A quiet corner of Oklahoma has become a center of training excellence for the USAF's heavy-lift C-17 Globemaster III and KC-135R tanker crews. It is also planned to be the training base for the forthcoming KC-46A Pegasus. *Combat Aircraft* takes an access-all-areas look behind the scenes.

REPORT **Henk de Ridder**

ALTUS AIR FORCE Base in Oklahoma is home to the 97th Air Mobility Wing (AMW) and is pretty much a perfect training base. It enjoys an average of 300 days of good flying weather per year, has a lot of open airspace and easily accommodates some of the largest aircraft in the US Air Force inventory. The station has two resident units: the 58th Airlift Squadron (AS) flying the Boeing C-17A Globemaster III, and the 54th Air Refueling Squadron (ARS) with the KC-135R Stratotanker. It is here that students coming out of basic pilot training learn their trade as co-pilots on the Boeing heavies, soon to be joined by the new KC-46A Pegasus.

Altus has an important role to play in the future of the USAF as it seeks to expand dramatically. In September, Secretary of the Air Force Heather Wilson called for 74 new squadrons including 14 new tanker units. It's a big undertaking and comes at a time when the USAF is also bringing the new KC-46 into service.

USAF aircrews have been trained at Altus for 75 years, although the base dates back a further decade, when it was known as Altus Army Air Field. With the drawdown of forces shortly before the end of WW2, it closed as an active airfield in May 1945, being used as an aircraft storage center. One of the most famous short-term residents was Boeing B-17F Flying Fortress *Memphis Belle*. The base's days of inactivity were relatively short-lived — Altus was reconstructed and brought back to active status during the early days of the Korean War as part of America's reaction to increased communist aggression around the world. On August 1, 1953, it reopened as a training facility for crews destined for transport aircraft, a role that continues to this day. Back then it was for Beechcraft C-45s and Douglas C-47s under the control of Tactical Air Command (TAC). During the 1950s, Strategic Air Command (SAC) was active here too, with the 96th Bomb Wing flying three squadrons of Boeing B-47 Stratojets and one KC-97F-equipped air refueling squadron. The first resident B-52 Stratofortress landed in January 1958, and the base gained its first KC-135A Stratotanker at around this time.

On July 1, 1968, Military Airlift Command (MAC) moved in and brought with it two new heavies — the Lockheed C-5 Galaxy and C-141 Starlifter. The USAF activated the 97th AMW at Altus as part of Air Mobility Command (AMC) on October 1, 1992. Ownership

A CENTER OF EXCELLENCE

KC-135 crew training came to Altus from Castle AFB, California, in 1994 when the 330th Flying Training Squadron (FTS) was deactivated and the 97th Training Squadron formed at the Oklahoma base. The KC-135 Combat Crew Training School also moved east to Altus in 1994 along with a loadmaster course for air-drop academic training. A part of the loadmaster instruction is done at Charleston AFB, South Carolina. To reduce costs, the C-17 loadmaster course moved from Sheppard AFB, Texas, to Altus in 2002. In 2005, the C-5s left Oklahoma and training for this type went to Lackland AFB in Texas, where it is performed by Air Force Reserve Command.

The 97th AMW has played an important role during many humanitarian airlift operations, providing aircraft and personnel in the aftermath of hurricanes and other natural disasters around the world. In January 2010, after a devastating earthquake in Haiti, 58th AS crews delivered supplies and evacuated 1,366 people from the Caribbean island.

The prize that awaits a successful student coming from training to the tanker community – the old but bold KC-135R, which remains the bastion of the USAF air refueling fleet. **Dick Wels**

HOME OF THE HEAVIES

of the wing changed to Air Education and Training Command (AETC) the following year, and it remains under AETC control to this day. Meanwhile, C-17 Globemaster IIIs came to Altus with the 58th AS under the command of the 97th Operations Group in 1996.

Globemaster goals

Known as the 'Ratpack', the 58th AS trains fledgling Globemaster pilots how to master this nimble heavyweight, with around 80 instructors and 17 aircraft on its strength. Capt Robert L. Petithomme explained, 'Most C-17 pilots come directly from a training base such as Columbus AFB. After completing pilot training, they will learn the basics of the C-17 at Altus and then become a qualified co-pilot. After some experience at an operational base, they will eventually return here for the aircraft commander upgrade course, and after that they return to an operational base [as a left-seat commander pilot].'

Although it's a training unit, the 58th is still part of the USAF's C-17 fleet and flies operational missions as and when the need arises. Those sorties are allocated by the 618th Air Operations Center (AOC), also known as the Tanker Airlift Control Center, which is responsible for dividing and allocating airlift requirements among the various units. 'A regular transport mission is pretty much as you might expect — fly to where the cargo is, load it, and take it where it needs to go,' explains Petithomme. 'It can be a quick one-day mission if the cargo is nearby, but an around-the-world mission takes up to a week or longer if you are making multiple stops across the globe. The same goes for requests from special forces. Special operations units need cargo moved just like anyone else.'

Transporting freight is one of the many facets of the training program, as is conducting air-drops. This demands special skills, a lot of teamwork and training. Petithomme says, 'The C-17 can air-drop loads but it doesn't work for all types of cargo because of the rigging

Above: A KC-135R from the 54th ARS seconds from touchdown at Altus as a new co-pilot learns the ropes.
Henk de Ridder

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>
> **Capt Robert L. Petithomme**

This image: As a C-17A awaits its crew, a fellow 58th AS example works the pattern.
Henk de Ridder

and forces involved in the dropping and landing. Air-drop is a great way to get freight to a place with no runway.

'Another way to get cargo to its destination or nearby is to land on dirt strips. This is one of the big advantages of the C-17, and something its predecessor — the C-141 — couldn't do, and the C-5 can't do. The aircraft is able to operate on airstrips as short as 3,000ft. To perform dirt landings requires a reconnaissance of the place which is the most appropriate to make such a landing. A team will go in advance and survey the airfield/strip to ensure its suitability prior to conducting operations.' Poor visibility and night vision goggles flying is bread-and-butter for Globemaster pilots.

It is not only US personnel who make their first C-17 flight at Altus. Foreign crews also use the squadrons here to become qualified on the Globemaster III. For example, a Dutch student is currently at the base and after graduation is expected to be assigned to the NATO Heavy Airlift Wing's C-17 fleet at Pápa Air Base, Hungary.

A changing time for tankers

The 54th ARS can trace its lineage back to the 54th Transport Squadron, formed on May 30, 1942. The unit ranged across the US, from Elmendorf in Alaska to Reese AFB in Texas, before being deactivated in April 1997. It was re-formed at Altus on January 16, 1998, and is the only AETC KC-135R unit. As we all know, 'no-one kicks ass without tanker gas' (NKAWTG), so the squadron has a tough remit: training new Stratotanker aircrews across the USAF.

Students spend about five months at Altus before receiving their initial qualification. As well as the obligatory simulator 'trips', tankers are regularly seen pounding the circuit or heading out after darkness falls. As the USAF's formal training unit (FTU), the squadron's mission takes in active-duty as well as Air National Guard and Air Force Reserve Command (AFRC) crew members, including boom operators, for which role students come to Altus after a month at Lackland AFB, Texas, and a three-week survival training course. For them, training at Altus takes about four months to complete successfully. More than 100 aircrew instructors and support staff within the 54th are responsible for training a whopping 900 pilots and boom operators every year, including international students. Training Stratotanker instructors is also a heavy burden given the turnover — it takes three flights and a simulator check ride for an experienced KC-135 pilot to achieve instructor status.

At the same time, Altus is looking to the future. In 2014, it was chosen to be the AETC base for the new Boeing KC-46A Pegasus, the USAF's first step in recapitalizing its tanker fleet.

On August 30, 2016, a new training center was opened and the 56th ARS became active as the KC-46 FTU. The Leverett Formal Training Center will be the first port of call for Pegasus crews, with the next generation of simulators revolutionizing the path through training and on to a real Pegasus.

Above: With a backdrop of expansion in the USAF amid a manning crisis, training units are increasingly under pressure to increase output. **Hans Drost**

Left inset: Capt Eric Miller, an instructor pilot with the 97th Training Squadron, lands a C-17 in Colorado during the Altus Quarterly Exercise (ALTEX), which provides exposure to realistic and emerging tactical scenarios. The 97th TS manages the 97th AMW's $1.98-billion contracted aircrew training program for 275 assigned instructors and 2,100 C-17, KC-135 and KC-46 students. **USAF/SSgt Kenneth W. Norman**

Right: Col Eric A. Carney, commander of the 97th Air Mobility Wing at Altus AFB. **USAF**

LOADMASTER LEARNING

The role of the loadmaster has become increasingly complex in recent times. A great deal of training is required in order to meet the exacting standards of this often overlooked role. It starts with grasping the basic principles of aircraft and their characteristics, such as weight and balance. An initial qualification means the student can effectively load a C-17's cargo hold. Many factors come into play when it comes to transportation of freight in the aircraft — size, weight and type of cargo, for example. The C-17A extended-range variant has a large fuel tank mounted inside the cargo bay between the wings. This upgrade takes advantage of previously unused space to hold 60,000lb of fuel and allows the aircraft to fly up to five additional hours per mission without refueling. It's an added variable for loadmasters to take into account.

Medical evacuation (medevac) is another area the C-17 crew needs to be skilled in. 'The C-17 has separate aeromedical teams that will augment a normal crew,' explains Capt Petithomme. 'They will configure the aircraft depending on what is required for the patients' needs. Aeromedical crew training involves lots of medical work that's not taught at Altus. It is done at the operational wings such as the 172nd Airlift Wing from the Mississippi Air National Guard or the 315th Airlift Wing at Charleston AFB, South Carolina.

'The most rewarding missions are humanitarian support and aeromedical evacuation missions. We have delivered aid to parts of the world devastated by hurricanes and without power and water. We have also made short-notice flight changes to bring injured personnel to hospitals to get needed care.'