Graduation parties were held at the Westward Ho Hotel in Phoenix, Arizona. The photographs on this page were taken by Flight Instructor David Thiele who took many of the pictures still treasured by former Falcon cadets.

At the Course 16 graduation party, RAF Sergeant David Moseley and AAF Second Lieutenant John Taub engage in friendly competition.

Miss Jean Hall of Phoenix, Arizona, and Second Lieutenant Francis Satterlee share a dance at the Course 16 graduation party.

". . .and you have the most beautiful eyes. No, I don't say that to all the girls — really!" Newly commissioned Second Lieutenant Arthur Winston of Course 18 appears to have the undivided attention of Miss Mary Ann Carter of Phoenix. She may consider that he looks absolutely splendid sporting United States Army Air Forces wings and British Royal Air Force wings.

Second Lieutenant and Mrs. Lee Vriezelaar pose for the photographer at the Course 18 graduating party. They had celebrated their first wedding anniversary the previous week.

Command and Liaison

Paragraphs 6 through 9 of the teletype from the Army Air Forces Flying Training Command deal with administrative matters necessary for the establishment of the increased U.S. Army presence at the British flying training schools.

While the Americans used the expression "commanding officer" to refer to the American officer in charge of the proposed Army Air Forces flying training detachments, the British used the term "liaison officer." In actuality, the American was both a commanding officer and a liaison officer. In a letter to the Army Air Forces West Coast Training Center, Major General Yount of the Army Air Forces Flying Training Command stated that the duties of the American officer would be twofold: maintain a close liaison between the Training Center and the British flying training school and serve as commanding officer of the American detachment posted at the BFTS. As liaison officer he would "render any assistance possible to the RAF commanding officer," and he "may assist in flight checking either U.S. or U.K. students." As commanding officer, he would "take care of the administrative details concerning U.S. students and the detachment."[24]

In his 1942 speech to the gathering of BFTS commanding officers, Group Captain Hogan observed that the American liaison officer might instruct U.S. cadets in any flying maneuver considered important to the USAAF but not taught at the RAF school, provided that the instruction did not interfere with the British training syllabus. He might also present lectures for the American cadets on subjects peculiar to the U.S. Army Air Forces. Hogan told the assembled BFTS commanding officers that for disciplinary purposes the U.S. cadets were to be dealt with by the RAF commanding officer in the same manner as the RAF cadets. The U.S. liaison officer would be in attendance during cases involving U.S. cadets. Where the case concerned violation of U.S. Army regulations only, the U.S. officer would deal with the matter. In a case that involved elimination from the program, the decision would be made by the RAF commanding officer, but the American liaison officer would be free to make any remarks or recommendations on the elimination report.[25]

Apparently, command dispute problems did exist at one or more of the British flying training schools, or a superior command (American or British) was improperly addressing the American officer as the commanding officer of the BFTS. The problem must have been considered serious by Group Captain Hogan. In an August 18, 1943, letter to the commanding officers of the BFTSs, he addressed "various misunderstandings regarding the relations of the BFTSs with the USAAF." He stated flatly that, "The RAF Commanding Officer will be considered the CO by the USAAF as well as the RAF Delegation," and that the American officer would "in no way relieve the CO of his ultimate responsibility for the affairs of the school as far as both the American and British services are concerned."[26] There was no disagreement at Falcon.

[24] Letter from Major General Yount to Commanding General, Army Air Forces West Coast Training Center, 1104 East 8th Street, Santa Ana, California, dated January 5, 1943, Paragraph 3.

[25] Group Captain Harry Hogan, "British Flying Training Schools, Minutes of Conference Held on 3rd, 4th, November/42, Entry of U.S. Cadets to BFTS's," Rafdel document number A.23,559/42 dated November 12, 1942. On page 6 of the *History of 15th Army Air Forces Flying Training Detachment (January 1, 1943 to March 1, 1944),* Lieutenant Marvin R. A. Grant noted that the precision flying maneuvers considered essential in Army Air Forces schools and not taught by the British were chandells, lazy eights, pylon eights, and spot landings.

[26] Memorandum from Group Captain H. A. V. Hogan, Director of Flying Training, Royal Air Force Delegation, Washington, D.C.; to the RAF officers commanding the British flying training schools, Rafdel file number A.20,016/41 dated August 18, 1943.

In early 1944, Lieutenant Marvin R. A. Grant noted that the efficient functioning of Falcon Field was, indeed, the responsibility of the RAF commanding officer and that everyone else on the base worked "under his direction." The commanding officer of the 15th Army Air Forces Flying Training Detachment (Grant), his staff and departments (Medical and Technical Inspection), the U.S. Army Air Depot Detachment (a separate command established on February 15, 1943), and all Southwest Airways Company employees worked for the RAF commanding officer. In plain military language, the 15th AAFFTD and the U.S. Army Air Depot Detachment were "subordinate commands." The Air Depot Detachment handled supply functions, and Lieutenant Eldon L. Cleveland, a U.S. Army supply officer, was assigned responsibility for that detachment. On January 15, 1944, the Air Depot Detachment was dissolved as a separate command, and supply department functions were assigned to Grant's 15th AAFFTD. Lieutenant Cleveland was reassigned as supply officer for the 15th AAFFTD.[27]

In 1999, Marvin Grant told the author that he was aware from the very beginning that his responsibility was "to keep the British happy." He initially underestimated the sensitivity of his position, but a rude awakening was in store for Marvin Grant. He had a nice adobe home about a mile from the base and on one occasion planned a social gathering of the American staff at his home. In what he thought was a private conversation with another American, Grant said that none of those "god damned Britishers" were going to be invited. Within hours he found himself unceremoniously transferred to Thunderbird Field. He had been overheard! Several days later one of the British staff was visiting Thunderbird and asked Grant what he had against the British. An embarrassed Lieutenant Grant responded that he had just made a "smart ass remark" and that he really enjoyed working with the British. Explanation accepted, he was immediately transferred back to Falcon. "The government was just that serious about maintaining good relationships," said Grant.[28]

American administrators may have been at Falcon to administer to their own, treat wounds and stomach aches, order spare parts, and assist the British, but American cadets were there for just one reason — to earn their wings and earn them the British way! Before American Cadet Carroll Goyne and the nineteen other future members of American Class 44-B-2 (British Course 18) departed from their pre-flight training school, the colonel of the school presented a brief on what to expect at the British school. The colonel stated that the academics would be the most difficult part of the program and that the RAF cadets had previously received training in some of the subjects. The colonel told nineteen-year-old Goyne and his classmates that they were representing their country with the British and that they must excel in all their efforts.[29]

[27] Grant, *History (January 1, 1943 to March 1, 1944),* p. 12. The Medical Department and the Technical Inspection Department were the responsibility of Lieutenant Grant in his capacity as Commanding Officer of the 15th Army Air Forces Flying Training Detachment. Lieutenant Grant reported to the 37th Flying Training Wing, the Army Air Forces Western Flying Training Command, and ultimately to the Army Air Forces Flying Training Command, Fort Worth, Texas. Prior to the formation of the Army Air Depot Detachment, supply requests were forwarded by Southwest employees through three government employees who simply verified the necessity of requisitions and checked shipping documents. With the establishment of the Air Depot Detachment, Lieutenant Cleveland became accountable for all Army property. He reported to the San Bernardino Air Service Command and ultimately to the Army Air Forces Air Service Command, Patterson Field. After January 15, 1944, of course, he reported to Lieutenant Grant.

[28] Marvin R. A. Grant, telephone interview with the author on January 8, 1999.

[29] Colonel Carroll H. Goyne, Jr., letter to the author dated May 28, 1998.

No Chicken S--- at Falcon

Concerning discipline at Falcon, American Ken Anderson of Course 13 had this to say, "Falcon Field was a very relaxed place. . .few restrictions, no detailed barracks inspections, and we could get out weekends. None of the chicken s--- requirements with lots of demerits like cadets at the Army pilot training schools."[30] Paul Giraudin, Jr., of Course 15 echoed those sentiments.

> "Life at Falcon was wonderful, unbelievably wonderful. Only for a short time did we have reveille and organized physical training. We ran miles through local citrus orchards in the blistering Arizona heat; but when the accident rate rose, we cut back on the exhaustive running, and added push-ups, leg lifts, swimming, and the like. We ate good meals, cafeteria style, when we wanted, within the designated mess time. We did not march to mess, nor did we sit uncomfortably erect with arms folded over our plates.
>
> "Three or four American cadets in my class were married and their wives lived in Mesa. After completion of Primary, a couple of the American cadets bought, and kept, personal cars at the base. Every weekend was free. I remember on one occasion, three of us visited the Grand Canyon. Sometimes, we hiked in the vicinity of the Superstition Mountains to the east."[31]
>
> Paul Giraudin, Jr.

"We were in the desert of Arizona during the middle of summer, but I do not recall it as oppressive. The buildings all had evaporative coolers. The swimming pool was available at off times. In an anticipated hour or two in the air, we could fly high enough to cool off. With a breeze and in the shade the low humidity allowed for cooling. After settling in to a routine, we were allowed considerable freedom. Saturday afternoons to Sunday evenings we were free. On Saturday afternoon we could get a bus or hitch hike to town. The first stop usually became the 'Green Frog.' Here a cool beer or two were consumed as a means of redressing the water balance and afternoon heat. Often we were joined by others, the Brits as well as the Americans. In retrospect, it seems like a charmed existence. We were fed, housed, lived comfortably, and had good company with only one responsibility, learning to fly."[32]

Alex Cochran

Alexander R. Cochran (Course 15) earned the Air Medal with two oak leaf clusters as a B-17 bomber pilot assigned to duty in the Rhineland, Ardennes, and Central Europe.

Photograph courtesy of Alexander R. Cochran

30 Lieutenant Colonel Kenneth L. Anderson, letter to the author dated May 1, 1998.

31 Giraudin.

32 Alexander R. Cochran, letter to the author dated June 11, 1998.

In a letter home to his parents, American cadet Bob Krone of Course 13 wrote, "I'm telling you this is paradise found. No reveille, no retreat, no gigs, no demerits and no punishment tours. You can go to town on Friday, Saturday and Sunday. There are only two American officers here, the rest are British. We just live like kings. . . . It's better than any U.S. set-up I've ever seen. If you want to wear a tie, okay, but if you don't — then don't!"[33]

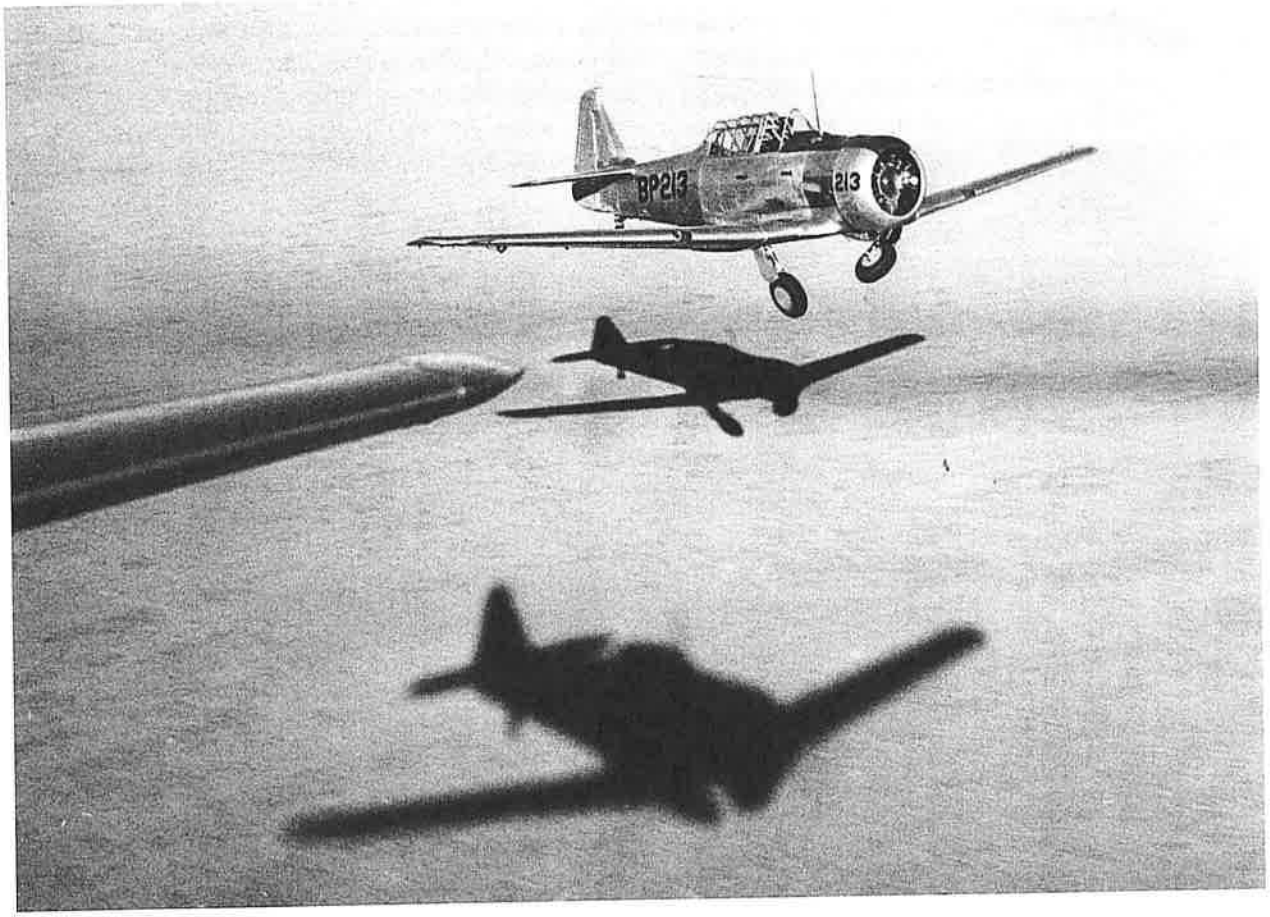
American aviation cadet training at the British flying training schools was discontinued after the graduation of the June 1944 classes (Falcon Course 19).[34] The Army's decision was based on a new policy that required the consolidation of Army Air Forces instructional bases.[35]

Photograph by Flight Instructor David Thiele, courtesy of David Thiele

[33] R. N. Appling, "A Yank in the RAF," *The Falcon* (a Reunion booklet of the Falcon Field Association of Great Britain), 1988, p. 21.

[34] Grant, *History (January 1, 1943 to March 1, 1944)*, p. 24. Sometime prior to February 7, 1944, Wing Commander McKenna notified Lieutenant Grant that the Army would discontinue the training of Americans at the British flying training schools. On February 7, 1944, Grant received official notification from Army Air Forces Western Flying Training Command.

[35] Marvin R. A. Grant, letter to the author dated February 10, 1999.



Shadows in the Sand

No other Falcon photograph has been reproduced more often.

Photograph by Flight Instructor Ray Shelton and Cadet Robert Hampton Purdy of Course 15, courtesy of RAF secretary Molly Turner

CHAPTER SIX

THE AIRPLANES

I owned the world that hour as I rode over it. . .free of the earth, free of the mountains, free of the clouds, but how inseparably I was bound to them.

Charles A. Lindbergh

At Falcon and the other British flying training schools, the U.S. Army owned the airplanes, and the civilian contractor, in this case Southwest Airways, maintained them. The RAF administration for their part determined aircraft usage in the training program syllabus. Flight training was divided into three separate phases — primary, basic, and advanced. A different U.S. Army aircraft was used for each phase: the Boeing-Stearman Kaydet for primary, the Vultee Valiant for basic, the North American Texan for advanced.

A Falcon Field Boeing-Stearman Kaydet owned by the United States Army

Photograph by George Peter Alexandra (Course 7), courtesy of Mike Alexandra

The Stearman flight line at Falcon looking northwest from the tower

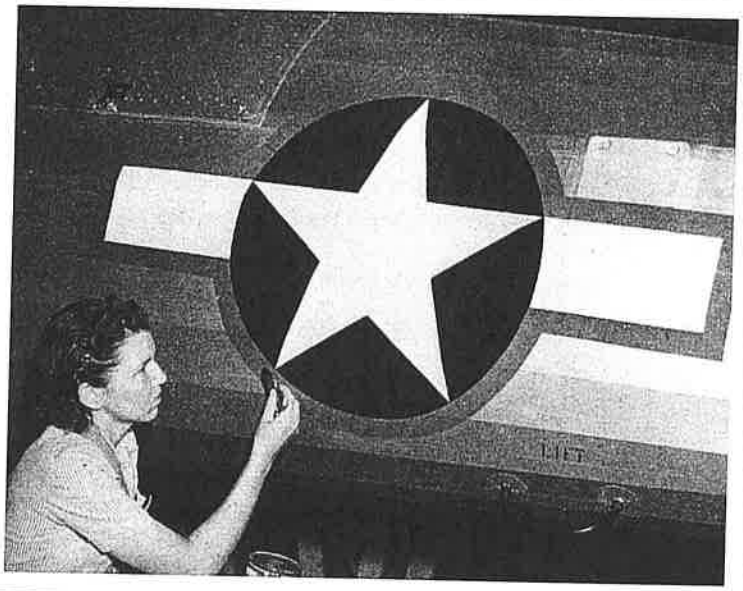
Photograph by Instructor Ray Shelton and Cadet Robert Hampton Purdy of Course 15, courtesy of RAF secretary Molly Turner

Aircraft Designations and Insignia

Aircraft assigned to the British flying training schools were identified by the fuselage lettering BP for British Program. Following the letters BP, Arabic numerals identified individual airplanes. Boeing-Stearman Kaydets used the numerical series 1 through 99; Vultee Valiants, 101 through 199; and North American Texans, 201 through 299. The letters BP followed by the Arabic numerals comprised the aircraft "field designation."[1]

All U.S. Army aircraft displayed a white star on a circular blue field. Early in the war, a red disk appeared in the center of the star. On August 18, 1942, all Army Air Forces commands were directed to remove the red disk in order to eliminate any possibility that the U.S. insignia might be mistaken for the red rising sun insignia used by the air forces of Imperial Japan. On June 29, 1943, white rectangles were added to the sides of the insignia, and the entire insignia was enclosed with a red border stripe. The red border stripe was replaced by a blue border stripe on September 17, 1943.[2]

This photograph first appeared in the August 1943 issue of Southwest Airways' company magazine *The Thunderbird*. The caption reads, "A new type of insignia for army aircraft is being placed on all planes at Southwest Airways' fields. Lora Mae Elerick of Overhaul's paint and dope department is shown putting the finishing touches on the new marking which, the army says, is visible at sixty percent greater range than either the old device or the Japanese and German markings. The white star on a field of blue is retained, but a white rectangle has been added, and the entire emblem enclosed in a red border."



The U.S. Army had three classifications for training aircraft based on their sophistication and on how demanding they were to fly. Cadets began training with primary trainers (PTs), graduated to basic trainers (BTs), and then completed training in advanced trainers (ATs). Specific aircraft models were indicated by the addition of Arabic numerals to the PT, BT, and AT letters. For example, BT-13 is the designation for one specific basic trainer built by Vultee Aircraft, Inc., Nashville, Tennessee. Significant variations to specific models were indicated by letters added to the Arabic numerals. For example, when Vultee began using a different engine in its BT-13 airframe, the corporation designated airplanes with the new engines as BT-13As; and when they changed from a 12 volt electrical system to a 24 volt system, they designated the 24 volt aircraft as BT-13Bs.

[1] A Texan on display at the Arizona Historical Society, Central Arizona Chapter, 1300 North College, Tempe, Arizona, displays the field designation BP200. The selection of a number that was never assigned to a Falcon aircraft was intentional. The Society wanted to avoid the possibility that their display aircraft might carry the designation of one in which someone had been killed or seriously injured.

[2] *The Official Guide to the Army Air Forces*, (New York: Pocket Books, Inc., 1944), p. 233.

Primary Training Aircraft

The Boeing Airplane Company, Stearman Aircraft Division, Wichita, Kansas, produced a popular and sturdy fabric covered bi-plane called the Boeing Model 75 Kaydet. Until August 1945 the Kaydets at Falcon were PT-17s and PT-17As powered by 220 hp Continental R-670-5 radial engines. In early August 1945, forty PT-13D Kaydets powered by Lycoming R-680-17 radial engines were added to the inventory to replace PT-17s and PT-17As destroyed by a storm. At Falcon, the Boeing-Stearman Kaydets were referred to simply as "Stearman." With ninety more horses than the U.K. grading school de Havilland Tiger Moths, the Stearman has a maximum speed of 124 miles per hour at 2635 pounds loaded weight.[3]

The Stearman has a wingspan of 32 feet, 2 inches and a length of 24 feet, 10 inches.

Photograph by George Peter Alexandra (Course 7), courtesy of Mike Alexandra

The propellers of the Tiger Moth and Stearman rotate in opposite directions, and this difference caused problems for the British cadets who had flown the Tiger Moths in U.K. grading schools. (As noted in Chapter Two, the early courses did not attend grading schools.) A spinning airplane propeller causes the airplane to turn either to the right or to the left depending on the direction or rotation of the propeller. This effect is called prop-torque-induced tendency, and pilots learn to compensate by applying opposite rudder. The difference caused problems for newly arrived British cadets because the corrective action at takeoff was the exact opposite of a habit already formed in flying the Tiger Moth.[4] The wrong application of rudder is one cause of an effect called "ground looping," an uncontrolled turn of the aircraft during taxying or on the roll before takeoff or after landing.

[3] David Lee, *World War II Airplanes* (Edison, New Jersey: Chartwell Books, 1998), p. 56.

[4] Don Dwiggins, "Yesterday At Falcon," *Arizona Highways*, July 1988, p. 39.

Stearman were not equipped with electric starters. Their nine cylinder radial engines were cranked by hand from the left side. Southwest Airways hired men specifically for this task; their job title, lineman. Many of Falcon's linemen were Pima Indians from the neighboring reservation. Falcon Mechanic L. P. Overstreet recalls that one of the Pima was called Chief Lewis. Any problem with Pima workers was reported to Chief Lewis, not Southwest administration, and the problem ceased immediately!

Stearman trainers in early-war training colors: blue fuselage, yellow wings and tail surfaces, and red and white stripped rudder. The seven red stripes and six white stripes represent the thirteen original American colonies and corresponds to the thirteen stripes on the American flag. The paint scheme was officially changed to silver in 1941, but the striped rudder was retained until May 15, 1942.

Photograph by Flight Instructor David Thiele, courtesy of David Thiele

Presumably the same aircraft as shown in the above photograph, but now in silver paint. Cadets called the field designations, in this case BP9, "buzz numbers" because the numbers could be seen from the ground when a cadet flew too low over populated areas, a violation of flying regulations called "buzzing." A cadet reported for buzzing could face elimination from the program.

Photograph by
Flight Instructor Ray Shelton,
courtesy of
Flight-Dispatcher Keith Hansen

In a July 1941 memorandum, Group Captain D. V. Carnegie noted that No. 4 British Flying Training School, then still at Thunderbird Field, had a complement of thirteen Stearman. Carnegie added that the War Department had authorized an additional seventeen, bringing the total to thirty.[5] A May 1943 U.S. Army inspection document lists thirty-three Stearman.[6] A June 1945 Army inventory lists forty Stearman: eighteen PT-17s and twenty-two PT-17As.[7] The final Army inventory on August 31, 1945, shows the same number of PT-17s and PT-17As, all heavily damaged in a storm, plus forty Stearman PT13Ds that had been flown in as replacement aircraft.[8]

Just the basics — a Stearman cockpit

Photograph by George Peter Alexandra, courtesy of Mike Alexandra

Looking south — the control tower, the barracks, the west hangar, and the Stearman line

Although not dated, the photograph provides two clues that it was taken between September 1943 and July 1944. The star insignia on the aircraft is a version not authorized until September 17, 1943, and the automobile parked on the tarmac by the tower building is the 1938 LaSalle coupe owned by Wing Commander John Fergus McKenna AFC, commanding officer of No. 4 BFTS from April 1942 until July 1944. When McKenna was transferred back to England, he is reported to have sold the LaSalle to Flight Lieutenant Hector White. A flight lieutenant would not have had tarmac parking privileges.

Photograph courtesy of Marvin R. A. Grant, commanding officer of Falcon's 3044th Army Air Forces Base Unit

[5] Document signed by Group Captain D. V. Carnegie, director of U.K. Training, titled "Strength and Establishment of Aircraft — British Flying Training Schools," dated July 8, 1941.

[6] Memorandum from Lieutenant Colonel Donavin Miller, Field Inspector, Headquarters, AAF Technical Section, 207 Pacific Building, Santa Ana, California; to The Commanding General, Army Air Forces, Washington, D.C., subject: Technical Inspection, British Flying Training School, Falcon Field, Mesa, Arizona, dated May 3, 1943.

[7] Capt. Marvin R. A. Grant, *History of 3044th Army Air Forces Base Unit (Primary — Advanced) and Falcon Field, Mesa, Arizona (May and June 1945)*, p. 12.

[8] Capt. Marvin R. A. Grant, *History of 3044th Army Air Forces Base Unit (Primary — Advanced) and Falcon Field, Mesa, Arizona (July 1, 1945 to September 11, 1945)*, pp. 14-15.

Basic Training Aircraft

The Vultee Valiant has a wingspan of 42 feet 0 inches and a length of 28 feet 10 inches.

Photograph courtesy of Tom Austin (Course 5)

Vultee Aircraft, Inc., of Nashville, Tennessee, built a low-wing monoplane called the Model 54. In September 1939 the Army selected the Model 54 for use as a basic trainer and placed an initial order for 300 aircraft, now designated BT-13. Those first 300 aircraft were equipped with Pratt & Whitney 450 hp R-985-25 radial engines. In 1941 the Army began ordering aircraft with Pratt & Whitney R-985-AN1 radial engines. Aircraft with this engine received the designation BT-13A. The next variation, the BT-13B, had the same engine but was given the new designation because its 24 volt electrical system was a significant improvement over the 12 volt system used in the BT-13A. The last variation, the BT-15, received its designation because it came equipped with 450 hp Wright R-975-11 radial engine instead of the Pratt & Whitney engine.[9] Vultee Model 54s in all of their variations are known as Valiants.

Photographs, Falcon office records, and personal recollections indicate that BT-13s, BT-13As, and BT-15s were assigned to Falcon. A photograph in the Wischler collection shows a Valiant with tail number 883. Number 883 was a BT-13. A photograph in the Falcon Field Association collection shows an aircraft with fuselage stenciling "U.S. Army - BT-13A, AC 41-1578." A flight accounting office record in the Bustrin collection shows that a BT-13A, serial number 41-1630, was used for the first training flights from Falcon on September 10, 1941. Neil Killgore, Falcon's chief flying instructor for primary training, remembers that "a few" BT-15s were also assigned.

Allan Ralph Wilden of Course 5 checks out a Vultee Valiant. Wilden, a recipient of Britain's Distinguished Flying Cross (DFC), did not survive the war. On August 3, 1943, his Lancaster bomber was shot down by a German night fighter piloted by Oberleutnant Herman Greiner.

Photograph courtesy of Robert Brown (Course 20)

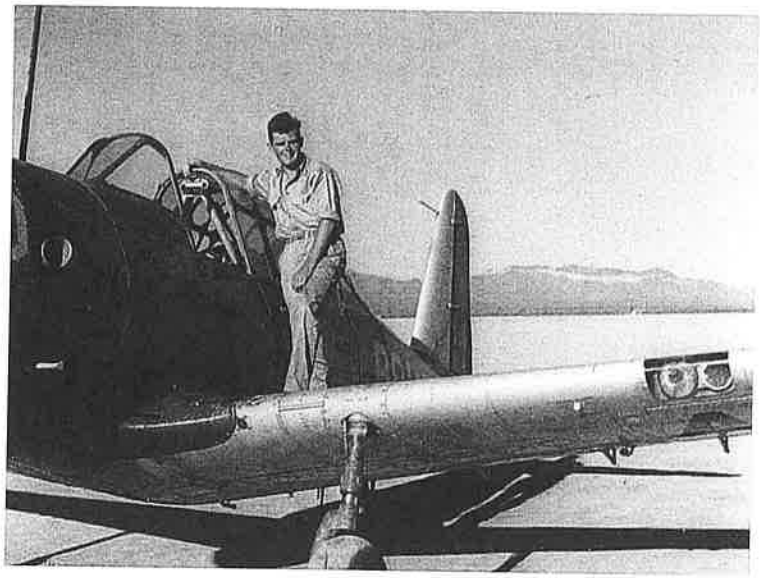
[9] Gordon Swanborough and Peter M. Bowers, *United States Military Aircraft Since 1909* (Washington, D.C., Smithsonian Institution Press, 1989), pp. 589-590.

Like the Stearman, the Valiant has a fixed undercarriage, but at 4496 pounds loaded weight and with its 450 hp engine capable of powering the aircraft to 180 mph, the Vultee Valiant is heavier, faster, and more powerful than the Stearman. In addition, the Valiant has a radio, landing flaps, and a two-position variable pitch propeller — all new items for the student pilot. Former cadets describe the Valiant, which they prefer to call simply by the manufacturer's corporate name "Vultee," as a forgiving aircraft that was "built like a tank." John Chatterton, a Course 10 cadet, recalled that breaking the Vultee's undercarriage on a night solo "took some doing."[10]

John Chatterton of Course 10 with a Vultee. Because of the Vultee's propensity to shake at certain speeds, the aircraft earned the nickname Vultee Vibrator.

Graduating from No. 4 BFTS as a sergeant pilot, Chatterton was later commissioned and attained the rank of flying officer. He won a DFC for his actions as a Lancaster pilot with 44 Squadron.

Photograph courtesy of John Chatterton



In 1942, Al Storrs, Falcon's director of training, became very unhappy with the Vultee. He thought that it was too easy to fly. According to Storrs, students "got lazy" flying the "docile" Vultee; consequently, they should transition directly from the Stearman to the advanced trainer. Wing Commander McKenna agreed to a trial run in which half a dozen cadets would skip the Vultee. Storrs later recalled that those cadets did "very, very well."[11]

Convinced that the Vultee should be eliminated from the program, Storrs traveled to Headquarters, Army Air Forces Western Flying Training Command in Santa Ana, California, to plead his case. The Vultee was eliminated as a basic trainer from all of the British flying training schools. Al Storrs later recalled that General Cousins in Santa Ana told him, "Storrs, you made an enemy for me out of Vultee [Aircraft, Inc.], but I guess you did the right thing."[12]

Because the Vultee was eliminated from the BFTS program before the U.S. Army began accurate record keeping at Falcon and because all of Southwest Airways' records pertaining to Falcon were later destroyed in a hanger fire in San Francisco, California, the number of Vultee aircraft assigned to Falcon can not accurately be determined. The Army did note in a 1944 history that "about twenty Valiants" had been in the inventory in 1941.[13]

[10] John Chatterton DFC, "Falcon Memories," *Falcon Field Association of Great Britain Newsletter,* ed. W. McCash AFM, 1998 No. 3, p. 12.

[11] Al Storrs and Betty (Storrs) Downing, *An Autobiography for My Family,* private manuscript, 1982, p 21.

[12] Ibid.

[13] Capt. Marvin R. A. Grant, *History of 15th Army Air Forces Flying Training Detachment (Primary-Basic-Advanced) Falcon Field, Mesa, Arizona (March and April 1944),* p. 9.

Advanced Training Aircraft

North American Aviation, Inc., of Inglewood, California, produced the best known and most widely used training aircraft of WWII. In 1937 the Army sponsored an aircraft design contest to encourage the development of aircraft in a category called "basic combat." North American won the competition with an aircraft that would become the BC-1A (BC for basic combat). In 1940 the Army changed the BC-1A's mission classification from basic combat to advanced trainer and redesignated the aircraft as AT-6.[14] Very few aircraft with the actual designation AT-6 were produced, and none found their way to Falcon.

The series continued with the AT-6A. The AT-6A is a low-wing monoplane with an all-aluminum fuselage, fabric-covered control surfaces, and a plexiglass canopy. It is powered by a 600 hp Pratt & Whitney R-1340 radial engine and, unlike the Vultee, has retractable landing gear. The AT-6A has a two-way radio, navigation instrumentation, and provisions for armament. At 5155 pounds loaded weight and with its 600 hp engine capable of powering the aircraft to 210 mph, the AT-6A is heavier, faster, and more powerful than the Vultee.

The North American AT-6A has a wingspan of 42 feet 0 inches and a length of 27 feet 9 inches. Tail numbers are abbreviated serial numbers. Tail number 1627 identifies the aircraft in this 1945 photograph as an AT-6A (serial number 41-627) manufactured in Inglewood, California. The O-AP markings indicate that this airplane was slated for reassignment or salvage. Although painted over with silver paint, the original airfield designation BP241 is still visible on the rear fuselage.

Photograph by Flight Instructor David Thiele, courtesy of David Thiele

Initially, AT-6A production was confined to North American's Inglewood facility, but war demand soon taxed the Inglewood plant. In addition to the Army's orders for AT-6As, the Navy placed orders for SNJ-3s, their version of the AT-6 airframe, and the RAF ordered their version, the Harvard IIs.[15] In 1941 North American built a second production line in Dallas, Texas, and soon all production of the AT-6A was turned over to Dallas. Because most AT-6 series aircraft were built in Dallas, the aircraft became known as the Texan.

[14] Swanborough and Bowers, p. 454.

[15] Larry Davis, *T-6 Texan in Action* (Carrollton, Texas: Squadron/Signal Publications, 1989), pp. 21 & 45. Harvard IIs were essentially BC-1As fitted out with British instrumentation, British radios, and equipment such as the RAF circular style control grip in place of the American pistol grip style control grip.

A North American Aviation Inc., AT-6A above the clouds. The tail number 116107 (serial number 41-16107) identifies this aircraft as an AT-6A manufactured in Dallas, Texas. The "41" in the serial number represents the year the U.S. Army ordered this aircraft from North American, in this case 1941, and not the year the aircraft was completed or delivered. Tail number stenciling omitted the serial number dash and the "4" from the "41." Any confusion with 1951 was not anticipated. Military airplanes were not expected to last ten years; nevertheless, Course 16 American graduate Major Francis Satterlee flew hundreds of combat sorties in WWII vintage AT-6s in the Korean War. Flying AT-6Cs, AT-6Ds, AT-6Fs, and LT-6Gs (re-manufactured earlier models), Satterlee's 6147th Tactical Control Group flew 40,354 combat sorties marking enemy positions for the jet fighter-bombers.

Photograph courtesy Falcon Field Association of Great Britain,
Arthur Stackard (Course 26) collection

As the story goes, early aircraft were designed with the steps on the left side because so many pilots were horseback riders accustomed to mounting and dismounting from the left side of the horse. RAF cadet Arthur S. Boulton of Course 14 demonstrates the proper "dismount."

Photograph by
Flight Instructor David Thiele,
courtesy of David Thiele

Someone may have hit the brakes too hard on BP252. The steel bar structure visible through the canopy was designed to prevent the canopy from being crushed in an accident. The venturi tubes on the fuselage directly below the canopy provide vacuum for the gyro instruments and identify this aircraft as an AT-6A. Subsequent AT-6 variations use a mechanical vacuum pump.

Photograph by Flight Instructor David Thiele, courtesy of David Thiele

North American produced an AT-6B, a gunnery trainer with a modified canopy and a rear-facing back seat, but this model was not used at Falcon. The AT-6C was externally almost identical to the AT-6A, but internal changes were considered sufficient to warrant the new designation. North American began deliveries of AT-6Cs in the early summer of 1942.

A Falcon Field AT-6C (foreground), tail number 132446 (serial number 41-32446), flies in formation with a Luke Field AT-6C, tail number 24034 (serial number 42-4034). All AT-6Cs were manufactured in Dallas, Texas. The letters BP on the Falcon aircraft fuselage stand for British Program; whereas, the X prefix was assigned to Luke Field, a U.S. Army Air Forces training field north of Phoenix, Arizona.

Photograph courtesy of Flight Dispatcher Keith Hansen

Concerned about a possible shortage of aluminum for the production of combat aircraft, the War Department asked manufacturers of training aircraft to use materials other than aluminum wherever possible. North American's response was to use mahogany plywood for rear fuselage skinning and bulkheads and solid spruce for internal stringers, stiffeners, bulkhead flanges, and longerons in many AT-6Cs. Each of these AT-6Cs saved 200 pounds of aluminum.[16]

A small number of these "wooden" AT-6Cs found their way to Falcon, and one of them burned. According to Falcon mechanic L. P. Overstreet, a standard feature on AT-6 series aircraft is an oil dilution system designed to thin the oil for cold weather starts. To dilute the oil, a special valve injects aviation gasoline directly into the oil. Once the engine is running, engine heat causes the gasoline to evaporate, and the oil returns to its original viscosity. This method of thinning the oil results in flames coming from the exhaust port for a few seconds. On the AT-6C in question, the special valve stuck in the open position resulting in a continuous flame billowing from the exhaust. The prop wash from the running engine sent the flames tracing down the right side of the aircraft, the plywood caught fire, and the aircraft was a total loss. After that incident, Overstreet said that safety wire was used to secure the oil dilution valves in the off position.[17]

Bad luck persisted with the wooden AT-6Cs. Instructor Doice Shults was assigned one of these AT-6Cs, and he reports that the aircraft was closely watched by Falcon's maintenance chief Joe Wischler. "One day I landed after doing some aerobatics with my cadet," recalled Shults. "When I taxied in to the ramp, I was met by a group from North American Aviation to inspect it. We found that the wood where it connected to the metal had cracked all around and was about to fall off. It was determined that this was not a good substitute especially for our dry hot weather in Arizona."[18] The AT-6D was the next variation in the AT-6 series.

AT-6D, tail number 481250 (serial number 44-81250), flown by cadet Kenneth H. Pullan of Course 25. The O-D stenciling indicates that this aircraft was slated for reassignment or salvage. Lack of visible riveting patterns in the empennage may indicate that this aircraft had wooden components.

Photograph by Alfred Derek Parmiter (Course 25), courtesy of Kenneth Herbert Pullan (Course 25)

[16] Ibid., p. 24.

[17] L. P. Overstreet, interview with the author in 1998.

[18] "Plywood AT-6s," *Falcon Field Association of Great Britain Newsletter,* ed. W. McCash AFM, 1997 No. 4, p. 5.

AT-6Ds had 24 volt electrical systems; whereas, earlier AT-6 variations had 12 volt electrical systems. AT-6Ds rolled off the Dallas assembly line intermixed with AT-6Cs, and some AT-6Ds were built with wooden fuselage components. The AT-6F was the final production version built by North American Aviation. AT-6Ds were assigned to Falcon; AT-6Fs were not.

Falcon began training with about twenty AT-6A aircraft,[19] and later added AT-6C and AT-6D aircraft, but because of the loss of Southwest Airways' records in the San Francisco hanger fire, the arrival dates for the AT-6Cs and the AT-6Ds at Falcon cannot be determined. One surviving United States Army record shows that in May 1943 an Army inspector counted sixty-five AT-6As and two AT-6Cs.[20] In April 1945, twenty-eight brand-new AT-6D aircraft arrived to replace a like number of AT-6A aircraft that were requiring excessive maintenance.[21] The final inventory on August 31, 1945, recorded twenty-five AT-6As, sixteen AT-6Cs, and thirty-one AT-6Ds.[22]

Flight Instructor Sid Wood runs up the engine on number 213 in this late-war photograph.

The only AT-6 series aircraft that was factory equipped with a propeller spinner was the AT-6F. The presence of a spinner on this Falcon aircraft indicates that the propeller assembly had been replaced.

Photograph by Flight Instructor Ray Shelton, courtesy of Flight Instructor Sid Wood

19 Grant, *History (March and April 1944),* p. 9.

20 Miller memorandum.

21 Capt. Marvin R. A. Grant, *History of 3044th Army Air Forces Base Unit (Primary — Advanced) and Falcon Field, Mesa, Arizona (March and April 1945),* p. 5.

22 Grant, *History (1 July 1945 to 11 September 1945),* pp. 14-15.

The Station Aircraft

Wing Commander Rogers was a twin-engine pilot, and in late 1944 he requested a twin-engine aircraft for administrative trips and for maintenance of his pilot proficiency. A Beech Aircraft Corporation AT-10 (serial number 41-26990) was assigned. In an official report to the Army, Captain Grant called the aircraft "a valuable adjunct to the Field,"[23] but he noted in a letter to the author that "Wing Commander Rogers was indignant." The AT-10, a lumbering aircraft known as the "Bamboo Bomber," was "just about as exciting as the Stearman and just about as fast," according to Grant.[24] Citing "inability to get parts" and "excessive maintenance," Grant had the AT-10 declared surplus, and on April 12, 1945, Falcon received a Beech Aircraft AT-7 (serial number 41-1191).[25] Suffering from serious mechanical problems, the AT-7 was later replaced by an AT-7C (serial number 43-33504).[26] Captain Grant referred to the AT-7s as "beautiful twin-tail Beechcraft," and he added, "as the C-45 [civilian designation] they became the dream of many corporate executives after the war."[27] Rogers used the AT-7C to tour the British flying training schools in Texas and Oklahoma. When Rogers returned to England, Grant inherited the AT-7C.

> "On September 10, 1945, Wing Commander Rogers asked that I fly him to Love Field in Dallas. He was returning to England. I advised him that my MOS was as a single-engine fighter pilot. I had not been qualified for twin engine. He said that 'when we get to Dallas, you will be.'
>
> "Wing Commander Rogers received an extravagant, free-flowing going away reception the evening before his departure. He was really 'hung over' when we met the next morning. However, we did get the AT-7C airborne and were on our way. He was soon sound asleep in the co-pilot's seat. Once, I was a little slow switching fuel tanks, and the engines sputtered. He popped alive but settled back into his nap as soon as the engines smoothed out. When we arrived at Dallas, he said, 'Land it.' Somehow I managed. He responded, 'Great, now you are qualified,' signed my log book and took off, leaving me with the AT-7C to take back to Falcon Field.
>
> "I was delighted. The AT-7C was my own personal, private airplane for the whole month because no one else on the base was qualified to fly it."
>
> Marvin R. A. Grant

[23] Capt. Marvin R. A. Grant, *History of 3044th Army Air Forces Base Unit (Primary — Advanced) Falcon Field, Mesa, Arizona (November and December 1944)*, p. 4.

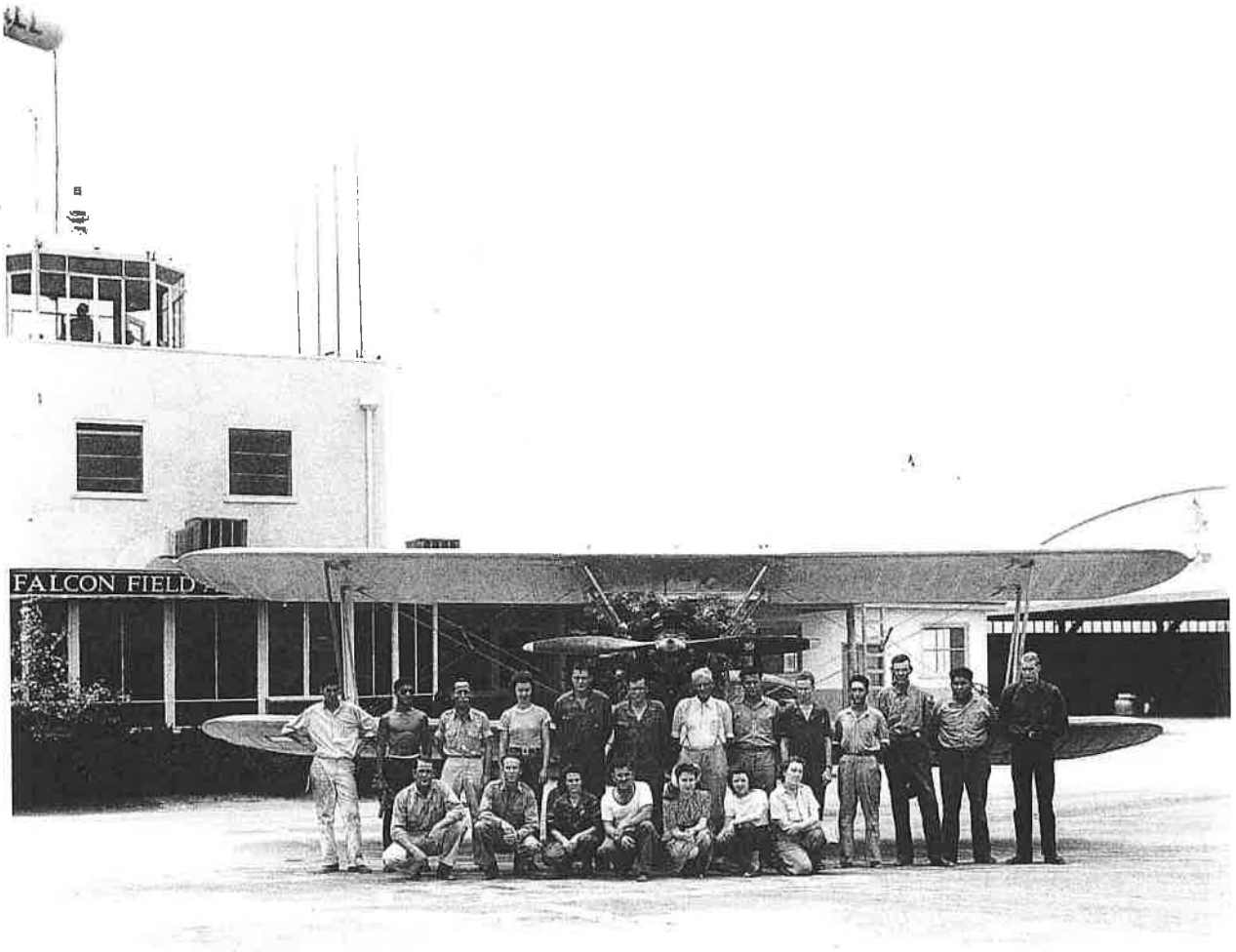
[24] Marvin R. A. Grant, letter to the author dated February 10, 1999.

[25] Grant, *History (March and April 1945)*, pp. 9-10.

[26] Capt. Marvin R. A. Grant, *History of 3044th Army Air Forces Base Unit (Primary — Advanced) and Falcon Field, Mesa, Arizona (May and June 1945)*, pp. 13-14. The AT-7C arrived on June 29, 1945.

[27] Grant letter.

[28] Ibid.



Stearman Maintenance Crew, 1945

Front row, left to right: Harold Gifford, Earl Proctor, Hester Swanner, Norval Sparks, Germaine Scanlon, Charlene Teigen, Laura Lambson.

Back row, left to right: Robert Romo, Arthur Arroyo, William Willis, Ethel Hale, Wallace Aycock, Charles Ballard, Henry Engebretson, Armando Corrales, Lester Grace, Martin Cabrera, William Brantley, Archie Wilson, W. R. Brantley.

Photograph by Sergeant Cy Cartwright, courtesy of Mechanic Walley Aycock