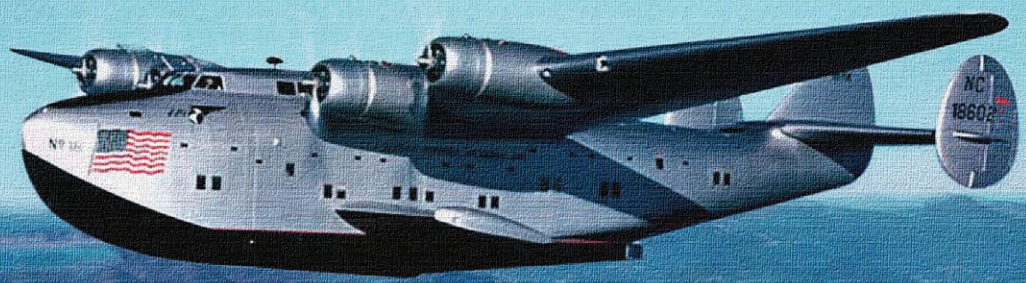
A/TQ

AIRLIFT/TANKER QUARTERLY
Volume 24 • Number 3 • Summer 2016



Westbound – Around the World

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A/TQ Award of Excellence Winner 2016

ON THE COVER: The"Pacific Clipper." On December 7, 1941, a Pan American Airways Boeing 314 flying boat called the "Pacific Clipper" began an unscheduled westward bound circumnavigation of the world starting in the opening hours of America's entry into World War II. Defying the odds, the crew of the "Pacific Clipper," proved their mettle during the 209 hour, 31,500 mile, first-ever commercial airliner flight around the world. (A/TA Photo montage by Collin Bakse).

"That's too coincidental to be a coincidence."

—Yogi Berra

I mention the above quote because it so perfectly illustrates the feeling I got opening a recent email from the National WASP WWII Museum concerning the Museum's recent acquistion of the fuselage, wings, engines, and parts of a UC-78 "Bamboo Bomber." And, amazingly, this particular UC-78 is one of the planes that was actually flown by the Women Airforce Service Pilots (WASP) at Avenger Field during World War II. Their very own warbird has come home to roost!

What made the annoucement seem to me to be "too coincidental to be a coincidence," was the fact that the last edition of *A/TQ* featured a story, by frequent *A/TQ* contributor Murdoch Moore, titled *The Bataan Airlift* which described the derring-do of what came to be known as the "*Bamboo* Fleet," and another story titled *The WASPs and America's World War II Air Mobility/Logistics,* a scholarship winning essay by AFROTC Cadet Kayshel Trudell, about the WASPs contributions to the Second World War. I took it as a sign that I should tell air mobility community folks who don't know about the National WASP WWII Museum's effort to restore a piece of WASP history about the project!

The "Bamboo Bomber" that the Museum acquired is a Cessna UC-78, USAAF Serial No. 42-14004, and it was used by the WASP as a twin engine trainer. Although it's not an actual bomber, it was nicknamed the "Bamboo Bomber" because of its primarily wooden construction.

Aviation collector and historian Scott Glover brought this aircraft to the attention of the Museum board after his research proved that it was one of 40 UC-78s that had been based at Avenger Field during 1943, and it is believed to be the ONLY surviving twin engine trainer flown by the WASP at Avenger Field. It's a really rare find!

Of course, as with all projects of this kind the Museum would like to start restoring the "Bamboo Bomber" as soon as possible, but a lot of money is needed to ensure that the Museum will have the funds lined up before it can proceed. Restoring a wounded WWII warbird like this one is a project that will require the support of generous, patriotic, and aviation loving Americans, like the members of the A/TA, to help reach the goal.

If you are interested in supporting this worthwhile project please visit the WASP Museum's website, waspmuseum.org, to find out more about the project.

I also encourage you to visit the A/TA website, atalink.org, and register for the **48th Annual A/TA Convention and AMC and A/TA Symposium & Technology Exposition** – it will be here before you know it!

Collin Bakse, editor

A/TA UpFront

Announcements & Stories from, and/or about Association Business, Members and Chapters

A/TA 2016

AMERICA'S MOBILITY FORCE
FORGED THROUGH ALLIANCES, PARTNERSHIPS AND TEAMWORK.

48TH ANNUAL
AIRLIFT/TANKER ASSOCIATION
CONVENTION
27-30 OCTOBER 2016
AND THE
AIR MOBILITY COMMAND AND A/TA
SYMPOSIUM & TECHNOLOGY EXPOSITION
27-30 OCTOBER
GAYLORD OPRYLAND
RESORT AND CONVENTION CENTER
NASHVILLE, TENNESSEE

RULES OF ENGAGEMENT AVAILABLE ONLINE AT atalink.org

REGISTER ONLINE OR USE THE REGISTRATION FORM ON PAGE 16

Future Convention Location

2017

Marriott World Center, Orlando

Note: Convention Start Dates historically have ended up 31 October plus or minus a week or so. While nothing is "guaranteed," that bracket is a reasonable aim point.

$400 A/TA Enlisted Education Grants Available!

The A/TA Enlisted Education Grant Program is designed to help A/TA enlisted members achieve their educational goals. Recipients are free to use their $400 Enlisted Education Grant money for tuition, books, transportation, etc…

Airlift/Tanker Association Enlisted Education Grants are available to Air Force, Air National Guard and Air Force Reserve A/TA members pursuing undergraduate or graduate degrees.

Details and forms are available online at www2.atalink.org

It's easy to find out if you meet the criteria – if you do you can apply today!

The A/TA wants to help you continue your education!

A/TA Salutes the Life of Founding Member Colonel Jimmy Maturo, USAF (Ret)

1930-2016

The Airlift/Tanker Association salutes the life and legacy of founding member Colonel Jimmy Maturo, USAF (Retired), who took his final flight into the wild blue yonder at the age of 85 in Niceville, Florida on May 24, 2016. In 1969, then-Major Maturo played a key role in organizing a reunion of those who had served with the 834th Air Division in Vietnam, from which emerged the Airlift Association and its successor, the Airlift/Tanker Association. As a founding member, Colonel Maturo continued to actively support the organization for over 46 years, most recently attending its 2015 convention.

Colonel Maturo was born in Nashville, Tennessee on September 13, 1930 to Frank and Rose Mary Lewis Maturo. After graduating from high school in Georgetown, Kentucky, Maturo enlisted in the Air Force and served for four years, after which he returned to the University of Kentucky and earned a bachelor's degree in business administration. While there, he served as the Cadet Wing Commander of the Air Force ROTC unit before being commissioned in 1956. Following pilot training in Arizona, Colonel Maturo was assigned to the 44th Air Refueling Squadron at Chennault AFB, Louisiana flying KC-97s in Strategic Air Command (SAC). Two years later, he was transferred to SAC's 17th Air Division at Whiteman AFB, Missouri. In July 1963, he moved to the 3902nd Operations Squadron at Offutt AFB, Nebraska, where he flew T-33, T-39 and KC-97 aircraft plus served as a flight instructor, evaluator and conducted ground training schools.

Beginning in August 1965, Maturo attended the Air Command and Staff College at Maxwell AFB, Alabama. His association with tactical airlift began shortly thereafter, with him eventually flying C-7s, C-123s and C-130s.

From October 1966 to November 1967, Col Maturo flew 293 combat missions for a total of 371 combat flying hours while assigned to the 19th Air Commando Squadron at Tan Son Nhut Air Base, South Vietnam. He also served as special assistant to the commander of the 834th Air Division and flew combat missions in fighter and forward air control aircraft assigned to Vietnam.

From Vietnam, Colonel Maturo was assigned to the Pentagon as a special assistant to the director of Operational Requirements and Development Plans. In February 1976, he was assigned to be aide de camp to the Twenty Second Air Force Commander at Travis AFB, California. Later that year, he became chief of the Airlift Control Element Wing Division Affiliation Branch of Twenty Second Air Force while also serving as a C-141 aircraft commander.

Colonel Jimmy Maturo, USAF (Ret) (C) recieves a plaque commemmorating his status as a Founding Member of the Airlift/Tanker Association at 37th Annual A/TA Convention and Symposium in Nashville, Tennessee in the fall of 2005. (A/TA Photo by Collin Bakse).

Colonel Maturo graduated from the Industrial College of the Armed Forces at Fort McNair, Virginia in August 1973, then became the Operations Officer for the 776th Tactical Airlift Squadron at Ching Chuan Kang Air Base, Taiwan, a subordinate unit of the 374th Tactical Airlift Wing. In December of that year, the wing relocated to Clark Air Base in the Republic of the Philippines, and Colonel Maturo took command of the 776th Tactical Airlift Squadron there. He later moved up to serve as the wing's assistant deputy commander for operations.

In December 1975, Colonel Maturo was reassigned to the Pentagon, where he served as the chief, Airlift and Tactical Forces Development Branch, Directorate of Plans Division. He later became assistant chief of the Airlift Forces Division. Colonel Maturo assumed command of the 374th Tactical Airlift Wing in August 1977 at Clark Air Base, which at that time was the largest airlift organization in the Pacific theater of operations.

In October 1978, Colonel Maturo was selected to command the newly reactivated 834th Airlift Division at Hickam AFB, Hawaii, which had been inactivated at the end of 1974. In that position, he assumed responsibility for managing all Military Airlift Command (MAC) resources in the Pacific area, acted as the single commander for MAC airlift units in the Pacific theater, and served Pacific Air Forces (PACAF) commander as the special assistant for airlift. The 834th commanded theater airlift forces for PACAF, performed airlift war planning and exercise planning, plus operated aerial ports for the air movement of personnel, cargo, equipment, patients, and mail throughout the theater.

Colonel Maturo retired from the United States Air Force in 1983 after serving his country for 27 years. His military decorations include the Distinguished Flying Cross, Bronze Star Medal, Meritorious Service Medal with Oak Leaf Cluster, Air Medal with nine Oak Leaf Clusters, Air Force Commendation Medal with Oak Leaf Cluster, among many others.

After leaving the Air Force, Colonel Maturo was the Mid-Pacific Manager for Emery Worldwide Air Freight Company in Hawaii and later worked for American Airlines Government & Military Sales in Washington, DC.

Colonel Maturo continued to support the Airlift Association as a founding member, which became the Airlift/Tanker Association in 1992. During a special recognition ceremony held during the Awards Banquet at the 37th Annual Airlift/Tanker Association Convention & Symposium on October 30, 2005, Colonel Maturo received a plaque replicating a monument to the founding members of A/TA, which is now located on the Airlift/Tanker Walk of Fame at Scott AFB, Illinois

He is survived by his loving wife of 59 years, Greta Maturo, as well as numerous friends and family members. A memorial service was held on June 7, 2016 at 2:00PM at Emerald Coast Funeral Home in Fort Walton Beach, Florida. Colonel Maturo will be buried at Arlington National Cemetery with full military honors.

"The A/TA family is saddened at the loss of one of our founding fathers last week, Colonel Jimmy Maturo. It's always tough to lose a part of our history, but Colonel Maturo's love for our organization will live on in our hearts. May he rest in peace."

—General Art Lichte, USAF (Ret.), A/TA Chairman

"I first met Jimmy nearly fifty years ago in Vietnam when we were both assigned to the 834th Air Division. As past Chairman and co-founder of A/TA, I can honestly say Jimmy, also as a co-founder, was one of our biggest supporters. He was extremely proud of our Association and will be greatly missed, but not forgotten. God bless to his family."

—Col. Bob Ellington, USAF (Ret.), A/TA Co-Founder & former A/TA Chairman

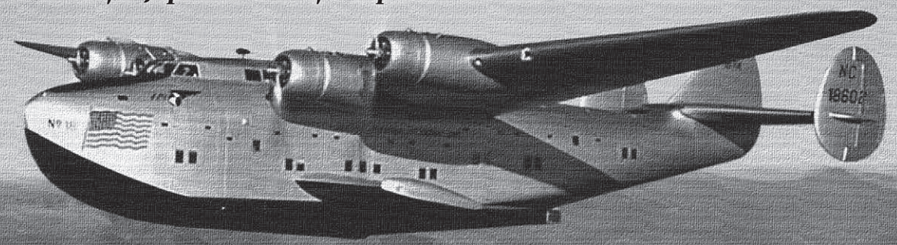
"Colonel Jimmy Maturo was always willing to help and never hesitated to listen and provide sage advice. He was a great American, a perfect Airman and truly a quiet professional. I remember a discussion we had about the success of A/TA and Jimmy stated: "I don't care who gets credit as long as we work together as a team and make A/TA a great association providing for our Airman, officers and enlisted." I will miss Jimmy at our conventions and I will miss his mentorship and more importantly his friendship. God Bless!"

CMSgt Mike Reynolds, A/TA Immediate Past President

Cover
STORY

On December 2, 1941, a Boeing 314 seaplane departed Treasure Island, California. Called the "Pacific Clipper," the plane, manned by an experienced crew, was under the command of a veteran Pan American Airways pilot, Captain Robert Ford. The plane and crew were embarking on a round-trip commercial passenger flight to Auckland, New Zealand. On the way to Auckland, the plane made scheduled stops in San Pedro, California; Honolulu, Hawaii; Kanton Island, Kiribati; Suva, Fiji; and finally Noumea, New Caledonia.

On the morning of December 7, 1941, the "Pacific Clipper," with 12 passsengers aboard, left New Caledonia for Auckland. A few hours into the flight, Radio Operator John Poindexter received a coded message: the Japanese had attacked Pearl Harbor. Along with the rest of the United States, the "Pacific Clipper" aircraft and crew were now effectively at war. Hoping to avoid an encounter with Japanese forces, the crew quickly took precautionary measures – they turned off the radio, steered a few dozen miles off their planned route and stationed two crew members in the navigation cupola at the top of the fuselage to watch for Japanese aircraft. Captain Ford took out his revolver...



Westbound – Around the World
The Stirring Saga of the Boeing 314 *"Pacific Clipper"*

This Article was compiled from many sources, among them: *The Round The World Saga of the "Pacific Clipper"* by John A. Marshall; the *Clippers as War* section of The Flying Clippers Website; The PanAm Historical Foundation's Website: PanAm.org; The National Air & Space Museum Website; Captain Robert Ford's obituary by Wolfgang Saxon, and Wikipedia.

On December 7, 1941, a Pan American Airways Boeing 314 flying boat called the "Pacific Clipper" began an unscheduled westward bound circumnavigation of the world starting in the opening hours of America's entry into World War II. Defying the odds, the crew of the "Pacific Clipper," Captain Robert Ford, First Officer John H. Mack, Second Officer/Navigator Roderick N. Brown, Third Officer James G. Henriksen, Fourth Officer John D. Steers, First Engineer Homans K. "Swede" Roth, Second Engineer John B. "Jocko" Parish, First Radio Officer John Poindexter, Second Radio Officer Oscar Hendrickson, Third Radio Officer Eugene Leach, Purser Barney Sawicki and Assistant Purser Verne C. Edwards, proved their mettle during the 209 hour, 31,500 mile, first-ever commercial airliner flight around the world. (A/TA Photo montage by Collin Bakse).

Pan America Airways' fleet of fabulous flying ships, known as the *Flying Clippers*, consisted of Sikorsky S-40s, Sikorsky S-42s, Martin M-130s and Boeing 314s, the latter being at the heart of a stirring saga of airmanship, stamina and guts.

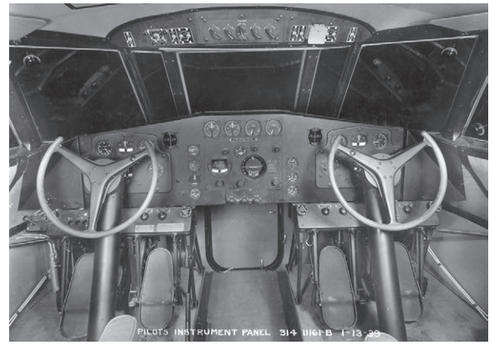
The Boeing 314 Clipper was a long-range flying boat produced by the Boeing Airplane Company between 1938 and 1941. One of the largest aircraft of the time, it used the massive wing of Boeing's earlier XB-15 bomber prototype to achieve the range necessary for flights across the Atlantic and Pacific Oceans. Twelve 314 Clippers were built; nine were brought into service for Pan Am and later transferred to the U.S. military. The remaining three were sold to British Overseas Airways Corporation (BOAC) by Pan Am and delivered in early 1941. (BOAC's 3 Short S.26 transoceanic flying-boats had been requisitioned by the RAF).

The "Pacific Clipper," tail number NC 18602, onloads passengers bound for the Far East at Pan American's loading dock, Treasure Island, San Francisco, California. Circa 1940. (Boeing courtesy photo).

Pan American had requested a flying boat with unprecedented range that could augment the airline's trans-Pacific Martin M-130. Boeing's bid was successful and on July 21, 1936, Pan American signed a contract for six. Boeing engineers adapted the cancelled XB-15's 149 ft (45 m) wing, and replaced the 850 hp (630 kW) Pratt & Whitney Twin Wasp radial engines with the 1,600 hp (1,200 kW) Wright Twin Cyclone. Pan Am ordered six more aircraft with increased engine power and capacity for 77 daytime passengers as the Boeing 314A.

The huge flying boat was assembled at Boeing's Plant 1 on the Duwamish River in Seattle, Washington, and towed to Elliott Bay for taxi and flight tests. The first flight was on June 7, 1938, piloted by Edmund T. "Eddie" Allen. At first the aircraft had a single vertical tail, and Allen found he had inadequate directional control. The aircraft returned to the factory and was fitted with endplates on the ends of the horizontal tail in place of the single vertical fin. This too was found to be lacking and, finally, the centerline vertical fin was restored, after which the aircraft flew satisfactorily.

The 314 used a series of heavy ribs and spars to create a robust fuselage and cantilevered wing, obviating the need for external drag-inducing struts to brace the wings. Boeing also incorporated Dornier-style sponsons into the hull structure. The sponsons, broad lateral extensions at the waterline on both sides of the hull, served several purposes: they provided a wide platform to stabilize the craft while floating on water, they acted as an entryway for passengers boarding the flying boat and they were shaped to contribute additional lift in flight. Passengers and their baggage were weighed, with each passenger allowed up to 77 pounds (35 kg) free baggage allowance (in the later 314 series) but then charged $3.25 per lb ($7.15/kg) for exceeding the limit. To fly the long ranges needed for trans-Pacific service, the 314 carried 4,246 US gallons (16,070 l/3,536 imp gal) of gasoline. The later 314A model carried a further 1,200 US gallons (4,500 l/1,000 imp gal). A capacity of 300 US gallons (1,100 l/250 imp gal) of oil was required for operation of the radial engines.



The Boeing 314 flight deck and pilot's instrument panel were state-of-the-art circa 1940. (Boeing Courtesy Photo).

Pan Am's "Clippers" were built for "one-class" luxury air travel, a necessity given the long duration of transoceanic flights. The seats could be converted into 36 bunks for overnight accommodation; with a cruising speed of 188 miles per hour (303 km/h) – typically flights at maximum gross weight were flown at 155 miles per hour (249 km/h). In 1940 Pan Am's scheduled San Francisco to Honolulu flight was 19 hours. The 314s had a lounge and dining area, and the galleys were crewed by chefs from four-star hotels. Men and women were provided with separate dressing rooms, and white-coated stewards served five and six-course meals with gleaming silver service.

The standard of luxury on Pan American's Boeing 314s has rarely been matched on heavier-than-air transport since then; they were a form of travel for the super-rich, priced at $675 return from New York to Southampton – comparable to a round trip aboard Concorde in 2006. Most of the flights were transpacific, with a one-way ticket from San Francisco to Hong Kong via the "stepping-stone" islands posted at $760, $1,368 round-trip. The Pan Am Boeing 314 Clippers brought exotic destinations like the Far East within reach of air travelers and came to represent the romance of flight. Transatlantic flights to neutral Lisbon and Éire (Ireland) continued after war broke out in Europe in September 1939 (and until 1945), but military passengers and cargoes necessarily got priority, and the service was more spartan.

Equally critical to the 314's success was the proficiency of its Pan Am flight crews, who were extremely skilled at long-distance, over-water flight operations and navigation. For training, many of the transpacific flights carried a second crew. Only the very best and most experienced flight crews were assigned Boeing 314 flying boat duty. Before coming aboard, all Pan Am captains, as well as first and second officers, had logged thousands of hours of flight time in other seaplanes and flying boats. Rigorous training in dead reckoning, timed turns, judging drift from sea current, astral navigation and radio navigation were conducted. In conditions of poor or no visibility, pilots sometimes made successful landings at fogged-in harbors by landing out to sea, then taxiing the 314 into port. And, in the days and weeks following the ominous December 7th radio transmission, the "Pacific Clipper" and her crew would be thoroughly and genuinely tested. Two hours after Chief Flight Radio Operator Poindexter received the message that the Japanese had attacked Pearl Harbor the "Pacific Clipper" smoothly touched down on the waters of Auckland Harbor. An amazing odyssey was just beginning.

Upon arrival in Auckland, Captain Ford holstered his revolver and immediately set about sending a message home via the local U.S. consulate, asking what to do with the Clipper. Unfortunately the U.S.'s imminent entry into World War II meant that hundreds of coded messages were flooding the consulate.

The "Pacific Clipper" was not the only Pan Am asset under attack. The company's "Philippine Clipper," a Martin M-130 had been recalled to Wake Island while on a routine flight to Guam. Its seven man crew watched with frustration and anger as Pan Am's

Wake Island base was reduced to smoking rubble. A Japanese fighter spotted the big flying boat at the dock and swooped down, opened fire and raked the defenseless Clipper from nose to tail with machine gun bullets. The crew rounded up the surviving Pan Am personnel (nine Wake Island Pan Am employees had been killed) and loaded them onto the plane, riddled with 96 bulleth holes. The "Phillipiine Clipper" made two unsuccessful tries to take off, then on the third attempt managed to struggle into the air. Three days later, after stops at Midway and Honolulu, it was in San Francisco, where the crew gave one of the first eyewitness accounts of the Pacific War.

Aboard the "Pacific Clipper" were an experienced crew, commanded by (top row) Captain Robert Ford, with First Officer John Henry Mack; Second Officer/Navigator Roderick Norman Brown; Third Officer James G. Henriksen; (middle row) Fourth Officer John Delmer Steers; First Engineer Homans K. "Swede" Roth; Second Engineer John Bertrand "Jocko" Parish; Chief Flight Radio Officer Jack D. Poindexter; (bottom row) First Flight Radio Officer Oscar Hendrickson; Third Flight Radio Officer Eugene Leach; Flight Steward Barney Sawicki; and Assistant Flight Steward Verne C. Edwards. (Courtesy Photo).

Another Clipper didn't escape. Anchored in Hong Kong harbor on December 7 (December 8 Hong Kong time) and fully fueled for a flight to Manila, the "Hong Cong Clipper II," a Sikorsky S-42B, was hit by incendiary bullets from attacking Japanese fighters, caught fire, and burned to the water line. It had only been in Pacific service for seven weeks.

It took a full week for backlogged consulate staff in Auckland to decode Captain Ford's instructions: he was told to bring the plane home safely to the U.S. *This presented a big problem.* The "Pacific Clipper" could not simply retrace its path back east to California. The Japanese had effectively cut off that route, as so many small islands throughout the South Pacific were now under attack or under evacuation orders. That left one alternative: Captain Ford and his crew were to head West instead of East. This would mean circumnavigating a world at war – *westbound*, around the world.

For Ford and his crew, it was a daunting assignment. Facing a journey of over 30,000 miles, over oceans and lands that none of them had ever seen, they would have to do all their own planning and servicing, scrounging whatever supplies and equipment they needed; all this in the face of an erupting World War in which political alliances and loyalties in many parts of the world were uncertain at best. A local Pam Am staffer, Bill Mullahey, collected all the navigational charts, maps, and even geography textbooks that he could find, and he and Ford planned the route. The crew painted over the plane's Pam Am logo and serial number in gray camouflage.

Not all of Pan Am's "Clippers" were Boeing 314s. A revolutionary 32-seat Sikorsky S-42 flying boat, like the one pictured here, was destroyed at its dock in Hong Kong during the opening days of World War II. (Courtesy Photo).

Their first assignment though, was to return to Noumea, back the way they had come over a week earlier, to pick up the Pan American station personnel there, and then deliver them to safety in Australia. Late on the evening of December 16th, the blacked out flying boat lifted off from Auckland harbor and headed northwest through the night toward Noumea. They maintained radio silence, landing in the harbor just as the sun was coming up. Ford went ashore, found Pan Am Station Manager and told him to "Round up all your people…I want them all at the dock in an hour. They can have one small bag apiece."

The crew immediately set to work fueling the airplane, and, exactly two hours later, fully fueled and carrying a barrel of engine oil, the "Pacific Clipper" took off and pointed her nose south for Australia.

It was late in the afternoon when the Queensland coast appeared ahead, and Ford began a gentle descent for landing in the harbor at Gladstone, north of Brisbane on the Coral Sea. After offloading their bewildered passengers, the crew set about preparing for a trip around the world. Captain Ford recounted, "I was wondering how we were going to pay for everything we were going to need on this trip. We had money enough for a trip to Auckland and back to San Francisco, but this was a different story. In Gladstone a young man who was a banker came up to me and out of the blue said, 'How are you fixed for money?' 'Well, we're broke!' I said. He said, 'I'll probably be shot for this,' but he went down to his bank on a Saturday morning, opened the vault and handed me five hundred American dollars. Since Rod Brown, our navigator was the only one with a lock box and a key we put him in charge of the money. That $500 financed the rest of the trip all the way to New York."

The next day, Captain Ford and the "Pacific Clipper" headed northwest to Darwin, flying over the Queensland desert and watching it gradually transform into tropical rainforest near their destination of Darwin. During the entire flight to Darwin the crew didn't see a river big enough to set down the big flying boat should anything go wrong. Any emergency would force them to belly land the airplane, and their flight would be over. They approached the harbor at Darwin late in the afternoon. Massive thunderheads stretched across the horizon, and continuous flashes of lightning lit up the cockpit. The northernmost city in Australia, Darwin was closest to the conflict that was spreading southward like a brushfire. A rough frontier town in the most remote and primitive of the Australian territories, it was like something out of a Wild West movie. After they had landed, the "Pacific Clipper" crew was offered a place to shower and change; much to their amusement their "locker room" turned out to be an Australian Army brothel.

Ford and his crew set about fueling the airplane. It was a lengthy, tiresome job. The fuel was stored in five gallon jerry cans, each one had to be hauled up over the wing and emptied into the tanks; it was past midnight before they were finished. They only managed a few hours of sleep before takeoff, but Ford was anxious to be under way. News of the progress of the Japanese forces was sketchy at best. They were fairly certain that most of the Dutch East Indies was still in friendly hands, but time was of the essence, so it was then onward to the next goal – Surabaya, in the Dutch East Indies (present day Indonesia). Keeping their fingers crossed that the Japanese expansion had not reached this far, the crew of the massive flying boat flew 1,400 miles (2,253 kilometers) over open ocean and reached the city but not before they were intercepted by suspicious British fighter aircraft and escorted in to safety after taxiing through mined waters.

The crew was forced to refuel with automobile grade gasoline, since no 100 octane fuel was available. The next leg of their journey would be many hours over the Indian Ocean, and there was no hope of refueling elsewhere. The flight engineers, "Swede" Roth and "Jocko" Parish, formulated a plan that they hoped would work. They transferred all their remaining aviation fuel to the two fuselage tanks, and filled the remaining tanks to the limit with the lower octane automobile gas. "We took off from Surabaya on the 100 octane, climbed a couple of thousand feet, and pulled back the power to cool off the engines," Ford later recalled. "Then we switched to the automobile gas and held our breaths. The engines almost jumped out of their mounts, but they ran. We figured it was either that or leave the airplane to the [Japanese]…"

…Ford jammed the Clipper's throttles forward to climb power, the engines complaining bitterly in response. Their 150 mph speed soon had them well out of range of the sub's guns, and the crew heaved a collective sigh of relief…

Leaving Surbaya, the "Pacific Clipper" flew northwesterly across the Sunda Straits, paralleling the coast of Sumatra. Chasing the setting sun, they started across the vast expanse of ocean headed for Trincomalee, Ceylon (now Sri Lanka) without any charts, only the coordinates of their destination. With remarkable precision, navigator Roderick Brown found the island and the port city where they alighted safely, although only after avoiding a patrolling Japanese submarine. As they were nearing the island they had seen a cloud bank ahead. In Ford's words, "There was some low scud, so we descended. We wanted the maximum available visibility to permit picking up landfall at the earliest moment – we didn't want to miss the island. All of a sudden there it was, right in front of us, a Jap[anese] submarine! We could see the crew running for the deck gun. Let me tell you we were pretty busy getting back into the scud again!"

Ford jammed the Clipper's throttles forward to climb power, the engines complaining bitterly in response. Their 150 mph speed soon had them well out of range of the sub's guns, and the crew heaved a collective sigh of relief. It would be difficult to determine who was the more surprised; the Japanese submarine commander or the crew of the Clipper, startled out of their reverie after the long flight.

It took another hour to reach the island, and for the Boeing 314 to finally touch water in the harbor at Trincomalee. The British Forces stationed there were anxious to hear what Ford and his crew had to report from the war zone to the east, and the crew was duly summoned to a military meeting. Presiding was a pompous Royal Navy Commodore who informed Ford in no uncertain terms that he doubted Ford would know a submarine if it ran over him. Ford felt the hackles rise on the back of his neck, but realizing that he could not afford to make an enemy of the British military, as the fate of the "Pacific Clipper" rested too heavily in their hands, he swallowed hard and said nothing.

Refueled once again, the Boeing 314 left Trincomalee on Christmas Eve only to turn back after losing an engine. The heavily loaded Boeing had struggled for altitude, laboring through the leaden humid air. Suddenly there was a loud bang as the number three engine failed. It shuddered in its mount, and as they peered through the windscreen the crew could see gushes of black oil pouring back over the wing. Ford quickly shut the engine down and wheeled the Clipper over into a 180 degree turn, heading back to Trincomalee. Repairs took all day on Christmas. The two flight engineers, Swede Rother and Jocko Parish, took apart the broken engine and fixed it using tools borrowed from a British warship in the harbor. They retook to the air in the early morning hours of December 26th, Boxing Day, bound for Karachi, India (now Pakistan). All day they droned across the lush carpet of the Indian sub continent, and then cut across the northeastern corner of the Arabian Sea to their landing in Karachi, touching down in mid-afternoon. The crew got a few nights' rest at the Carleton Hotel in Karachi, setting off for Bahrain on December 28th. After just a bit over eight routine hours of flying, they landed in Bahrain, where there was a British garrison.

Upon landing safely in Bahrain, the crew again learned that they couldn't obtain 100 octane aircraft fuel, and had to refuel using automobile gasoline instead. Another frustration presented itself the following morning as they were planning the next leg of their journey. They had planned to fly straight west across the Arabian Peninsula and the Red Sea into Africa, a flight that would not have been much longer than the leg they had just completed from Karachi.

"When we were preparing to leave Bahrain we were warned by the British authorities not to fly across Arabia," said Ford. "The Saudis had apparently already caught some British fliers who had been forced down there. The natives had dug a hole, buried them in it up to their necks, and just left them."

The "Pacific Clipper" took off into the grey morning, engines knocking and sputtering, and climbed through a solid overcast. They broke out of the clouds into sunshine above a carpet of clouds stretching westward to the horizon. And, despite the warning, Ford later reported that "We flew north for about twenty minutes…then we turned west and headed straight across Saudi Arabia. We flew for several hours before there was a break in the clouds below us, and damned if we weren't smack over the Mosque at Mecca! I could see the people pouring out of it, it was just like kicking an anthill. They were probably firing at us, but at least they didn't have any anti-aircraft [artillery]."

They crossed the Red Sea and the coast of Africa in the early afternoon with the Saharan sun streaming into the cockpit windows. Late in the afternoon they raised the Nile River, and Ford turned the ship to follow it to the confluence of the White and Blue Niles, just below Khartoum, Sudan. They landed in the river, and after they were moored the crew went ashore to be greeted by the now familiar hospitality of the Royal Air Force. The "Pacific Clipper" couldn't head north from there, since that would take the plane right into the middle of the war. Nor could they head due west, because a long trip across the waterless Sahara desert would have been far too risky. Instead, the Pacific Clipper headed southwest to Leopoldville in the Belgian Congo (now Kinshasa in the Democratic Republic of the Congo). They had some engine trouble soon after take-off, but, since there weren't spare parts in Khartoum anyway, they decided to press on. The crew navigated across Africa by matching rivers and other landmarks to features on their maps, landing on the Congo River in Leopoldville on a extremly hot and humid New Year's Day. Pan Am ground crew greeted the "Pacific Clipper" crew with cold beers, "one of the high points of the whole trip," according to Captain Ford.

After a night ashore they went to the airplane the next morning prepared for the long over-water leg that would take them back to the western hemisphere. The terrible heat and humidity had not abated a bit when the hatches were finally secured and they swung the Clipper into the river channel for the takeoff. The airplane was loaded to the gunnels with fuel, plus the drum of oil that had come aboard at

Noumea. It was, to put it mildly, just a bit overloaded. The heavier-than-usual, fuel-laden aircraft lifted out of the water slowly, just before it would have plummeted over a waterfall at the end of the "runway." The Pacific Clipper was flying, but just barely. Their troubles were far from over, however. Just beyond the cataracts they entered the steep gorges; it was as though they were flying into a canyon. With her wings bowed, the Clipper staggered, clawing for every inch of altitude. The engines had been at take-off power for nearly five minutes and the their temperatures were rapidly climbing above the red line. With agonizing slowness the big Boeing 314 began to climb, foot by precious and perilous foot. At last they were clear of the walls of the gorge, and Ford felt he could pull the throttles back to climb power.

Captain Ford steered the craft along the African coast for a little while, monitoring the engines to make sure everything was running smoothly. Satisfied that the Clipper was running fine, he steered out over the Atlantic. In spite of their fatigue, the crew felt revived with new energy, and they were excitedly optimistic. Against all odds they had crossed southern Asia and breasted the African continent. Their airplane was performing better than they had any right to expect, and after their next long ocean leg they would be back in the hemisphere from which they had begun their journey nearly a month before. 3,583 miles and just under 24 hours later the plane landed in the harbor at Natal, Brazil. There, they refueled and, while they were waiting for the necessary immigration formalities to be completed, the Brazilian authorities insisted that the crew disembark the Clipper while the interior of the airplane was sprayed for yellow fever. Two men in rubber suits and masks boarded and fumigated the airplane.

Late that same afternoon they took off for Port of Spain, Trinidad, following the Brazilian coast as it curved around to the northwest. It wasn't until after they had departed that the crew made an unpleasant discovery. Most of their personal papers and money were missing, along with a military chart that had been entrusted to Navigator Rod Brown by the US military attaché in Leopoldville, obviously stolen by the Brazilian "fumigators."

The sun set as they crossed the mouth of the Amazon, nearly a hundred miles wide where it joins the sea. Across the Guineas in the dark they droned, and finally at 3 AM the following morning they landed at Trinidad. There was a Pan Am station at Port of Spain, and they happily delivered themselves and their weary charge into friendly hands.

The final leg to New York was almost anti-climactic. Just before six in the early morning of January 6th, the control officer in the Marine Terminal at LaGuardia, New York, was startled to hear his radio crackle into life with the message, "Pacific Clipper, inbound from Auckland, New Zealand, Captain Ford reporting. Due to arrive Pan American Marine Terminal LaGuardia seven minutes."

In a final bit of irony, after over thirty thousand miles and two hundred hours of flying on their epic journey, the "Pacific Clipper" was forced to circle for nearly an hour – because no landings were permitted in the harbor until official sunrise. They finally touched down at 7:12 a.m., the spray from their landing freezing as it hit the hull. *No matter – the "Pacific Clipper" had made it home – travelling westbound, around the world!*

The significance of the flight is best illustrated by the records that were set by Ford and his crew. It was the first round-the-world flight by a commercial airliner, as well as the longest continuous flight by a commercial plane, and was the first circumnavigation following a route near the Equator (they crossed the Equator four times). They touched all but two of the world's seven continents, flew 31,500 miles in 209 hours and made 18 stops under the flags of 12 different nations. They also made the longest non-stop flight in Pan American's history, a 3,583 mile crossing of the South Atlantic from Africa to Brazil.

President Franklin Delano Roosevelt celebrating his 61st birthday on a 314 Clipper in January 11, 1943. FDR was flying the "Dixie Clipper," which had been transferred to the U.S. Navy and designated C-143. The President was en route from Miami, Florida, to Bathurst, British Gambia, as part of a trip to Casablanca, Morocco to meet with England's wartime Prime Minister Winston Churchill to plan the Allied European invasion (which later became known as D-Day). Flying was deemed safer than a journey by ship due to the threat of German submarines. (Courtesy Photo).

The Pan Am Clipper fleet was pressed into military service during World War II, and the flying boats were used for ferrying personnel and equipment to the European and Pacific fronts. The aircraft were purchased by the War and Navy Departments and leased back to Pan Am for a dollar, with the understanding that all would be operated by the Navy once four-engined replacements for the Army's four Clippers were in service. Only the markings on the aircraft changed: the Clippers continued to be flown by their experienced Pan Am civilian crews. American military cargo was carried via Natal, Brazil, to Liberia, to supply the British forces at Cairo and even the Russians, via Teheran. The Model 314 was then the only aircraft in the world that could make the 2,150-statute-mile (3,460 km) crossing over water, and was given the military designation C-98. Since the Pan Am pilots and crews had extensive expertise in using flying boats for extreme long-distance over-water flights, the company's pilots and navigators continued to serve as flight crew.

Pan Am's experiences during the early days of World War II were unmatched by any other civil organization, but there was no time to dwell on them. With the entrance of the United States into the war, virtually all of Pan Am's equipment and personnel were assigned, directly or indirectly, to the war effort. Pan Am, the nation's only overseas airline, had a very special responsibility and it called on its 9,000 employees to respond. They rose to the challenge.

Pan Am's pilots and navigators were called in to advise the military on the techniques of overseas flying and to start training crews. At the Pan Am Navigational School near Miami, Florida, General Jimmy Doolittle's navigators trained for his bombing raid. At Pan Am bases, many departments started working around the clock. Doubling and tripling of maintenance personnel resulted in a 50% cut in servicing time and a 100% increase in aircraft utilization.

Most Clippers flew twice as many hours, twice as often, as they had in peacetime. The plush interiors of the B-314 flying boats were stripped to wartime austerity and priority cargo was packed into every available inch of space. The exteriors were camouflaged by painting them with drab sea-gray paint. The Pan Am crews now wore khaki when under Army command and green when flying for the Navy.

During the first year of the war records were shattered and reshattered. Feats that would have been considered miraculous in normal times were now all in a day's work. In 1942 Pan Am Clippers made 1,219 Atlantic crossings. The amount of cargo carried increased sharply – from 16,500 pounds in 1941 to over three million pounds in 1942!

It seemed that transatlantic flight crews were in the air more than they were on the ground. Captain H. E. Gray, who was to serve as president of Pan Am in the 1960s, made nine crossings in nine days. Pan Am pilot Joe Hart made 12 in 13 days. Captain R. O. D. Sullivan made a total of 103 crossings of the Atlantic in 1942. When he became the first person in history to make a hundred aerial crossings, he wasn't even aware of it. Bringing his oil-stained, camouflaged Clipper down on Long Island Sound, he had to be told of his achievement by Pan Am's ground personnel. Asked to describe his feelings at reaching this aviation milestone he answered, "Well, I do feel a little hungry."

Although the Japanese had taken over all of its Central Pacific bases except Honolulu, Pan Am nevertheless continued to be active in Asia. Pan Am's affiliate on the mainland of China, the China National Aviation Corporation, made a heroic evacuation of some 275 U.S., British and Chinese civilians from Hong Kong, accomplished by pilots and ground crews working without rest for 72 straight hours. In April, 1942, Pan Am played a key role in evacuating more than 4,000 civilians and wounded soldiers from Burma, at the same time flying in supplies for the forces struggling to hold back the Japanese invaders – much of it accomplished in violent monsoon weather and under constant threats from enemy aircraft.

...[during World War II operations] Pan Am paid the price: more then 200 employees gave their lives...

To expedite shipments to the Asian and African war zones, Pan Am formed a new Africa-Orient Division. Its exploits are legendary. The famous "Cannonball" route was established; stretching 11,500 miles from Miami to South America, across the Atlantic to Africa and from there to India, it was the longest, fastest, big-scale air transport route in history – and an important supply line for the entire Far East. At its peak, seven flights a day in each direction were being scheduled, and one day there were 16 Pan Am-operated C-54 transport planes over the ocean at the same time. This steady flow of arms, ammunition and supplies was later given a large share of the credit for driving the Japanese out of Burma.

The Africa-Orient Division also flew supplies to China over the Himalayas, a route known as the "Hump" – one of the wildest, most rugged areas on earth with the high mountain peaks and almost constantly turbulent weather. Frequently planes were forced to struggle up to 20,000 feet to clear the peaks, sometimes without oxygen for the crew, often fighting 100-mph winds. Violent updrafts and downdrafts tossed planes around like leaves. Ice was severe. The ever-present enemy fighters also took their toll. One Pan Am plane came back with over *3,000* bullet holes. For three years the flights over the "Hump" were the sole source of U.S. and other outside help to otherwise-isolated China.

In addition to its regular flights across the Atlantic and the Pacific, and into Africa and the Orient, Pan Am allocated aircraft to special, often secret, missions. A Pan Am B-314 flew President Roosevelt and his advisors to the summit conference at Casablanca. Roosevelt celebrated his sixty-first birthday aboard the "Dixie Clipper" on January 30th, 1943, while over the Caribbean, on his return trip from the secret meeting in Casablanca with Winston Churchill and Charles De Gaulle.

Other Pan Am aircraft carried top U.S. generals and admirals, Britain's Prime Minister Winston Churchill, the Netherland's Queen Wilhelmina, Greece's King George and scores of other high-ranking diplomats and military men. Pan Am flew more than 700 of these special missions.

Although there were many acts of heroism and moments of high drama, Pan Am's major contribution throughout the war was doing what it had learned to do so expertly in peacetime: the building and outfitting of overseas air bases and the fast, dependable transportation of people and cargo over long distances.

During the war years Pan Am built some 50 airports in 15 different countries, almost all of them in remote, often hostile areas. As the largest air transport contractor to the Army and the Navy, Pan Am flew over 90 million aircraft miles for the government and made more than 18,000 ocean crossings. In the first years of the war, before the operation was taken over by the U.S. Air Transport Command, Pan Am ferried 542 bombers and transports to the war zones. Pan Am also trained more then 5,000 military pilots and thousands of mechanics, and established schools and procedures for the training of many more thousands.

And Pan Am paid the price: more then 200 employees gave their lives, an unknown number were imprisoned in enemy prison camps and at least a dozen aircraft were lost.

After its historic flight, the "Pacific Clipper" was assigned to the U.S. Navy for the rest of World War II. When the War ended, the aircraft was sold to Universal Airlines who salvaged it after it was damaged in a storm. Nine of the twelve Clippers survived the war intact. By the time the war ended, the clippers were no longer the cutting-edge craft they were in 1941. Lockheed Constellations and Douglas DC-4s had rendered seaplanes obsolete.

Not many people know about Pan Am's role in World War II. There was almost no publicity. There were no medals, no glory. It was all done in the line of duty. Pan Am's Herculean efforts to keep supply lines open throughout the world was one of America's most valuable secret weapons.

When the war ended, Pan Am could look back with pride on a job well done. Its unique experience, gained during years of pioneering air transportation in Latin America and across the Atlantic and Pacific, had been the basis for the country's entire wartime international transport operations – and significantly influenced the war's outcome.

Captain Robert Ford, the aviator who made his mark in the era of the flying boats with an unscheduled flight around the globe, died in October 1994, of pancreatic cancer, at his 880-acre ranch at Penn Valley, California, north of Sacramento. He was 88. When Captain Ford, at the age of 35, was asked about his round-the-world flight he called it "a purely routine operation."

Born in Cambridge, Massachusetts, Captain Ford earned his wings as a naval aviator before joining Pan American Airways in 1933. He flew the Caribbean before transferring to the Atlantic division in 1939, flying Clippers between New York and Lisbon. He shifted to the Pacific route in July 1941. Before his round-the-globe journey, he had completed some 50 flights across the two oceans.

At the time of his death, he had been a cattle rancher for 45 years. At the time of Captain Ford's death he was survived by his wife of 63 years, Elizabeth Evans Ford; three sons, Michael, Tim and William; a daughter, Mary Jenifer Menke; eight grandchildren and one great-grandchild.

Pan American Airways, (Pan Am) as it was known from its founding until 1950 when it became Pan American World Airways, was the principal and largest international air carrier in the United States from 1927 until its collapse on December 4, 1991. Founded in 1927 as a scheduled air mail and passenger service operating between Key West, Florida, and Havana, Cuba, the airline became a major company credited with many innovations that shaped the international airline industry, including the widespread use of jet aircraft, jumbo jets, and computerized reservation systems.It was also a founding member of the International Air Transport Association (IATA), the global airline industry association. Identified by its blue globe logo ("The Blue Meatball"), the use of the word "Clipper" in aircraft names and call signs, and distictive white pilot uniform caps, the airline was a cultural icon of the 20th century. In an era dominated by flag carriers that were wholly or majority government-owned, it was also the unofficial overseas flag carrier of the United States. During most of the jet era, Pan Am's flagship terminal was the Worldport located at John F. Kennedy International Airport in New York City. ■

Air Mobility Command Fosters Industry Collaboration for Innovation

By Staff Sgt. Stephenie Wade, Air Mobility Command Public Affairs

Air Mobility Command hosted more than 100 industry partners at Scott Air Force Base, Illinois, on 27 July 2016, providing an opportunity for industry to collaborate, network and strengthen relationships.

"Now is the time for us, industry and Mobility Airmen, to further our innovation efforts and continue to enhance the Air Force's capabilities in areas such as manufacturing, autonomous systems and standardizing our fleet."

—Gen. Carlton D. Everhart II, commander Air Mobility Command

Gen. Carlton D. Everhart II, Air Mobility Command commander, said this event provides a great opportunity for AMC to share its 30-year vision regarding aircraft recapitalization, aeromedical evolution, defensive systems technology and more. His primary goal for this event was for AMC and industry partners to continue to work together to better meet the needs of preparing mobility Airmen for tomorrow.

"This is just the start of improving our collaboration process," said Everhart. "Collaboration reduces cost escalation and encourages novel solutions to shape the 21st-century. Now is the time for us, industry and Mobility Airmen, to further our innovation efforts and continue to enhance the Air Force's capabilities in areas such as manufacturing, autonomous systems and standardizing our fleet."

Following Everhart were discussions led by the directors of intelligence, operations, logistics, strategic plans and communications in addition to AMC's chief scientist.

Topics included concepts on how to improve intelligence analysts' access to real-time reports that all domains can understand; communication systems which can sustain electromagnetic pulse; the use of 3-D modeling to print non-critical parts and eventually essential parts; aircrews using new technology to communicate and transmit important data while inflight to the ground; enhancing virtual training environments; improving airdrop precision without the use of GPS; and capability to decontaminate larger aircraft while preventing corrosion in a post-nuclear environment.

To best execute the mission, AMC needs help from industries to match plans for the future with resources, said Maj. Gen. Thomas Sharpy, Strategic Plans, Requirements and Programs director.

"If the technology doesn't exist, the question is 'how do we get it,'" said Sharpy. "If we, as a total force, work together, we can find an integrated solution that makes ideas reality and will not only benefit the Air Force, but the Department of the Defense.

"This day was the first step toward ensuring our warfighters are equipped with the right tools to be successful in their mission to deliver unrivaled global reach for America well into the next decade and beyond," he said.

AMC is planning additional events with industry partners. Upcoming opportunities include the Airlift/Tanker Association Convention scheduled for 27 to 30 October 2016; National Defense Transportation Association United States Transportation Command fall meeting scheduled for 31 October to 3 November 2016; and the 2017 Air Warfare Symposium. ■

KC-46 Completes Required Flight Tests for Milestone C Production Decision

88th Air Base Wing Public Affairs

Pegasus Refuels Globemaster

The KC-46A Pegasus connected in flight with an F-16 Fighting Falcon on July 8 and a C-17 Globemaster III on July 12.

These tests with the F-16 and C-17 were in support of the Milestone C requirements to rendezvous, contact, and transfer fuel to several receiver aircraft types.

An initial attempt with the F-16 earlier this year was successful, however higher-than-expected axial loads on the boom were detected. These loads were again present during the initial attempt with the C-17 and necessitated installation of hydraulic pressure relief valves in the boom.

The KC-46 Pegasus refuels a C-17 Globemaster III July 12, 2016. The successful mission tested the hydraulic pressure relief valves installed to correct higher-than-expected axial loads in the boom. (Courtesy Photo)

This week's successful tests show the boom axial loads hardware fix, designed by Boeing engineers, is performing as expected to alleviate the loads.

"I'm encouraged by these results. The KC-46 program continues to move forward, making important progress that will get this vital capability into the hands of the warfighter," said Deborah James, Secretary of the Air Force.

The final Milestone C flight test is to transfer fuel through the fixed boom to an A-10 Thunderbolt. That test is also slated to occur this month.

"Once complete with the A-10, we will request approval from Mr. Frank Kendall, Under Secretary of Defense for Acquisition, Technology and Logistics, to award production Lots 1 and 2, totaling 19 KC-46A aircraft," according to Darlene Costello, Air Force Service Acquisition Executive.

"While it took some time, this week's results confirm my confidence the Boeing team will get this figured out. It's reassuring to see the program take this important step toward the production decision in August," said Gen. Dave Goldfein, Chief of Staff.

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Pegasus Refuels A-10 Thunderbolt

The KC-46 Pegasus program completed all flight tests required for the Milestone C production decision July 15 by offloading 1,500 pounds of fuel to an A-10 Thunderbolt II.

The successful A-10 mission was the last of six in-flight refueling demonstrations required before the tanker program can request approval from Frank Kendall, the under secretary of defense for acquisition, technology and logistics, to award production Lots 1 and 2, totaling 19 KC-46A aircraft.

"It is great to see the KC-46 boom back in action and the program moving forward to a production decision" said Col. John Newberry, the KC-46 system program manager.

The other five required air refueling demonstrations were with the C-17 Globemaster III and F-16 Fighting Falcon using the air refueling boom, the Navy's F-18 Hornet and AV-8B Harrier II using the centerline and wing drogue systems, and the KC-46 as a receiver aircraft.

"Today's flight marks the final step we needed to see on the boom fix in order to request production go-ahead," said Brig. Gen. Duke Richardson, the Air Force program executive officer for tankers. "Our joint team's tireless efforts are paying off, preparing us for the next step of this critical need to our warfighter."

This test would not have been possible without contributions from the 412th Test Wing, 23rd Fighter Wing, 355th FW, 124th FW, 896th Test Support Squadron and 40th Flight Test Squadron, which all provided aircraft, manpower and equipment.

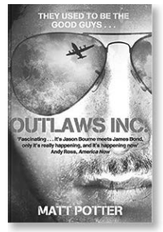
The Milestone C decision to begin low-rate initial production of the KC-46 Pegasus is expected in August. ■

Book Review

by Capt Murdock Moore, USAF Ret

OUTLAWS INC., Flying with the World's Most Dangerous Smugglers

bt Matt Potter, 2011, Bloomsbury, New York



OUTLAWS, INC is a book for those who held down a C-130/C-141 seat for years while dreaming of being an Indiana Jones of the Air. While the Soviet system collapsed in 1991 its Air Force did not. But no pay was coming from the Kremlin. To make ends meet HQ Moscow authorized local commanders to sell readily disposable items such as POL (petroleum, oils and lubricants), POL trucks, trucks. Some airlift officers, in lieu of pension and severance pay, were given the keys to Il-76 transports (= C-141). One younger demobbed crew lacking pension points simply went to an unguarded satellite airfield and with some bolt cutters "acquired" an AN-12 (= C130), and no one noticed or cared!

The transporters generally flew south to the newly independent "stans" for gold, glory and work. On arrival you taxied to an available hangar, bought some paint, white washed off the red stars, added a logo, then slapped on a new tail number (Soviet air transports carried tail number swap kits). Next you then went to local "FAA" to register your air asset. To prove you were honest you paid a cash "gratuity," the higher the gratuity the more honest you became. The next day, using the prime corporate phone on the tire work bench, "X-BOLSHI AIR" calls UN/NGO cargo brokers looking for work. At a price 1/4th what the poolside Westerners are charging, your calls get returned quickly by: *the good, the bad, the ugly.*

The NGOs folks pontificate their good work should be done as a charity lift or at least semi-free. You point out God may be *THEIR* copilot but yours has a family to support.

UN Congo flying can be bad. The people suffer for want of good government and air-conditioned cars. Having more runway mileage than roadway mileage, senior government officials (driven around in chauffeured limos) decreed private vehicles entering the Congo would be subject to high import taxes. These high taxes would, in theory, to be used to pave the highways. BUT poorly paid government empoyees would have to explain their extra cash! The solution – UN flights, after downloading their cargo, would later disgourge a Mercedes, the new owner paying a "transfer fee" to the loadmaster. Of course, if things went wrong, the aircraft commander would be "shocked" to find his loadmaster had deceived him. The pilot readily paying IN CASH to keep the fine off the books.

The Caspian Sea Caviar Crowd are a very ugly lot. A local $2 caviar kilo has a US "Easy Street" value of $4,000. When the Russian Coast Guard (RCG) interfered with their smuggling the first generation mafia types ground assaulted the interfering RCG station. Later they murdered 27 children at a RCG sponsored private school. To avoid sleeping with the sturgeons for a simple error you flee westward to the more peaceful cocaine trade.

A now defunct Venezuelan drug cartel was paying AN-12 crew members $200,000+ per trip, BUT you flew for hours across the South Atlantic without benefit of radio or ATC. You cross the African coast unannounced at a non-radar covered spot. Flying Inland your navigator vectors you to a strobe light in the great darkness. Truck lights at either end of the compacted dirt roadway define your "runway." You hope they know the AN-12's landing gear footprint. On landing, from the darkness comes the "FBO" manager armed with an AK-47 and driving a refueling truck. No credit card or names are exchanged. Watered down AV gas? You'll find out over the Sahara! Hours later if you make a one-time delivery in your boneyard reject no one buys you a drink or will even sit by you.

One legit start-up was made an offer it couldn't refuse, two million US dollars for short hauling a long generator. The catch – it was going in to a base in Taliban country. Where the Sons of Hercules and Heavy Lifters saw suicide, the ex-Afghan War airlifters (Soviet type) saw opportunity. They flew back to Russia and bought a Cold War surplus IL-76 for $500K. On returning they uploaded the generator and a few hours later downloaded it after a combat descent. The Taliban, taken by surprise, moved to the end of the runway for revenge. They still wait. An unchallenged resupply helicopter had evacuated a $1,500,000 richer Ruski aircrew!

When you have no SOF to restrict you and your maintenance department is one person deep things can go bad. An IL-76 lost a wing over Uganda when its Soviet Air Force aircraft duck tape came off – a product not designed for the high humidity of the tropics? An intra-Africa airlifting IL-76 blew a hydraulic line. The ramp opened. Some 14-129 floor-loaded passengers disappeared into the decompression fog. Why the casualty variance? The plane was charterd to carry 14 policemen – rumor had it another 115 were added as "off-the-manifest" revenue.

Russian airlift communities, like mini-gulags, spread from Kazakhstan to Capetown. They are semi-closed socially. Very closed on the softer side in regards to "country wives." If you bought-the-kulak in an accident your local mistress won't be invited to the wake or even final flight coffin loading. Bread and salt in the semi-legit airlift community are offered only to legit assignations.

Yet for those who survive Fate and INTERPOL, in years hence a vodka and a loose ear will invite airlift tales not too far stretched…*at least from those who flew them.* ■

INDUSTRY PARTNER SPOTLIGHT

BOEING

1916 – 2016

100 Years of Greatness!

Over the past 100 years, mankind has progressed from walking on Earth to walking on the moon. We've gone from riding horses to flying jet airplanes. With each decade, aviation technology crossed another frontier, and, with each crossing, the world changed. The Boeing Company and its heritage companies grew with tailored services including commercial and military aircraft, satellites, weapons, electronic and defense systems, launch systems, advanced information and communication systems, and performance-based logistics and training. In its first 100 years Boeing has grown to become the world's largest aerospace company and leading manufacturer of commercial jetliners and defense, space and security systems. A top U.S. exporter, the company supports airlines and U.S. and allied government customers in 150 countries.

William E. Boeing. Under his guidance, a tiny airplane manufacturing company grew into a huge corporation of related industries. He never lost his interest in aviation, and during World War II he volunteered as a consultant to the company. He lived until 1956, long enough to see the company he started enter the jet age. He was a private person, a visionary, a perfectionist, and a stickler for the facts. The wall of his outer office bore a placard that read: "2329 Hippocrates said: 1. There is no authority except facts. 2. Facts are obtained by accurate observation. 3. Deductions are to be made only from facts. 4. Experience has proved the truth of these rules." (Boeing Courtesy Photo).

Boeing has a long tradition of aerospace leadership and innovation. The company continues to expand its product line and services to meet existing an emerging customer needs. Its broad range of capabilities includes creating new, more efficient members of its commercial airplane family; designing, building and integrating military platforms and defense systems; creating advanced technology solutions; and arranging innovative customer-financing options.

With corporate offices in Chicago, Boeing employs approximately 160,000 people across the United States and in more than 65 countries. This represents one of the most diverse, talented and innovative workforces anywhere. The company also leverages the talents of hundreds of thousands more skilled people working for Boeing suppliers worldwide.

Boeing is organized into two business units: Commercial Airplanes and Defense, Space & Security. Supporting these units are Boeing Capital Corporation, a global provider of financing solutions; Shared Services Group, which provides a broad range of services to Boeing worldwide; and Boeing Engineering, Operations & Technology, which helps develop, acquire, apply and protect innovative technologies and processes.

William E. Boeing, who studied at Yale University, worked initially in the timber industry, where he became wealthy and learned about wooden structures. This knowledge proved invaluable in his subsequent design and assembly of airplanes. In March 1910, Boeing bought Heath's shipyard in Seattle, Wasahington, on the Duwamish River, which later became his first airplane factory. Boeing was incorporated in Seattle by William Boeing, on July 15, 1916, as "Pacific Aero Products Company." Boeing was later incorporated in Delaware, the original Certificate of Incorporation was filed with the Secretary of State of Delaware on July 19, 1934.

The Boeing Model 1, also known as the B & W Seaplane, a single-engine biplane seaplane aircraft, was the first Boeing product and carried the initials of its designers, William Boeing and Lt. Conrad Westervelt USN.This founding partnership heralded The Boeing Company's steadfast support of U.S. military objectives.

Boeing's Defense, Space & Security (BDS) unit is a diversified, global organization providing leading solutions for the design, production, modification and support of military fixed-wing aircraft, rotorcraft, weapons, and satellite systems, among others. It helps customers address a host of requirements through a broad portfolio that includes the 702 family of satellites; AH-64 Apache helicopter; cyber security; EA-18G electronic attack aircraft; KC-46 aerial refueling aircraft, which is based on the Boeing 767 commercial airplane; and the P-8 anti-submarine/anti-surface warfare aircraft, which is based on the 737 commercial jet. Driven by its ability to provide customers with the right solutions, at the right time, and at the right cost, BDS seeks ways to better leverage information technologies and continues to invest in the research and development of enhanced capabilities and platforms.

Boeing's first 100 years of greatness has produced an impressive list of aircraft of special interest to the Air Mobility community, including the Boeing 314 Clipper [see story on page 4], the Boeing C-75 Stratoliner, the Boeing C-97 Stratofeighter, the Boeing KC-135, the Boeing VC-137/C-37 Stratoliner, the McDonnell Douglas/Boeing KC-10 Extender, the Boeing VC-25 (Air Force One), the McDonnell Douglas/Boeing C-17 Globemaster III, the Bell/Boeing V-22 Osprey, and the Boeing KC-46 Pegasus (only a small sampling of the company's overall historical catalog of military aircraft and products).

The Boeing Company has an enormous impact on the American economy. Boeing and its subsidiaries had over 148,750 employees working in 49 states as of December 31, 2015. In the past 12 months, Boeing paid nearly $50 billion to more than 13,600 businesses, supporting an additional 1.5 million supplier-related jobs across the country. These businesses include production suppliers and non-production vendors, as well as subsidiaries of companies to which Boeing made other payments.

The Boeing Company's relationship with the Airlift/Tanker Association reaches back to the Association's very beginnings and has remained steadfast for the Association's entire history. Boeing has supported the A/TA through advertising, particiation in the Association's Annual Convention and Aerospace Industy Exhibitions, its Industry Partnership and support for many of the Association's Board of Officers over the years.

The Airlift/Tanker Association extends a sincere "Thank You" and a heartfelt "Happy Birthday" to The Boeing Company for all it has done for the A/TA and the United States of America! ■

***A/TA INDUSTRY PARTNERS** (as of 2 August 2016)*

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Altus Military Affairs Committee

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Thank you all for your support!

Industry Partner HIGHLIGHTS

Cary Walgamott
VP Industry Affairs

The Airlift Tanker Association team is in the final stretch with preparations for the ***48th Annual A/TA Convention and the AMC & A/TA Symposium & Technology Exposition*** in Nashville. Another world-class program has been planned and preparations are coming together nicely. Once again, an outstanding lineup of senior Air Force leaders including the Secretary and Chief of Staff as well as an impressive list of seminars on a wide variety of mobility topics are at the heart of the symposium program. Early indications are there will be more exhibitors at this year's Air Mobility Technology Exposition than last year and we are estimating attendance to be around 2500 attendees (includes 1750 military personnel). Similar to last year there will be a number of AMC mini-conferences held before as well as integrated into the symposium. These are designed to meet and enhance the professional development requirements of the air mobility community.

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We will again have several industry-focused seminars that will include panel discussions and specific speakers focused on industry matters. In addition, the Chairman's Luncheon – always a very popular event – will feature a government speaker to address industry specific subjects. Brand new to the annual event, the Air Mobility Command (AMC) and the Airlift Tanker Association (A/TA) are hosting an AMC Industry Day in conjunction with the AMC and A/TA Symposium. The Industry Day will take place the afternoon of Thursday, 27 October 2016. The objective of this event is to discuss and share the acquisition portfolio AMC has planned for the future, in a symposium-like atmosphere. USTRANSCOM representatives will be in attendance as well. More details about the Industry Day will be announced via FedBizOpps.

When you go to the Airlift/Tanker Association website to register for this year's event, you will also find something new. With the retirement of Bud and Pam Traynor who provided outstanding support to the Airlift Tanker Association for more than 20 years, the Board of Officers decided to upgrade our registration software program. A new IT team and A/TA administrative staff were hired and have been working diligently over the past year and a half to outline the necessary requirements and develop a new, streamlined registration program. Their efforts have been exemplary and we hope your registration go very smoothly.

It is always a joy to be at the Gaylord's premier property at the Opryland Resort & Conference Center in Nashville. Tennessee. We hope you will join us, 27 – 30 October, for the 2016 A/TA Convention/Symposium and Air Mobility Technology Exposition. The 48th Annual Airlift/Tanker Association Convention will be another memorable time – ***come and be part of another historic air mobility event.***

Warm regards
Cary Walgamott
Vice President Industry

AIR MOBILITY *Classics*

Air Mobility Classics is a recurring feature contributed by Lt Col Douglas H. Lloyd, USAF Ret.

Some of the most unique and interesting aircraft to come out of World War II were those built using alternative materials in order to conserve strategic resources, principally aluminum. Most often this meant the use of wood or wood-based composites, but the Budd Company of Philadelphia, Pennsylvania took a different approach.

Budd was best known as a manufacturer of streamlined railroad cars. They had developed a patented "shot-weld" technique for welding stainless steel that they thought could be applied to aircraft construction. The welded stainless steel skin eliminated the need for rivets and offered increased corrosion resistance. Despite the company's lack of aeronautical experience, the twin-engine, high-wing transport design they created held enough promise that the U.S. Navy ordered 200 as the RB-1 Conestoga (in the pre-1962 USN designation system, "R" indicated a transport aircraft, the next letter identified the manufacturer, and the "-1" meant it was Budd's first transport design). The USAAF followed with an order for 600 which it designated the C-93A.

Production started in 1943, with the first flight occurring on 31 October 1943. With the same engines as the venerable Douglas C-47, but a 3,000 lb. higher empty weight, the Conestoga posted disappointing speed, range, and fuel consumption numbers. The crash of the first prototype, and reports by test pilots of poor handling and poor reliability, didn't help. The fact that the expected aluminum shortage never materialized was the final nail in the Conestoga's coffin. The Army cancelled its entire order, having never accepted a single aircraft. The Navy hung in there a little longer, but it too soon lost faith in the aircraft, reducing its order from 200 to 25, of which just 17 were delivered in March of 1944. They never entered squadron service, although a few were briefly assigned to some naval air stations as base utility aircraft. In early 1945 the Navy disposed of all its RB-1s, and the entire fleet of virtually new aircraft was offered surplus to the civilian market by the War Assets Administration at bargain basement prices.

Although never a well-loved aircraft, the Conestoga at least enjoyed a modicum of success as a civilian freighter. Twelve of them were acquired as the initial equipment of the National Skyway Freight Corporation (later to be re-named the Flying Tiger Line), and several other cargo operators utilized the aircraft into the 1950s before they faded from the scene.

Despite its somewhat cartoonish appearance, lackluster performance, and disappointing operational history, the Conestoga does deserve recognition for incorporating many innovative features that have become standard for modern military transports. The flight deck, which accommodated two pilots and a navigator, was elevated above the cargo area. This, in conjunction with the high wing design, provided an 8' x 8' square cargo box that was unobstructed for its full 25' length. Cargo loading and unloading was accomplished via an electrically-operated rear door and ramp under an upswept tail, which would be familiar to any C-130 crewmember. The tricycle landing gear provided a level cargo floor at truck bed height, and an overhead hoist as well as a floor-mounted winch eased loading.

Today the only surviving Conestoga can be seen at the Pima Air Museum in Tucson, Arizona, sadly displayed without her engines, outer wing panels, and tail surfaces. An inglorious end for an airplane that dared to be different. ■

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AIRLIFT/TANKER ASSOCIATION CONVENTION
27-30 OCTOBER 2016
AND THE
AIR MOBILITY COMMAND AND A/TA SYMPOSIUM & TECHNOLOGY EXPOSITION
27-30 OCTOBER
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Lt Col Gary Hart, USAF (Ret)
655 Julian Road
Chattanooga, TN 37421
Registration form must be received on or before 26 October 2016.

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