the Department of Energy.

According to Mr. Barnell, the Roadrunner cost more than \$120 million dollars to build, a 60-fold increase in cost for three times the performance of the AFRL cluster. However, the savings aren't limited to the upfront cost of building the computer. Modern computers require huge amounts of energy to run. Fortunately for AFRL, Sony had already figured out how to make the consoles energy efficient.

"The PS3, which is designed to function in a living room, requires a very efficient power requirement," said Dr. Linderman. "They also have a sleep feature when they're not in use. This means that when they aren't in use they only use a fraction of the power."

bought every one he could find.

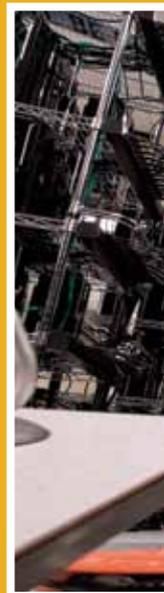
"The server runs on a Linux operating system that isn't available on the newer firmware of current systems," said Mr. Barnell. "We have to abide by the end-user license agreement like everyone else, so we're only able to use the systems as we get them."

If a Condor PS3 breaks it can't be sent in for repairs because it comes back with system updates that are unable to run Linux. After an update, it's useless in the Condor cluster.

"I have a few spares," he said. "But as they break, we'll end up removing consoles from the cluster."

The Condor cluster did accomplish what it was built to do. It's proven the abilities of a heterogeneous computer cluster and the feasibility of using off-the-shelf components as parts. As the Condor is eclipsed by more advanced technology, Mr. Barnell is looking to the next high-performance computer challenge; though he still has an appreciation for the PS3.

"If we had four times as many consoles, we could achieve roughly the processing power of the human brain," he said. "Imagine what we could do then." 🐦



Playstation 3 game consoles are lined up for cataloging in an Air Force Research Laboratory warehouse in Rome, N.Y.

(inset) Mitch Kowalski, a contractor from Ryan Electric in Rome, N.Y., runs power cables used to power Playstation 3 consoles that will be used for research. When complete approximately 3,500 consoles will be connected.

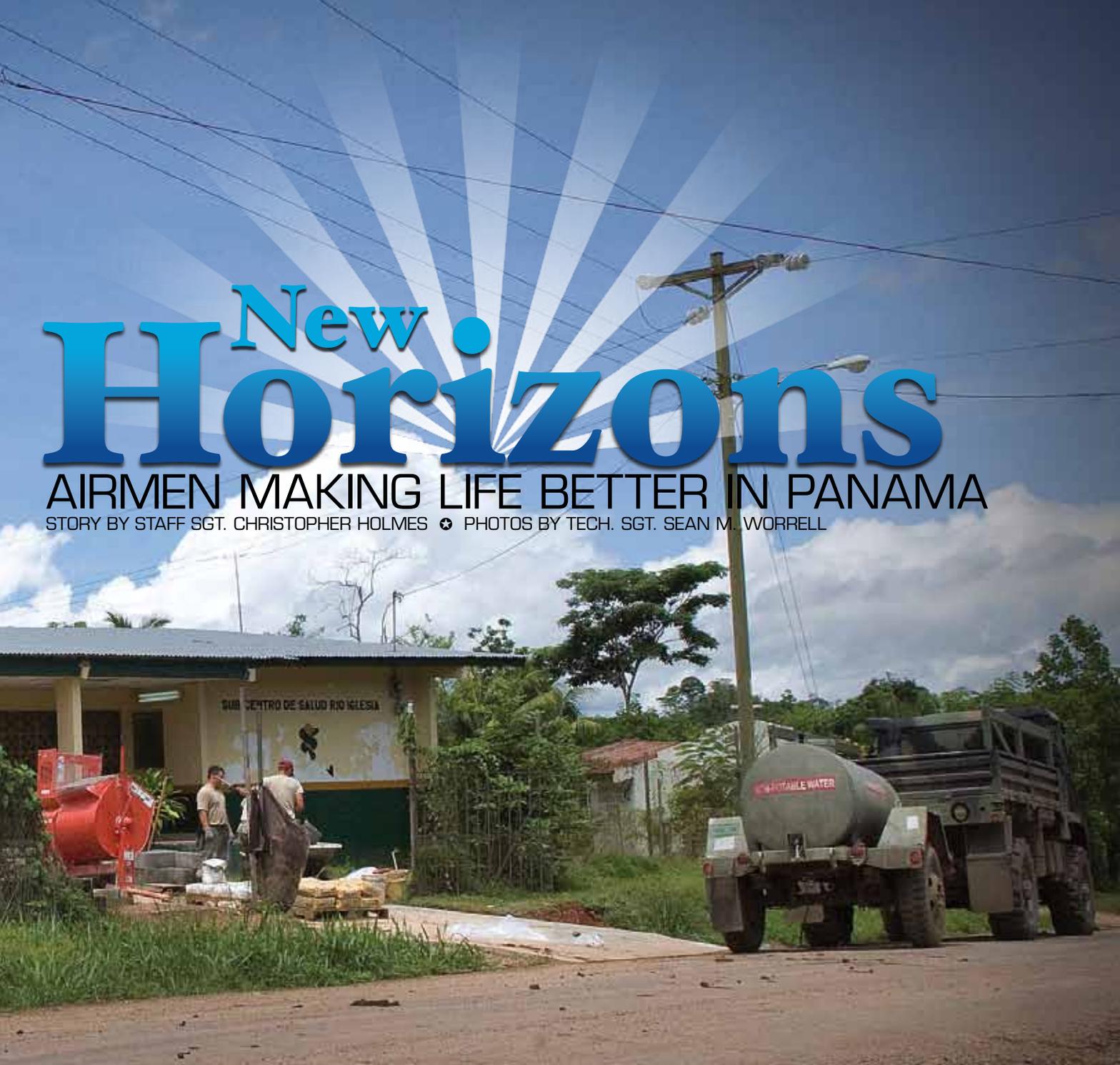


IF WE HAD FOUR TIMES AS MANY CONSOLES, WE COULD ACHIEVE ROUGHLY THE PROCESSING POWER OF THE HUMAN BRAIN.

— Mark Barnell



Children ride a horse in front of a medical clinic that members of the 820th RED HORSE Squadron from Nellis AFB, Nevada, are renovating near Meteti, Panama, during Exercise New Horizons.



New • Horizons

AIRMEN MAKING LIFE BETTER IN PANAMA

STORY BY STAFF SGT. CHRISTOPHER HOLMES ♦ PHOTOS BY TECH. SGT. SEAN M. WORRELL

Deep within one of the most pristine and untouched jungles in the world, where indigenous tribes scrape by with whatever the land around them provides, Air Force men and women from around the world have converged to make a difference. In an area so remote that only naturalists, botanists and archeologists venture within the 10,000 square miles of raw wilderness, members of the 820th RED HORSE Squadron

from Nellis Air Force Base, Nev., are helping improve the quality of life for people living in conditions that most Americans will never see.

The assistance is part of an annual U.S. Southern Command exercise called “New Horizons,” in which engineer and medical teams are deployed throughout Central and South America as a training platform that also provides infrastructure improvements to impoverished areas. New Horizons 2010 was held in the remote Darien region of southern

Panama, as a 12-week, \$8.5 million project, with close to 250 service members, including more than 160 Airmen, deployed to provide nation-building and humanitarian and medical assistance.

Working near the small town of Meteti, the RED HORSE team focused on six major construction projects at four schools and two clinics.

“Santa Librada [school] is a big project for us because we are constructing brand new classrooms and



Members of the 820th RED HORSE Squadron from Nellis AFB, Nevada, construct a wall at a forestry center near Meteti, Panama, during Exercise New Horizons.

A member of the 820th RED HORSE squadron brushes excess mortar off a wall at an elementary school near Meteti.

RED HORSE members cut a PVC pipe at a forestry center near Meteti, Panama, during Exercise New Horizons.

new bathroom facilities in the back,” said Col. Tim Lamb, Task Force New Horizons commander.

“We are also constructing a water tower and a water distribution system to the bathrooms, as well as a septic system. We’re replacing a lot of the electrical wiring in the classrooms and finally installing a new playground.”

According to Capt. Brandy Caffee, project engineer with the 820th RED HORSE Squadron, the teams provide infrastructure that the Panama government normally can’t provide or doesn’t have the money to fund.

“One of our biggest focuses has been replacing bathrooms, because

the situation here has been very unsanitary,” said Capt. Caffee. “We have given them new facilities, and when you couple that with the activities on the medical side, that is the biggest piece for the locals.”

Senior Airman Carlos Parades is one of the Nellis engineers providing support as an electrical systems specialist, working to provide children in the area with new classrooms for the upcoming school year. “I work on electrical panels, lighting fixtures, wiring for heating, ventilation and air conditioning, as well as helping improve the buildings’ electrical safety standards.”

Airman Paredes and his teammates endure extreme heat, austere

conditions and monsoon-like rains to help improve quality of life in the area, but feel that it’s well worth the effort.

“The mission is very important because it helps establish better relations with the local residents,” said Airman Paredes. “They know we’re here to improve the quality of life for them and their children, and they appreciate what we do. The mission helps improve foreign relations, not just with Panama, but with other Latin American countries as well.”

The experience is also a benefit to the servicemembers involved, giving them a chance to use the skills and training they’ve received back home in a real world setting.

According to Col. Lamb, the Nellis engineers get valuable training they would normally not find in Nevada. “The new facilities are concrete block, for the most part, and that’s something we don’t get a chance to do a lot of,” the colonel said. “The electricians are getting good experience with rewiring, and we are doing water tower work and plumbing the new bathroom facilities.”

“I have learned how to make better conduit bends, and how to install power panels, something I hadn’t done before,” said Airman Paredes. “I have even had a chance to cross-train in other related fields doing such things as pouring concrete pads, mixing mortar and doing basic plumbing work.”

Senior Airman Eric Cormier is a cyber-transport systems specialist, part of an 11-person team from the 32nd Combat Communications Squadron from Tinker Air Force Base, Okla., who deployed to Panama to set up communications.

“This is the first time our unit has deployed using an over IP communications kit,” said Airman Cormier. “We are learning a lot of different things that can go wrong and things that will make our jobs easier the next time this package goes out. We exercise a lot back home, but it’s not like setting up a real bare base. We’re also getting to see a new country and getting good experience working in a tropical environment.”

Col. Lamb stressed that helping build infrastructure was only part of the assistance the task force provided. Medical readiness teams in David provided ear, nose and throat services, while a team in Chitre

U.S. military members gather to watch traditional Panamanian ceremonies and dances at a village near Meteti, Panama, during Exercise New Horizons.



provided optometry care.

“The optometry team performed 74 surgeries over six days, and made 128 post-operative visits over eight days,” said Col. Lamb.

To provide support for the engineer teams, Airmen from as far away as Kadena Air Base, Japan, as well as from active duty, Reserve and Air National Guard bases throughout the U.S. deployed to set up a total base package.

“We provide force protection and security for all deployed people and property for the New Horizons exercise,” said Master Sgt. Bennie Baker, NCOIC of force protection, normally assigned to the 12th Air Force at Davis-Monthan Air Force Base, Ariz. “I manage and direct security for the base camp, work sites and for official trips, as well as coordinate with host nation force protection assets.”

Although the locations are in some of the most remote and poverty-stricken areas of Latin America, Airmen find much to like about the exercise.

“Panama is a beautiful country, with all types of flora and fauna flourishing. It is very tropical and humid here, and totally outside of anything that I normally



Panamanian women do a traditional dance for U.S. servicemembers at a village near Meteti, Panama, during Exercise New Horizons.

experience,” said Airman Paredes, who has been in the Air Force for four years. “The people are warm and friendly, very kind-hearted and grateful for everything we do for them.”

“A lot of the locals come out to the work sites and bring us food and fruits that they grow at their homes,” said Airman Cormier. “On weekends, we also get to play softball, soccer or basketball with the locals and go out and see some of their cultural dances.”

New Horizons is an exercise that has brought construction and medical help to impoverished regions of Central and South America and the Caribbean for more than a quarter century. The exercise has also provided servicemembers with experience in building schools, digging wells, constructing community centers and medical clinics, as well as providing medical care in a real-world setting that is cementing partnerships with those countries for decades to come. 🦋



Heroic Action

YOU'RE ALWAYS SECOND-GUESSING

STORY BY AIRMAN 1ST CLASS CHRISTOPHER GROSS, 3RD WING PUBLIC AFFAIRS

An Alaska Air National Guardsman and active-duty Airman from Elmendorf Air Force Base jumped into action and put themselves in harm's way recently while rescuing survivors from a Cessna 206 aircraft crash.

The Cessna, which took off from Merrill Field in Fairview, Alaska, went down moments later into the side of a building, injuring four people and killing one.

"I could hear an aircraft coming over the top of me," said Capt. Erik Boltman of the Alaska ANG, who was sitting in traffic a few blocks from the crash site. "Next thing I knew, I just heard this really loud thud, and my truck shook."

Captain Boltman said he could see smoke rising from the crash site and tracked it to where everybody was looking. Once he located the aircraft, he grabbed a fire extinguisher from his vehicle and rushed to the site.

He said people were already there,

attempting to break out windows and using fire extinguishers to keep the fire under control.

Rescuers were finally able to pull the door off the hinges with the pilot, 34-year-old Preston Cavner, still inside the window frame of the driver's door when they carried it away. He was covered in blood, said the captain.

While they were pulling the pilot out, Captain Boltman said he could hear the girls inside screaming "the fire is coming, the fire is coming, it's burning my feet!"



out of the way and pulled her out, handing her off to a group of people, two of whom were Captain Boltman and Anchorage Police Officer Will Cameron. They took the girl to safety while Sergeant Gibson went back to try to free her mother, 32-year-old Stacie Cavnar.

"I grabbed up underneath her arms and was trying to pull her free. The flames were all around her, and there were about two people with fire extinguishers," said Sergeant Gibson. "I couldn't physically pull her out [because] she was pinned so badly, and this green mushroom cloud came out and it hit me and the cop behind me. I dropped to the ground and I rolled out of the way so the cop could get in there."

Officer Cameron attempted to pull her out the same way Sergeant Gibson had, feeling his way through the smoke inside to find the restriction and trying to cut it until the fire singed him and he dropped his knife. That's when he planted both feet on the aircraft and heaved the 32-year-old mother out to safety.

"I think that needed to happen, because five seconds after he did it, [the aircraft] mushroomed into flames [and] cleared everyone out of there," said Sergeant Gibson.

Once everyone was pulled from the aircraft, bystanders provided first aid until professional medical care arrived.

Sergeant Gibson said a lady who had aluminum blankets started passing them out to cover the wounds of the victims. That's when he wrapped the 16-year-old girl's legs and began talking to her trying to keep her calm.

The crash left four family members, including a 2-year-old son, Hudson, alive - most with severe burns. Tragically, a 4-year-old son, Miles, was killed on impact.

"I just can't thank them enough for what they did, they saved my daughter's life," said Mike Zientek. "The way they quickly responded, time was definitely a factor, and I just really appreciate the way Staff Sgt. Gibson and Will Cameron went into the plane and pulled out my daughter, I just really appreciate that. I'm just so thankful that she's alive."

During an earlier assignment at Ellsworth Air Force Base, S.D., Sergeant Gibson was a volunteer for the Pennington County [S.D.] Search and Rescue team. That experience served him well in dealing with this crash and its aftermath.

"Physical stuff always heals, but it's learning to live with memories, that's when it doesn't matter if you're in the plane, standing by or getting fire extinguishers. You're always second guessing, until you learn to live with it," said Sergeant Gibson. 🦋

Capt. Erik Boltman and Staff Sgt. Jacob Gibson were on scene when this Cessna 206 crashed into a Fairview home near Elmendorf Air Force Base, Alaska, June 1, 2010. Both Airmen took part in rescuing survivors from the crash.

More bystanders rushed to the scene to help, including Staff Sgt. Jacob Gibson, who was on his way home.

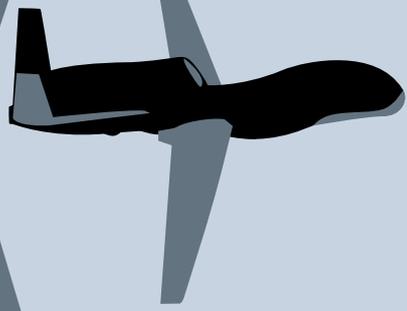
"I never ever go that way," said Sergeant Gibson. "I was sitting in traffic downtown at a stoplight, kicking myself because I thought I would have beaten traffic. About that time, I saw a cop three lanes over in the far left lane. He cut on his lights and started trying to get through traffic, and then I saw people pointing."

When Sergeant Gibson saw the black clouds of smoke billowing out of the aircraft he said he pulled in behind a gas station, not knowing what had happened. As soon as he saw the crash, he ran to the burning aircraft.

Once inside the Cessna, he saw 16-year-old Rachel Zientek in one of the back seats. He moved the seatbelt

GLOBAL

HAWK



LESS MAINTENANCE. LESS TIME. LESS MANPOWER.

STORY BY RANDY ROUGHTON

(below) A RQ-1 Global Hawk from the 9th Reconnaissance Wing is recovered after landing at Beale Air Force Base, Calif.

Less adds up to a lot more now – about 50 percent more – when it comes to the efficiency of the unmanned RQ-4 Global Hawk as it flies from Beale Air Force Base, Calif., to a forward operating location in southwest Asia.

That's because the aircraft now fly over Canada, instead of heading to Naval Air Station Patuxent River, Md., for refueling and maintenance before continuing the journey.

Since that stop was eliminated in April, maintainers with the 12th Reconnaissance Squadron have noticed a difference in getting the surveillance aircraft serviced and quickly back to the forward operating location. Before the first flight on the new route, a Global Hawk participated in the Canadian exercise, Maple Flag.

"Flying over Canada just reduces

our timetable for getting them transferred over there [southwest Asia]," said Master Sgt. Edwin Sims, 9th Aircraft Maintenance Squadron production superintendent. "It's basically more efficient. Otherwise, we have to go to a staging point in between and have people set up there before the aircraft even gets there. Now, we prep it here and it flies all the way. All we have to worry about are them coming back, so it cuts down on our maintenance."

The 12th Aircraft Maintenance Unit is the first of its kind to provide maintenance and generation capabilities for the remotely powered aircraft.

Staff Sgt. Ryan Conversi, the 12th AMU dedicated crew chief, talked about the changes recently as he monitored a pair of industrial-strength laptop computers before a launch from the Beale AFB flightline.

One of the computers is a vehicle test controller and the other contains Sergeant Conversi's technical orders. Both help him communicate with the pilot who operates the Global Hawk from Beale until it reaches the area of responsibility overseas when pilots there take over the aircraft for landing.

"Flying over Canada has lightened the load on our manpower," Sergeant Conversi said. "We were sending personnel to Patuxent River, but now we don't have to do that. One more stop means one more chance for the aircraft to have problems."

Staff Sgt. William Murray, a 12th AMU avionics specialist, also noted the decrease in manpower needed for maintenance in the first month the Global Hawk flew the new route. The aircraft can usually be prepped within three hours after landing on the Beale flightline, but the new route saves

photo by Lance Cheung





several days from not having to go through Patuxent River.

The Global Hawk's first flight on the northern route to southwest Asia in April marked its first over Canada in a non-training mission. The new route has increased the Global Hawk's efficiency by about 50 percent, according to Capt. Gary Toroni, 12th Operations Support Squadron flight commander.

"Efficiency relates to effectiveness, so if we're able to get the aircraft operating without the variable of sending it to the East Coast before we forward deploy it, we've got manpower back here to do other missions, whether they are for Haiti relief or continental United States missions," he said. "We're constantly swapping aircraft out for maintenance to provide the forward operators with fresh aircraft. The ability to fly through Canada also affords us the opportunity to not

only have the aircraft out there in a shorter time period, but also bring them back so we can do service and maintenance and be able to get them forward-deployed."

The Global Hawks are assigned to the 380th Air Expeditionary Wing from Beale and provide a broad spectrum of intelligence, surveillance and reconnaissance collection capability to support joint combatant forces in real-time peacetime, contingency and wartime operations.

While the Global Hawk has earned a reputation for some maintenance issues, the 12th RW maintainers have noticed a definite positive trend toward keeping the aircraft in action.

A major contributing factor is simply experience, Sergeant Conversi said. Unlike maintainers on other aircraft, there are no 7-skill level specialists on the Global Hawk and no technical

school. Those who work on the Global Hawk have backgrounds on various other aircraft. Once they arrive at Beale, they complete two weeks of field training and learn everything else through on-the-job training.

A tremendous amount of operational checking and coordination are required for Global Hawk maintenance, but maintainers see fewer problems as they become more experienced on the aircraft, Sergeant Conversi said.

"The maintenance on the Global Hawk is getting better [because] we're flying it more now than ever, and that gives us the opportunity to learn new things about the aircraft," Sergeant Conversi said. "The more it flies, the more times we have the repetition and the more we understand how the aircraft works and we become better at troubleshooting." 

Staff Sgt. John Signorelli, a dedicated crew chief for the RQ-4 Global Hawk, attaches a Dash-95 air cart, which provides air to the starter for launch of the unmanned aircraft system. Staff Sgt. Signorelli is a member of the 12th Reconnaissance Squadron, Beale Air Force Base, Calif.



ARCTIC HOUSE CALLS

AIR FORCE MEDICAL TEAM TRAVERSES THE ARCTIC TO BRING HEALTHCARE, EDUCATION TO ESKIMO VILLAGES

STORY BY STAFF SGT. J. PAUL CROXON ✦ PHOTOS BY MASTER SGT. JACK BRADEN

Outside Clarence Jackson's Noorvik, Alaska, home a newly-constructed dogsled sits unused. Its humble construction contrasts with the snow machines that speed past. When Jackson was a boy, the dogsled was the only way to travel from village to village in winter, the only way to bring in supplies or medical care. It was by dogsled that he went to a neighboring village and met his wife Dorcus. To him, it is a symbol of who the Eskimo people are and what remains the same.

Despite the changes in his village: snow machines, Internet, soda, a few of the old ways remain and with them, daily challenges. Villages are still remote; no roads link them in the winter; much of the diet comes from subsistence hunting, fishing and gathering; and medical care is still hard to get. At least one of these challenges was alleviated this year when a joint medical exercise brought a traveling team of military medics to town and, with them, much-needed care that Jackson and his wife would have otherwise had to go without.

A CHANCE MEETING

Operation Arctic Care is an annual

exercise with a different service leading the operation each year. Arctic Care 2010 was an Air Force Reserve-led exercise. Each year the operation sets up in different areas of Alaska. This year the teams landed in Kotzebue, in the far northwest part of the state. When the more than 200 doctors, nurses, medics, veterinarians and others landed in Kotzebue April 17, they were divided into teams.

Most of the teams were to stand up clinics in specific villages and work out of those clinics for the three-week operation. However, one team was different. It was hand-picked and given the mission of traveling between villages to augment the clinic staffs, providing specialty care and education.

This team of a podiatrist, pediatrician, dietician, medics and nurses went to the homes of the Eskimo people and the schools to educate children. Although predominately made up of Air Force Reserve Airmen, the team also had active-duty Air Force and Navy Reserve members.

The teams traveled with all the supplies they would need: sleeping bags, uniforms and food. Traveling by helicopter, snowmobile and even dogsled, the teams moved from village to village like a band

of wandering medics. They slept in the schools and never stayed in one place for more than a few days before moving to the next village. As they traveled, they learned more about the Eskimo people, though it wasn't until they got to Noorvik that they were fully immersed in the culture.

INTO THE VILLAGES

Noorvik is a small Inupiat village about 30 miles north of the Arctic Circle. The village sits along the Kobuk River, which serves as the only highway between Noorvik and the larger cities of Kotzebue and Anchorage beyond. Villagers can canoe down the river in the summer months, but primarily wait until it is frozen to make the journey to the city via snow machine and dogsled. The village is made up of ordered rows of houses, many raised above ground on stilts. At the center of the village sits the school, which is also the center of daily life for most of the Inupiat.

The village has only one medical facility. About the size of an average mobile home, it's staffed with healthcare aides who, though they are not doctors or nurses, use video conferencing to talk with doctors in Kotzebue. Through conversations with these healthcare aides, the



The traveling medical team unloads their gear in Selawik, Alaska from a UH-60 Blackhawk provided by the Alaska Army National Guard.

doctors decide whether a patient needs to be sent to a physician or can be treated locally. Though this system can provide some medical care, procedures as simple as school physicals require licensed doctors or nurses, part of what makes Operation Arctic Care such an important exercise.

Once the team arrived at Noorvik, they immediately set out to find where they were most needed. Some, like active-duty pediatrician Capt. Donald Traver, went to the clinic to help the embedded Arctic Care team with sports physicals and well-baby check-ups. Other travel team members split into other specialized groups.

Lt. Col. Jacki Kaszuba, a Reserve dietitian from Homestead Air Reserve Base, Fla., and Tech. Sgt. Danielle Foster, a Reserve medic from Elmendorf Air Force Base, Alaska, primarily worked out of the schools, teaching classes on nutrition, which is needed because the influx of processed foods and beverages and the decline of the native Eskimo diet has wreaked havoc on the health of the village youth.

“The native diet is actually quite

healthy,” said Colonel Kaszuba. “They traditionally ate a lot of fish, lean meats and local berries. Talking to the kids in the villages, we learn that they drink more than a dozen cans of soda a day.”

VILLAGES ARE STILL REMOTE; NO ROADS LINK THEM IN THE WINTER; MUCH OF THE DIET COMES FROM SUBSISTENCE HUNTING, FISHING AND GATHERING; AND MEDICAL CARE IS STILL HARD TO GET.

— Staff Sgt. J. Paul Croxon

Colonel Kaszuba said the increase in sugar and the tendency for the youth to be more sedentary and not go on the traditional hunts has contributed to the dramatic incidence of diabetes and tooth decay in the children.

“It’s so sad to see children with

most of their teeth missing or rotten,” said Sergeant Danielle Foster, a medic from Elmendorf AFB, Alaska. “We use visual aids to show them how much sugar is in the soda and what it does to their bodies. They seem to respond, especially the younger children.”

While part of the team worked in the clinic and the schools, the remaining team members went out into the village for home calls. That’s how the team met the Jacksons. Mrs. Jackson’s inability to bend down and properly care for her feet had resulted in painful ingrown toenails.

When podiatrist Lt. Cmdr Jeffrey Johnson, a Navy Reservist, Reserve medic Master Sgt. Jenny Carney, and Reserve medic Senior Airman Emily Mormino arrived at the Jackson home, they were greeted with children spilling out of the modest house and flowing around the newly-made dogsleds outside. Inside the home, a small television and DVD player sat in the living room, though the most dominant feature was the crackle of the short-wave radio announcing information every minute or two. “A family needs someone to help fix



1 Navy Cmdr.

Jeffrey Johnson, foreground, a podiatrist with the Navy Operational Support Center in Bangor, Maine, and Master Sgt. Jenny Carney, a medical technician with the Massachusetts Air National Guard's 439th Aeromedical Staging Squadron, make a house call for a diabetic patient in Noorvik, Alaska.

2 Navy podiatrist

Cmdr. Jeffrey Johnson, right, visits Dorcus Jackson, one of the village elders in Noorvik. Commander Johnson is assisted by Senior Airman Emily Mormino, a medic with the Air Force Reserve at Scott Air Force, Ill.

3 Dorcus Jackson

watches intently while the doctor examines her feet for diabetes related symptoms.

their snow machine, someone shot a grizzly and is sharing the meat, the caribou herd was spotted 50 miles to the south." The radio is the lifeline of the village, and announced the arrival of the traveling team and Mrs. Jackson's request for the team to visit her house.

As Dr. Johnson and the other medics made their way into the home, brushed the snow off their feet and introduced themselves, they were greeted with smiles and offers to sit and talk. Taking Mrs. Jackson's feet, washing them and meticulously clipping the toenails, Dr. Johnson talked with Mr. Jackson about the Eskimo people, what daily life was like and asked about the dogsled outside.

Mr. Jackson said the village was waiting for the caribou herd to migrate to stock up on meat. Living primarily on subsistence hunting, the villagers' lives revolve around the seasons and the migrations of the animals.

"In the spring we fish for sheefish and pike," Mr. Jackson said. "We move from the villages to our camps in the wild. It's where we learn to be Eskimos. I didn't get my teaching from schools. I only finished eighth grade. I learned out here. Now the old







Chester Washington, red shirt, a first grader in Noorvik, Alaska mimics a beating heart while a classmate listens to his in a stethoscope. The class was learning basic first aid from Master Sgt. Jenny Carney, a medical technician with the Massachusetts Air National Guard's 439th Aeromedical Staging Squadron in Springfield, Mass.

(opposite) Staff Sgt Jena Hayes, an Air Force Reserve medic with the 442nd Medical Squadron at Whiteman Air Force Base, Mo., entertains a group of first graders in Noorvik, Alaska after teaching them basic first aid.

ways are disappearing, and nobody learns that way anymore.”

As the conversation continued, Dr. Johnson finished his portion of the procedure and Airman Mormino and Sergeant Carney took over the remainder. Mr. Jackson said the villages had been advertising the medical team’s visit for weeks and everyone was eager to meet the team and share with them.

As the team members finished the procedure and began packing their supplies, they asked if there was anything else they could do for the village.

“Come back with your families,” Mr. Jackson said. “We will take them to the camps and teach them to catch sheefish.”

The openness and willingness to share was consistent throughout the villages. Expecting to only talk about medicine and how they could help their patients, team members said they were surprised at the Eskimo people’s willingness to share their lives and homes.

“It’s such an open environment,” said Sergeant Carney. “We learned so much. Like how the elders are admired and respected in the villages and how their lives are changing

with the influx of commercial goods. We’ve even been invited to have dinner with one family, the Pungaliks.”

During that dinner, a feast of caribou, sheefish, dried pike and even muktuk (raw whale blubber), the Pungaliks treated the team like family. They even joked that two of team members were now family as adopted Eskimos.

LIKE A FAMILY

Though none of the team members had met previously, they shared the commonality of medical care as a foundation for a relationship built over the three weeks of the exercise.

“We’re really like a family,” said Master Sgt. Jenny Carney, a Reservist medic assigned to the 439th Aeromedical Staging Squadron. “Our personalities complement each other. We laugh and support each other when we’re with a patient. We’re experiencing this amazing mission as if we’ve known each other for years.”

One experience shared among team members had less to do with the mission and location and more to do with the medical community when Col. Kim Neiman, a nurse and travel team lead, spread the ashes of her mother in the Alaskan wilderness as

the team traveled from one village to another.

“My mother was an adventurer,” Colonel Neiman said. “She was a nurse and a mother. After she retired as a nurse, she joined the Peace Corps at 66 and moved to Yemen. She came back after the country’s civil war, joined the disaster preparedness program with the Red Cross and traveled by herself and then became the parish nurse for the church. Life began for her after she retired.”

For the team, the gesture of sharing such a poignant moment was profound.

“When we got to Noorvik we met the Pungalik family and learned that the grandmother was also a nurse,” said Airman Mormino, a Reserve medic from Scott AFB, Ill. “It was fitting and felt like leaving one nurse and meeting another.”

Colonel Neiman said the process of saying goodbye to her mother in the Alaskan wilderness was perfect. For her, the snow, trees and the company of the team made the moment special. She had become a mentor to a new generation of medics and as the team traveled from one village to another, the dogsled served as a perfect platform to link the past with the future. ♡



MEDICAL TECHNICIAN

Master Sgt. Jenny Carney

“We have the best mission there is. There is nothing better than being able to give back to those who have already given of themselves.”

HOME UNIT/BASE:
439TH AEROMEDICAL STAGING SQUADRON,
WESTOVER AIR RESERVE BASE, MASS.

HOMETOWN:
HOLYOKE, MASS.

JOINED AIR FORCE:
DECEMBER 1998

PRIMARY AFSC:
4N071 MEDICAL TECHNICIAN



STORY BY RANDY ROUGHTON

DOUBLE DUTY: THE EXPERIENCE OF ONE FAMILY WHEN BOTH PARENTS DEPLOY

Every Air Force spouse knows the feeling of having to fulfill multiple roles when the husband or wife deploys. Tech. Sgt. Christina Gamez has been there several times during her husband's deployments. But now the financial analyst is learning a different level of double-duty responsibilities in a dual, active-duty family as she prepares to follow her husband for her own deployment in early 2011.

Sergeant Gamez will soon leave for combat skills training at Camp Bullis near San Antonio, Texas before she begins her 365-day deployment. Her husband, Master Sgt. Rodolfo Gamez, a member of the Air Force Intelligence, Surveillance and Reconnaissance Agency at Lackland Air Force Base, is already in Afghanistan.

The Gamez's are writing a blog during their dual deployments to help prepare other Airmen couples for the double duty they will face if they deploy at the same time. She hopes her "Double Duty" blog will help fellow Airmen to "make those hard choices and follow through on their preparations — to know before they go, making sure

their families and homes are properly cared for while they fulfill their responsibilities during deployment."

"When Airmen deploy, there are so many things left to take care of," Sergeant Gamez wrote in her first blog as she prepared for her deployment, "and the day-to-day stuff is just a small part of it.

"It's the pneumonia that pops up and the brakes going out, or if you're like me and on active-duty yourself, you could get picked up for a special duty assignment and have to pack up your home and get it on the market while he's still gone . . . It's really about being prepared, saving some of the stress and having some kind of positive control.

"For the moms and dads who stay back, maybe some can learn from my lessons, others will understand that their feelings are completely normal. For me it's definitely therapy for what will be one of the hardest years in our lives with both of us being away from the kids.

"For those who are about to deploy, maybe it can help them to understand what to expect if they haven't deployed before. I have the opportunity to view this process from both sides and

help others while helping myself in the process, that's a good feeling."

The first entry in the blog, entitled "From One YA YA to Another," is now available at <http://doubleduty.dodlive.mil/2010/08/18/10/#more-10>.

In her blog, Sergeant Gamez plans to share how her family prepares before deploying and how they cope with separation from each other, as well as their two children — 4-year-old Tomas and 3-year-old Eva. The children have become accustomed to their father being away for work, with two of his six deployments occurring during their young lives. But this time will be different, with both mother and father facing deployments simultaneously.

Her parents planned to take the children when Sergeant Gamez followed her husband to Afghanistan. Tomas, who is scheduled to begin kindergarten next fall, still has the soldier doll with his father's face and recorded messages from his previous Operation Iraqi Freedom deployment. His parents are also keeping a journal for their children to read.

They've also established "goal dates" to give the children days they can mark off the calendar to work toward various rewards. They've seen their trip to Walt Disney World come through; they've seen their dad come back from training and they realize that all those "X's" lead to something.

They are excited about gardening at Grandma and Grandpa's house and picking up where they left off here, and probably most importantly have been practicing Skyping. They

know that it is not perfect and while they may not get to talk everyday, they will get to talk to mommy and daddy as often as possible.

Air Force deployment checklists stress preparing a will and power of attorney, online access to bank and credit card accounts with passwords and pin numbers, and plans for automatic bill payments, along with a family care plan.

Once the couple learned Master Sgt. Gamez was set to deploy again, she had her chief call to find out where she sat in the "rack and stack."

She learned the Air Force Personnel Center already knew her name and she was on the short list. AFPC told her she would more than likely be tasked within two to three months, and that there were several more deployment slots coming down the pipeline. It was at that point the couple decided to take positive control of the situation.

They decided she would volunteer for her own 365-day deployment to lessen the impact on the family, especially the children. They believe their experience shows the importance of Air Force families knowing where they stand in the deployment cycle. The 365-day non-volunteer deployment schedule is based on the Airman's short-tour return date.

Time may move slowly as the couple is separated from the children until their father returns in October 2011, followed by their mother in February 2012. But they're confident their preparation will ensure the best possible situation for their family while their parents are away and upon their return.

Tech. Sgt. Christina Gamez gives her husband, Master Sgt. Rodolfo Gamez, an emotional send-off with their children at the San Antonio International Airport before he deployed to Afghanistan.





RESCUE IN THE GULF

EGLIN AFB BIOLOGISTS, VOLUNTEERS
TAKE PART IN UNPRECEDENTED
SEA TURTLE EGG RELOCATION

STORY BY STAFF SGT. MATTHEW BATES ✦ PHOTOS BY LANCE CHEUNG

Kathy Gault is ready. She can feel the nervous excitement building up inside, telling her it's time to get to work.

Standing on the beach, feeling the ocean breeze caress her, she takes in a deep breath of the clean, salt air and begins trudging through the sand.

She loves this time of day. The sun is just beginning to peak over the horizon, so it is still mostly dark and definitely not hot. There isn't another soul in sight and the only sounds are the faint rustling of weeds and the crunching of her feet on the sand.

Not that this is an early morning nature walk. No, there is a purpose to this hike.

EVENT HORIZON

On April 20, 2010, the oil drilling rig Deepwater Horizon exploded, causing crude oil to pour from a damaged pipe. Over the next few months, oil would continue to drain into the Gulf at a rate of nearly a million gallons a day, sending government agencies, private organizations and a flurry of volunteers scrambling to fix the problem.

Before the oil well was finally capped July 15, more than 200 million gallons had filtered into the Gulf, creating an environmental disaster of historical proportions.

Beaches, once thriving with tourists, were empty. Charter boats that once ferried fishermen around the Gulf were now docked, unused, or

of all shapes and sizes make their way to Eglin's more than 13 miles of beaches, where they go ashore to build nests and lay eggs. And every year, conservationists on the base monitor their activity and ensure the baby sea turtles are left to hatch and make their way to the ocean with no human interference.

This year things are different. This year there's oil.

"If we left the hatchlings to fend for themselves, they would face a certain death," said Robin Trindell, sea turtle management coordinator for the Florida Fish and Wildlife Conservation Commission.

To keep this from happening, it was necessary to relocate the turtle eggs from their nests on Eglin's

(left) The last of 112 Loggerhead sea turtle eggs went to Bob Miller, who carefully packs the eggs into Styrofoam coolers lined with the white sand at Eglin Air Force Base, Florida. Mr. Miller is the Sea Turtle Program Manager with the 96th Civil Engineer Squadron. Because of the critical attachment of the embryo to the inside of the shell, the eggs must be gently lifted without tilting or rotating.

Bob Miller (right) very slowly lowers a Loggerhead sea turtle egg into Styrofoam coolers lined with the white sand, while Kelley Anderson-Nunley (left) uses finger tips to clear sand away from the sides of the egg she will lift into a cooler. Mr. Miller is a 96th Civil Engineer Squadron biologist and the Sea Turtle Program Manager at Eglin and Ms. Anderson-Nunley is a contract wildlife technician with Colorado State University.



And while she has no way of knowing to what extent, her actions this day will set in motion an event never before witnessed on this or any other beach in the United States.

So, she is excited ... and nervous.

She pauses, taking another look out over the waves and into the Gulf of Mexico. She shakes her head, remembering, because before this event could happen here, a different one — a more unfortunate one — had to happen out there.

helping with clean up efforts.

As bad as the impact was along the coast, the Gulf itself was also struggling. Oil slicks covered the surface, endangering fish, birds and other forms of life found there.

Yet, amid all this chaos, a team of natural resources people from Eglin Air Force Base, Fla., are working hard to save one of the Gulf's most threatened species: the sea turtle.

Every year, female sea turtles

beach to Cape Canaveral, Fla, on the Atlantic coast.

The Eglin effort is part of a national plan to relocate more than 70,000 eggs. Beginning June 26, biologists from the U.S. Fish and Wildlife Service, the Florida Fish and Wildlife Conservation Commission, the National Park Service and the National Oceanic Atmospheric Agency devised the plan to excavate the eggs from some 700 sea turtle nests in Mississippi, Alabama and

Sun rises as biologists at Eglin Air Force Base, Fla., begin packing coolers with 112 Loggerhead sea turtle eggs.



Northern Florida and transport them to the Atlantic Coast for hatching and release.

To do this, various “turtle relocation teams” were organized with the task of digging up the nests, removing the eggs and shipping them to Florida’s east coast.

UNDER PRESSURE

Kathy Gault is a member of Eglin’s turtle relocation team. She is an endangered species biologist with Eglin’s Natural Resources Section, and today her mission is to save the sea turtles on her beach.

Trudging through the sand in the early morning hours, her team is looking for the latest loggerhead sea turtle nest that was spotted and marked by volunteer “beachcombers.”

These volunteers drive up and down the beach on all terrain vehicles, looking for turtle “tracks” and nests. If they find a nest, the volunteers tape it off and place a metal screen across the top. The tape is to keep humans away, the screen to keep predators out.

“There are coyotes, crabs and even birds that will try to eat the eggs,” Ms. Gault said. “So the screen just keeps them from being able to dig down and get to them.”

Once they find the nest, Ms. Gault and the other team members immediately set to work. First they remove the tape and metal screen and then they start digging, pushing and pulling away the sand until they reach the eggs.

From here, the job gets more

WE’RE SERIOUS ABOUT SAVING THESE TURTLES AND SHOWING WE ARE GOOD, RESPONSIBLE STEWARDS OF OUR ENVIRONMENT.

— Kathy Gault

intense. Each movement is carefully considered and performed in a slow, meticulous manner. Every effort is made to ensure the eggs are moved as little as possible.

“This is not a fast process by any means,” Ms. Gault said.

The eggs are removed from the nest very slowly, one at a time. The egg’s horizontal orientation must remain the same throughout the process to keep the baby turtles from moving around too much. And, because turtle eggs take an average of 60 days to incubate, the eggs aren’t moved until after they’ve been in the nest for 50 days. This way the turtles are more developed and hardier.

Once removed from the nest, the fragile eggs are packed into sand-filled coolers, which fit snugly into pallets that have shock absorbers attached. The coolers are then transported in commercial climate-controlled vehicles to a high-security facility at Kennedy Space Center on the Merritt Island National Wildlife Refuge. There, they’ll be monitored until they hatch in about 10 days.



RISKY BUSINESS

Moving the turtle eggs isn’t without a certain measure of risk. For one, there’s the danger of damaging the egg or embryo inside.

“We have to be careful when moving the eggs,” Ms. Gault said. “If we tilt one the wrong way, drop one or move it too fast, it could harm the baby turtle inside, possibly even killing it.”

But another risk is that of the turtles’ unknown biological imprints. Sea turtle females reportedly return to the beach of their birth to nest. Relocating Eglin’s turtles to the east coast of Florida may cause them to



Eglin is required by law to protect them — something Ms. Gault and her team are more than willing to do.

“We have a responsibility here,” she said. “And we’re serious about honoring it. We’re serious about saving these turtles and showing we are good, responsible stewards of our environment.”

And the relocation team at Eglin is happy to help. It’s not just a matter of saving a few sea turtle eggs,

but possibly the entire species.

“If we have the chance to do the right thing for this species, then we have a responsibility to do that,” Ms. Gault said.

As the last of the eggs are packed away and loaded onto a waiting vehicle, Ms. Gault is once again excited. Another nest has been successfully moved, more than a hundred eggs given a second chance at life.

The sun has risen high into the sky, the darkness replaced with bathing rays of warm light. The ocean breeze is still there, though, and she drinks it in before exiting the beach.

She pauses, taking one last glance out over the waves and into the Gulf. She smiles to herself, silently thinking.

Because, while one amazing event has occurred here today, another one — one even more amazing — is about to occur on a beach on Florida’s east coast about 10 days from now. 🐢

1 Kelley Anderson-Nunley slowly carries a Loggerhead sea turtle egg to a cooler lined with white sand at Eglin Air Force Base, Florida. Ms. Anderson-Nunley is a contract wildlife technician with Colorado State University. The gloves prevent skin oil from coming in contact with the egg.

2 Kathy Gault (right) and Bob Miller (left) walk in step and use a sedan style lifting rig to keep the cooler containing sea turtle eggs smooth and level as they walk across the pristine white sand beach to their vehicles.

3 The first of several layers of turtle eggs in a cooler at Eglin Air Force Base, Fla.



“Relocating nests at any time is very risky and would be considered only during an unprecedented disaster such as the Deepwater Horizon incident,” Ms. Trindell said. “The undertaking is risky, however it’s felt that the risk of doing nothing and losing the hatchlings is even higher.

Such extreme measures would never be undertaken under most other circumstances.”

Of the six types of sea turtles, four, the loggerhead, green, Kemp’s ridley, and leatherback, lay eggs on Eglin’s beaches. All are designated as endangered under the Endangered Species Act, except for the loggerhead, which is listed as threatened.

Because the turtles are a threatened species on a federal installation,

return to Cape Canaveral instead of Eglin when they next come ashore to lay their eggs. Or, they may return to Eglin.

“Thing is, we just don’t know,” Ms. Gault said. “There’s just no data out there and so any theories are just that — speculation. It’s basically a wait and see approach now.”

But, risks aside, this move, which the scientific community is calling “unprecedented,” was considered the best chance for the sea turtle hatchlings.



In the Belly of the Beast

PHOTOS BY
TECH. SGT. BENNIE J. DAVIS III
AND SENIOR AIRMAN CHRISTOPHER GRIFFIN



(main) Trainees don

personal protective equipment for Mission Oriented Protective Posture Level 4 during a simulated training scenario of a chemical attack at the BEAST. While training at the BEAST complex, trainees will be responsible for field security, complex protection, entry control procedures and operation under simulated attack situations.

A basic trainee Airman

marches towards his security post at the BEAST, an exercise complex which replicates the sights, sounds and emotions Airmen will experience in the deployed environment.

A group of basic

trainees march towards their barracks in MOPP Level 2 protective gear after completing a training scenario for a chemical attack at the BEAST.

A group of trainees

perform self-aid buddy care on a moulage dummy after a simulated mortar attack exercise at the BEAST or Basic Expeditionary Airman Skills Training center.

A basic trainee Airman

puts on cotton glove inserts while donning his Nuclear, Biological, Chemical suit during a simulated attack scenario at the BEAST.

Airman Basic Jody

Bruneau watches over her flight during a field security training exercise designed to help Airman protect the BEAST compound.

1 Airman Basic

Corrie Chaffin provides security during an early morning training exercise at the BEAST.



2



2 Basic Trainees

leave their barracks at the BEAST to attend a briefing on the day's scheduled events.

3 Airman Basic

Carlynn Easterwood keeps hydrated between training scenarios at the BEAST.



4 A basic trainee

yells to other members of his flight to race to a safety bunker during a mortar attack simulation.

5 Airman Basic

Sorpsith Keo restricts perimeter access while guarding a cordoned-off unexploded ordnance after a simulated mortar attack at the BEAST. While training at the BEAST complex, trainees experience scenarios of incoming mortar rounds, complex attacks, roadside bombs, car bombs and unexploded ordnance.





1 Basic trainees rely on each other to inspect and secure equipment during buddy checks.

2 Trainees are ordered to cover their lips and listen to instructions by their element leader after making too much noise inside a safety bunker during a simulated mortar attack at the BEAST.

3 Airman Basic Matilda Rodriguez listens to instructions for authentication procedures for personnel gaining access into an entry control point during a field security training exercise designed to help Airman protect the BEAST compound.

4 Basic trainees at the BEAST wear their protective masks, commonly referred to as gas masks, during a training scenario. The protective mask is designed to filter harmful chemical and biological agents to allow the wearer to breathe safely.

1



2

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4

STORY BY RANDY ROUGHTON ✦ PHOTOS BY TECH. SGT. BENNIE J. DAVIS III

MASTER OF THE SKY

'HE WAS GOING FASTER THAN ANY MAN IN HISTORY'

The West Virginia teenager wasn't impressed by his first close-up look at an airplane after it made an emergency landing near his house. Heck, it was 1930 and he didn't even know what a pilot was. The 16-year-old, who was keen on hunting squirrels, could not have dreamed he would become a history-making hunter in the sky any more than he could have foreseen he would earn the right to be called the fastest man alive.

And today, retired Brig. Gen. Chuck Yeager keeps no pilot's helmet, flight suit or any other memorabilia from his six decades in cockpits. The souvenirs from his achievements are primarily his memories.

"Obviously, there are a few photos you hang on to," he says. "But, to me, a piece of GI equipment belongs to Uncle Sam. It doesn't belong to you. You have to take care of it until you wear it out, trade it in and get a new one."

Others have a different view of Yeager memorabilia; such as the owners of Riebes Auto Parts store in Grass Valley, Calif., a town of about 12,000 people where General Yeager now lives with wife Victoria. The store, owned by a family friend in the town 50 miles north of Sacramento, boasts a Yeager

Room with photos adorning the walls and depicting major milestones in the aviation legend's career. This small town in the Sierra foothills is one of northern California's most famous gold rush towns and serves as an appropriate retirement location for a man who has enjoyed the outdoors since childhood.

Grass Valley residents have become accustomed to seeing the Yeagers' car around town with the X-1 personalized license plate.

The Air Force is honoring the general, this time as the inaugural aviation hero featured in a new Air Force Public Affairs portrait project that showcases veterans and their contributions to the Air Force. "Pioneers in Blue" features Airmen from the Army Air Corps in World War I through the present in a photo gallery at the Pentagon. His photo, the first to be unveiled, went on display Sept. 18 in conjunction with the Air Force birthday celebration.

But the most vivid snapshots are in his mind, which even after 87 years, remains a virtual museum of memories from when he became "master of the sky." With a disclaimer not to trust his memory because "it has been more than 60 years," the general recounts details — from his 13 kills as a World War II fighter pilot to his own downing over Nazi-occupied France. He eventually comes to the part of becoming the first pilot

to break the sound barrier on Oct. 14, 1947, only 26 days after the Air Force became a separate service.

Some of his accomplishments attracted more publicity than others, but to General Yeager, everything he did in a career that spanned four wars and more than 18,000 flying hours in 341 types of aircraft can be summarized in one word: "Duty. Everything I did was for duty. There are lots of Airmen in the Air Force who do different kinds of duty. I was just involved in the leading

edge of research of supersonic flight and in the development of weapons systems in modern airplanes."

BACKWOODS BOY

The general developed his prowess as a hunter as a boy in the Appalachian foothills. He says he learned the art of "deflection shooting," or leading prey and aiming for where it will be when he fires his weapon.

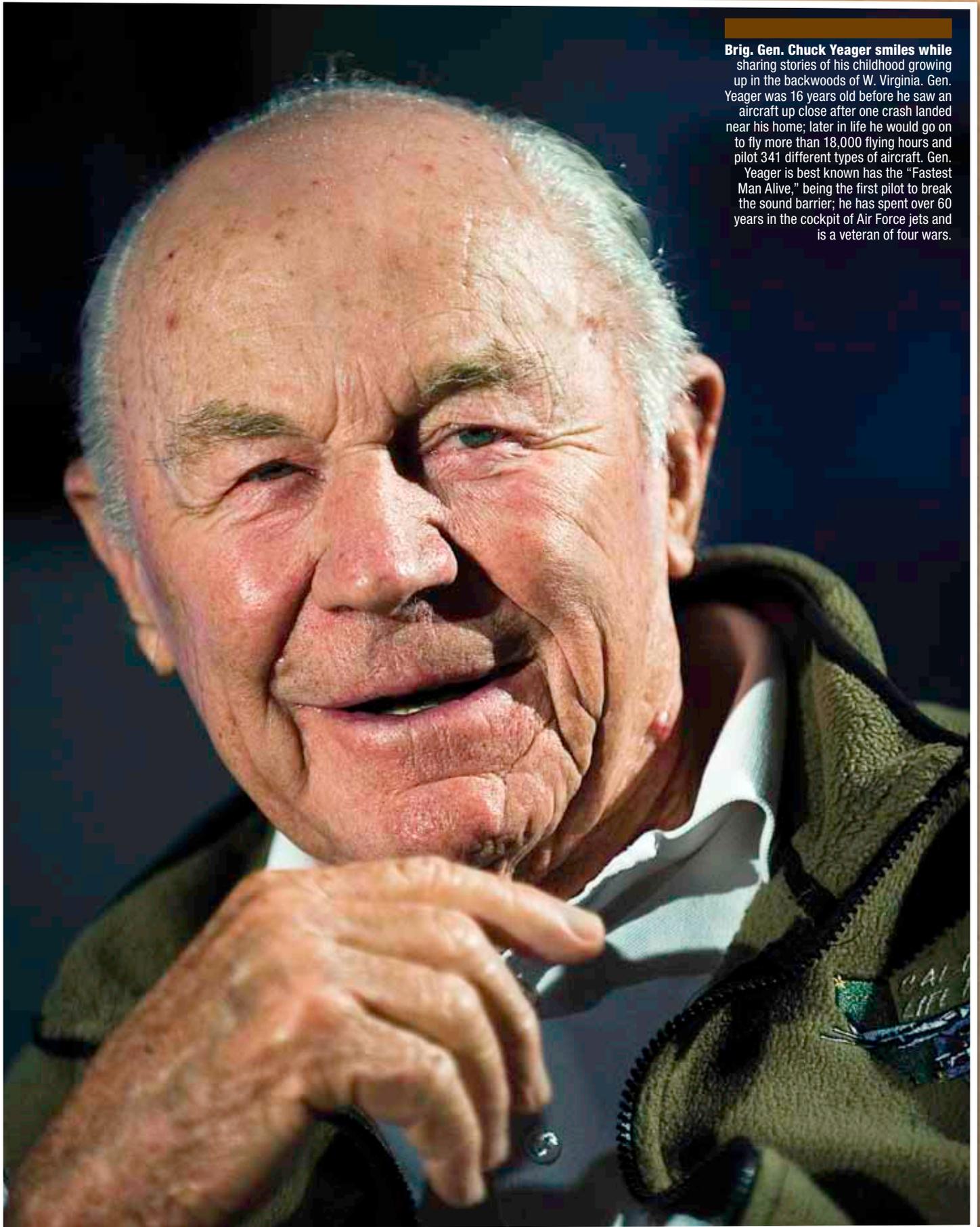
"That is exactly what you have to do when you're dog-fighting in airplanes," General Yeager says. "All of the leading aces of fighter pilots were raised as rural kids. You have to know what the target is going to do."

But, his West Virginia childhood didn't exactly prepare him for flying. General Yeager joined the Army Air Corps at the age of 18 as an aircraft mechanic and was transferred to Victorville [Calif.] Air Base after Pearl Harbor and worked on AT-11 Kansan aircraft. He was accepted for pilot training under the flying sergeant program in July 1942, but became nauseous the first time he flew in a C-45 Expeditor two months after beginning training.

"I thought to myself, 'You've made one big mistake,'" General Yeager says with a laugh. "But when I got into flying school, I had something to do instead of just riding in the airplane and it got a little better."



Then-Capt. Chuck Yeager poses next to the X-1 he piloted on Oct. 14, 1947, after he broke the sound barrier. He nicknamed the plane "Glamorous Glennis" after his first wife, who died in 1990.



Brig. Gen. Chuck Yeager smiles while sharing stories of his childhood growing up in the backwoods of W. Virginia. Gen. Yeager was 16 years old before he saw an aircraft up close after one crash landed near his home; later in life he would go on to fly more than 18,000 flying hours and pilot 341 different types of aircraft. Gen. Yeager is best known as the "Fastest Man Alive," being the first pilot to break the sound barrier; he has spent over 60 years in the cockpit of Air Force jets and is a veteran of four wars.

After completing pilot training in March 1943, General Yeager was selected as a P-39 Airacobra pilot with the 363rd Fighter Squadron in Tonopah, Nev., for one important reason.

"I could dogfight better than some of the other guys could," he explains matter-of-factly.

The young flyer didn't have to wait long to get his first taste of combat after arriving in England in November 1943. On March 4, 1944, American bombers took off for Berlin but were recalled, except for the group that included Yeager's P-51 Mustang. He saw his first German ME-109, shot it down, and learned a lesson that would serve him well in the many combat kills that came later.

"I learned, really quickly, never to shoot at an airplane from directly behind it," he says. "Big pieces of wing and tail will come back and they'll take you right out of the sky if they hit you."

One day after his first aerial kill, his luck turned when three German Focke-Wulf FW-190s shot him down and he bailed out over occupied France. Bleeding and injured and armed only with a .45-caliber pistol, he landed about 50 miles east of Bordeaux. German soldiers searched for him in the forest. They didn't

have a chance.

"It was easy for me," General Yeager says. "There's not a German in the world who can catch a West Virginian in the woods. That's just the way it is."

The next morning, General Yeager met a French woodcutter, who brought back a member of the Maquis, the French resistance group who hid the young Airman in a barn while the Germans continued their search. General Yeager stayed with the Maquis near Nerac, a town in southwestern France, for several months and he later set fuses for their bombs, another skill honed in his childhood when he would help set explosives for his father's natural gas well drilling business.

The French eventually helped General Yeager escape to Spain through the Pyrenees Mountains.

"Lots of guys owed their lives to the French," he said. "I know I do, and they were wonderful, wonderful people."

The United States offered Spain, a neutral nation during World War II, gasoline in exchange for the parole of American pilots like General Yeager. More than 2,500 American pilots were interned in Spain until they were taken to the British at Gibraltar. He

went back to England on May 15, 1944, but faced an early trip home from the war because of a policy that prevented pilots from returning to combat after being shot down to protect the lives of people like the French resistance group who protected him from the Germans.

But, he wasn't ready to go home. The pilot talked to a string of colonels in his chain of command until eventually he ended up in the office of Gen. Dwight D. Eisenhower, the Supreme Allied Commander in Europe.

"He told me, 'I normally don't see guys like you, but I just wanted to meet a guy who didn't want to go home,'" General Yeager says. "He said, 'We've got guys shooting themselves in the foot to go home. Why don't you want to go home?' I just said I hadn't done my job.

"I've done five missions and I'm trained. I've got more fighting left to do," he said he told General Eisenhower. "He said he couldn't give me permission to go back, but he'd take it up with the Department of Defense. What he knew, and didn't tell me, was that was eight days before D-Day. Once D-Day surfaced, all of the free French resistance groups became an open army, so there was no longer any reason to

keep me out of combat."

MOVING INTO HIGH SPEED

By the end of the war, General Yeager had flown 64 combat missions and shot down 13 enemy aircraft. He was the first American pilot to down five aircraft in one mission, or to make "ace in a day."

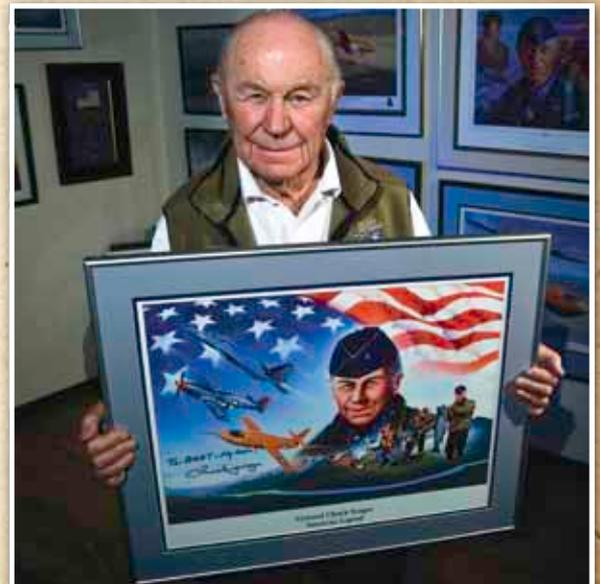
After World War II, he served as a test pilot at Wright Field, Ohio, before he was selected as the Bell X-1 project officer for high-speed flight research at Muroc Air Base, Calif., which became Edwards AFB two years later. Quonset huts, sagebrush and Joshua trees shared the Muroc landscape with Rogers Dry Lake, a flat expanse covered with a couple of inches of water in the winter and dried out in the spring.

The British had already tried to break the sound barrier but test pilot Geoffrey de Havilland was killed in an attempt to reach Mach 1 in a British Meteor jet.

"When I was assigned to the X-1, I gave no thought to the outcome of whether the airplane would blow up or something would happen to me," General Yeager says. "If you have no control over the outcome of something, you forget about it. I learned that in combat. In our squadron of 29 pilots, 23 of them got killed. It was a lethal job. "You've got a mission to fly,

Brig. Gen. Chuck Yeager talks about his historical flight becoming the first pilot to break the sound barrier, flying at Mach 1 at an altitude of 45,000 feet inside the Bell X-1 jet-powered research plane on October 14, 1947. At the time many scientist believed the sound barrier could crush an aircraft, yet Gen. Yeager stepped forward and accepted the challenge to become the "Fastest Man Alive."

Brig. Gen. Chuck Yeager holds his favorite lithograph depicting images of his life and career as an Air Force pilot inside the "Yeager Room" at the Riebess Auto Parts store, owned by a family friend, near his home in Grass Valley, Calif. Gen. Yeager was the first pilot to break the sound barrier on October 14, 1947, while flying the experimental X-1 at speeds exceeding Mach 1.





so you fly. It wasn't my job to think about that. It was my job to do the flying."

On Oct. 14, 1947, then Captain Yeager piloted the X-1, an experimental aircraft designed like a .50-caliber bullet because bullets were believed to be stable at supersonic speeds, at 45,000 feet with the goal of achieving Mach .97, almost 20 mph slower than the speed of sound. The X-1 bore the inscription "Glamorous Glennis" in honor of his first wife, Glennis. Two days earlier, he'd broken two ribs while horseback riding in the Mojave Desert. To avoid being scrubbed from the mission, he told only his friend and flight test engineer, Dr. Jack Ridley, who thought of the idea of using a 10-inch piece of broomstick to help him raise the X-1's door.

The X-1 dropped from a B-29 Superfortress at 25,000 feet to save fuel because the

liquid-powered airplane only had 2½ minutes of power under full thrust. Once he reached Mach .93, the X-1 developed heavy buffeting and shaking, so he accelerated to Mach .96. The turmoil immediately stopped.

"We were a little surprised we got above Mach 1 without the little airplane flying apart," General Yeager said. "We were sitting there at nearly supersonic speed and the airplane was smoothing out. No other airplane had ever been there."

"It was as smooth as a baby's bottom," General Yeager was quoted afterward. "Grandma could be sitting up there sipping lemonade."

Celebration at Muroc was somewhat muted because the X-1 was only one of 10 airplanes General Yeager was testing at the time. The news of breaking the sound barrier remained top secret until Aviation Week

magazine broke the story two months later. Air Force Vice Chief of Staff Gen. Hoyt Vandenberg didn't confirm this achievement until June 1948. A Newsweek magazine story proclaimed the general "the fastest man alive."

"Obviously, the most important thing I did was the success we had with the X-1," he said. "When we got above Mach 1, what did that do? It opened up space and everything else for us."

General Yeager also became the first pilot to fly at more than twice the speed of sound in the Bell X-1A on Dec. 12, 1953, and was the first American to fly a Soviet MiG-15 after a North Korean pilot defected to South Korea with the plane.

After General Yeager retired in 1975, he served the Air Force as a consultant test pilot at Edwards AFB for an annual salary of \$1.

A master of the sky even at 87 years old, Brig. Gen. retired Chuck Yeager, stands at a local airport near his home in Grass Valley, Calif. Gen. Yeager is an aviation legend with the U.S. Air Force after becoming the first pilot to fly faster than the speed of sound, breaking the sound barrier on Oct. 14, 1947, only 26 days after the Air Force became a separate service.

"I thought it was great," he says. "It meant I could fly all of the new airplanes and work on the development of new weapons systems. I spent a lot of time down there, and it gave me something to do after my wife Glennis died in 1990."

General Yeager made his last flight as a military consultant on Oct. 14, 1997, the 50th anniversary of his history-making flight in the X-1. He again observed the occasion by once again breaking the sound barrier, this time in an F-15.

STORY BY RANDY ROUGHTON • PHOTO BY XXX XXXX

PLAYFUL TO PRO-TECTIVE: MILITARY

The day in the whelping barn at Lackland Air Force Base, Texas, when we first met the eight puppies featured in Airman's military working dog series, one question became our focus. We wanted to know how these Belgian Malinois pups, then 8 weeks old and as playful as your typical household dog, would develop into the military working dogs that protect our troops and innocent citizens at some of the world's most dangerous and violent places.

The series is designed to follow one of the puppies from birth to the day it becomes a fully-trained military working dog. The day our photojournalist, Tech. Sgt. Bennie Davis, and I were introduced to the puppies about two months after their June 2 birth, they were nipping at our feet, falling over their siblings, with paws landing helter-skelter on our legs. On our next visit about a month later, one of the puppies playfully crawled all over the back of photojournalist Lance Cheung and even tried to use his camera as a toy by dragging it across the floor.

As cute as these puppies were, I found it difficult to imagine the work both trainers and foster parents would face to develop them for the important work they have in their future. But even then, the puppies showed signs of their promise in what trainers call the piranha stage, when they try to latch on with their jaws on anything within striking distance, such as our pants and shoestrings.

We also saw some of the natural attributes of the breed when the breeding program's puppy development specialists gave the litter the puppy aptitude test at the 8-week point. This test evaluates the puppies for social attraction; social and elevation dominance; retrieval; and sight, sound and touch sensitivity. But the three main things the specialists want to see in the dogs are prey and hunt drive and social attraction to a handler. All three attributes will be crucial to their future as military working dogs.

But we saw even more signs

of promise the next time we saw the puppies, after they were placed in their foster homes at 12 weeks. Foster parents aren't expected to teach obedience, as they might do with their own pets. Their responsibilities are mainly to make sure the dogs remain healthy and to introduce them to as many experiences as possible while they're in their homes.

The most surprising thing I learned about fostering one of these dogs is that the ones with the most potential are often the most difficult to have in your home. As one foster parent in our story described it, fostering a military working puppy is like having an extremely intelligent child — one who's always exploring, testing and finding trouble. "It's really like having a toddler in your house again," said Bernie Green, a 341st Training Squadron military working dog supervisory training instructor who fostered one of the puppies in the R litter. Foster parents endure their dogs' crate and potty training, biting, chewing and digging, as well as the barking and whining. Sarah Dietrich, another foster parent, told us of her work with her third military working puppy, Respect. They also have a much stronger motor than most personal dogs. A walk around the block isn't going to tire out a Belgian Malinois puppy. It will just get them ready for more exercise.

But fosters also get to see their puppies constantly exercising their considerable problem-solving skills. For example, one puppy's favorite hobby is

putting her toy in a difficult place, such as in a hard-to-reach corner or under a bed, just to figure out how to retrieve it again. But all of the drama becomes worthwhile as the foster parents begin to see their dog's future more clearly. The dogs grew quickly, just in about a half-dozen meetings our staff had with them. They are physically beginning to resemble the size they will be as adult working dogs, when they will range from 55 to 75 pounds. But the most important changes that will happen will come during training, when they go through what amounts to college for the military working dog. This is when they learn basic obedience and skills like attacking on command and sniffing for specific substances.

Watching the puppies in action so far has given us part of the answer to the question we're seeking. Respect and her siblings already show their problem-solving abilities and natural talents for sniffing and focus on potential prey, which they will all need when they eventually graduate from military working dog training and meet their first handler. I've a feeling we've just begun to answer the question about how this transformation happens. The next part of the answer should come when the puppies return from foster care to Lackland for puppy training sometime this month.

Randy Roughton

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NOVEMBER
**NATIONAL
AMERICAN INDIAN
HERITAGE MONTH**

 **Airman**

THE FINAL FRAME



MORNING WITH DADDY | photo by ANDREA HUBBARD

Andrea Hubbard captured her husband, Tech. Sgt. Daniel Hubbard, and their children, as he prepared to go to work at Cannon Air Force Base, N.M. The photo, "Morning with Daddy," earned first place in the MyAirForceLife.com contest, and she received new camera equipment and a showing of her photograph at the Pentagon.

Airman