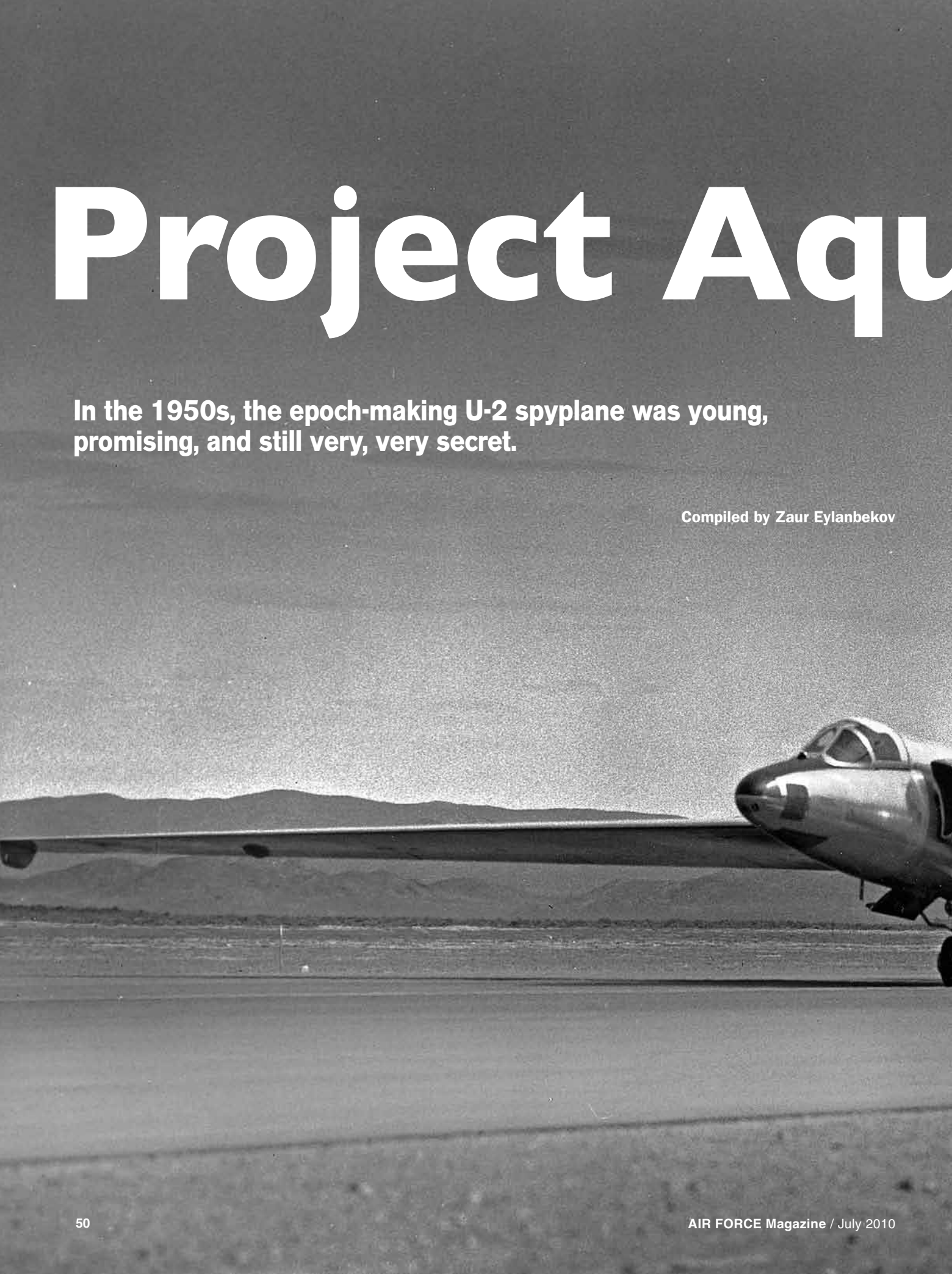
Project Aqu

In the 1950s, the epoch-making U-2 spyplane was young, promising, and still very, very secret.

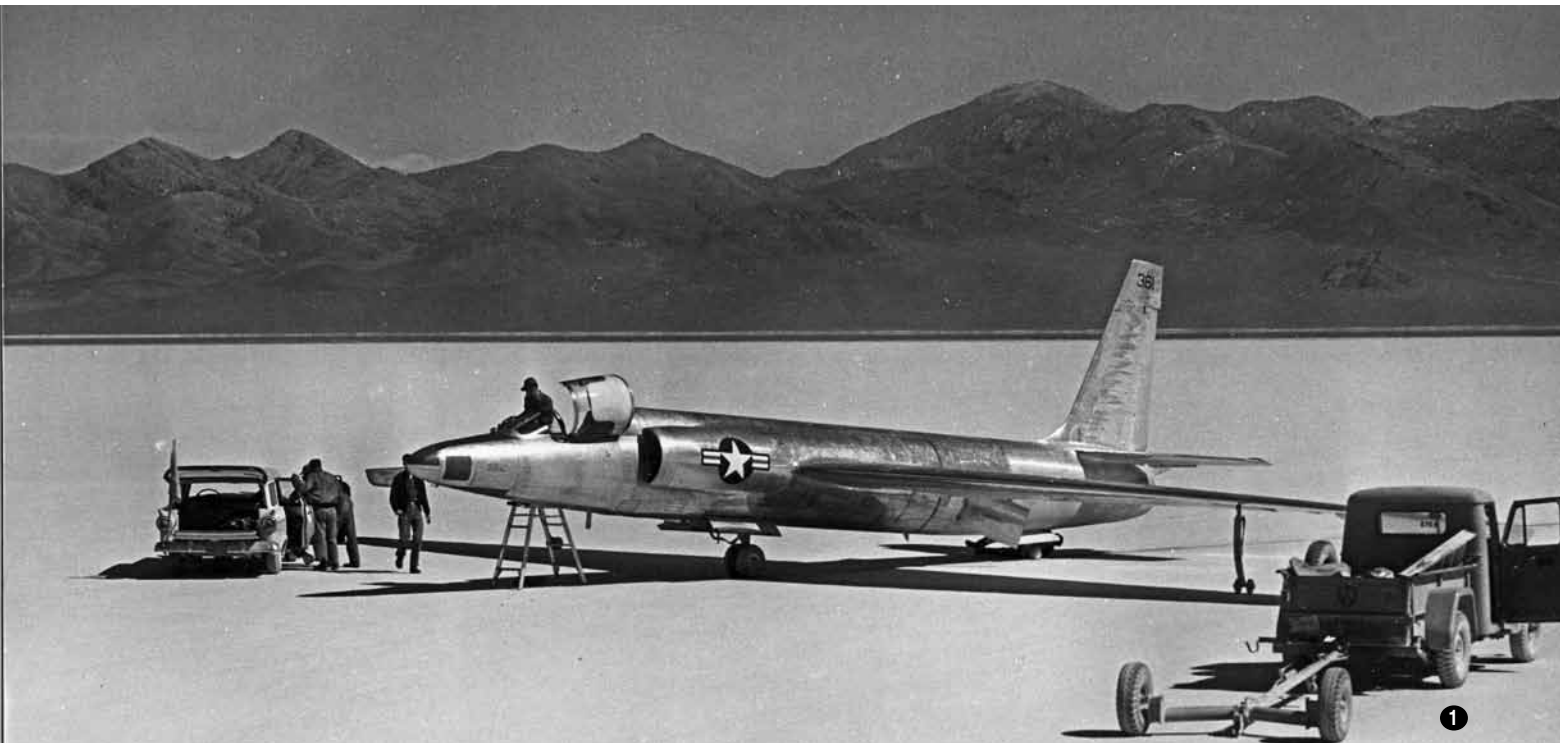
Compiled by Zaur Eylanbekov



uatone

An early U-2 reconnaissance airplane, speed brakes and landing chute deployed, lands at Groom Lake, Nev., in the mid-1950s. This aircraft bears a civilian registry number and markings of the National Advisory Committee for Aeronautics—forerunner of NASA. It was part of an elaborate cover story for what actually was a joint effort of the CIA and the Air Force. This photo and those on the following pages, recording those early days, come from the Lockheed Martin archive.

The U-2 is headed into its operational homestretch; in a few years, the Global Hawk will take its place. Even now, though, the story of its birth is fascinating. In November 1954, President Eisenhower approved Project Aquatone, a top secret effort to build a spyplane able to obtain intelligence about Soviet nuclear deployments. The U-2 made its first flight in August 1955. The U-2 was conceived by the CIA and built by Lockheed's famed Skunk Works. It was the first airplane to fly higher than 60,000 feet, above the reach of Soviet anti-air missiles at that time. ***|1|*** *A U-2 pilot is readied for a mission. Early U-2 pressure suits required "reverse breathing," in which pilots had to exhale hard to admit new air into the face mask.* ***|2|*** *A technician at Groom Lake—the secret base that got its start as home of the U-2 program—checks flight gear, which was form-fitted to each pilot.* ***|3|*** *A U-2 (background) is maintained in the open at Groom Lake. The U-2 has always had bicycle landing gear, but this one has a wheeled dolly under the tail to facilitate towing. The aircraft bears NACA markings. Once the U-2 became known, some genuine weather flights were flown to maintain the cover story, but the type's true altitude capability was not revealed.* ***|4|*** *The A-2 camera system for the U-2, here being installed. Note the wide apertures of the three down- and side-pointing cameras.*



|1| *A U-2 receives a postmission check. The aircraft's wings were patterned after those on gliders, to obtain maximum lift. Early test flights were confined to an area within 200 miles of Groom Lake; a pilot whose single engine flamed out could make a dead-stick landing back at the secret base.* ***|2|*** *Behind the fiberglass panels on the nose of this early U-2 were sensors that collected signals intelligence on Soviet radars tracking the airplane. These data were collected and analyzed after each mission, to plot future routes away from defenses.* ***|3|*** *A half-dozen U-2s wore NACA markings early in flight test.* ***|4|*** *U-2s were built by Lockheed at Burbank and Palmdale, Calif., then loaded in C-124 Globemaster IIs and reassembled at Groom Lake for test and operations.*

|1| *The arduous process of suiting up for extremely high-altitude flight could take hours. Pressure suits, like the U-2 itself, evolved quickly and with many field modifications. Early suits had no lavatory accommodations, despite missions that could last up to 10 hours.* *|2|* *A pilot poses for a wry photo. Pilots had to prebreathe pure oxygen for more than an hour to eliminate nitrogen bubbles that could give them "the bends" at extreme altitude. Heating elements are visible on the edges of the faceplate.* *|3|* *U-2 wings being assembled at Oildale, Calif.* *|4|* *Groom Lake had few amenities, but the crash truck proved a necessity on numerous occasions.* *|5|* *U-2 in final assembly at Groom Lake. Early hangars were small and sparse.*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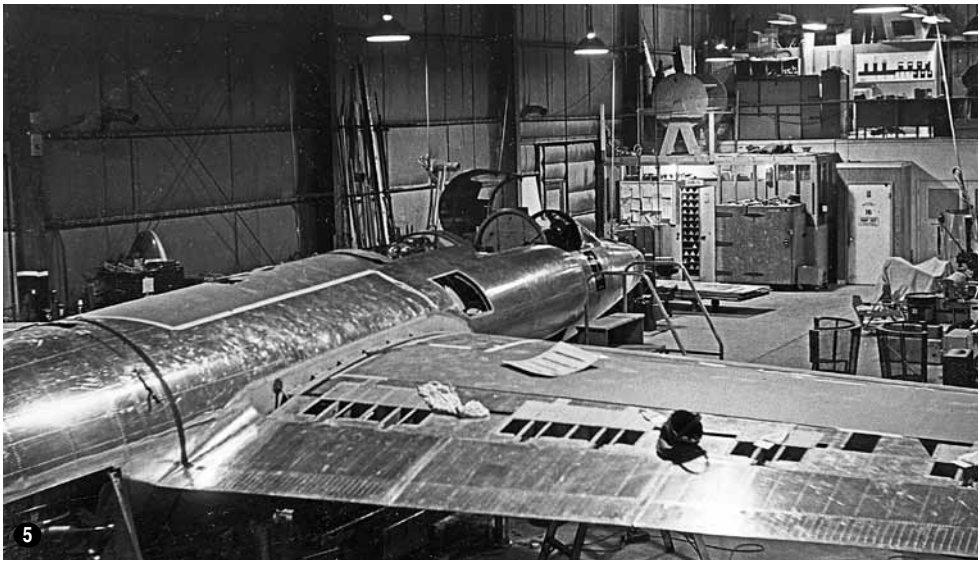
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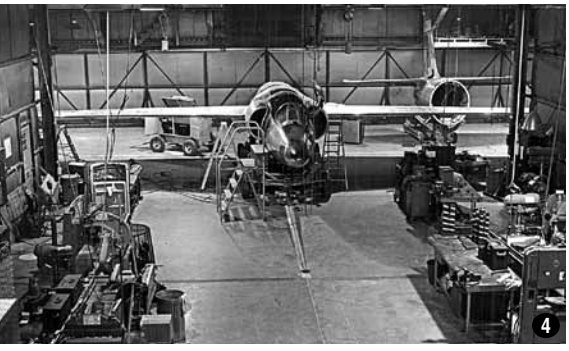
I1I *The U-2 pilot's pressure suit was so stiff when inflated that another pilot had to perform the preflight inspection, help strap the pilot into the seat, and then serve as a spotter as the U-2 took off, feeding the pilot, by radio, information about the airplane's attitude.* ***I2I*** *A U-2, unpacked from its cargo flight, is assembled at Groom Lake. An early unofficial name for the base was "Watertown Strip," named after the New York hometown of CIA Director Allen Dulles.* ***I3I*** *The Groom Lake cafeteria served meals to Lockheed, Air Force, and CIA employees. A few billiard tables served as the only after-hours entertainment.* ***I4I*** *A U-2 wearing NACA livery has its engine serviced. The entire rear of the aircraft could be removed.*

|1| *Mission planning was also done at Groom Lake, keeping planners close to the pilots and the whole operation as secret as possible. The atmosphere was serious but informal.* ***|2|*** *Lockheed pilot Bob Schumacher dons the improved MC-2 helmet for prebreathing; it would be covered with a thin white shell in flight. The helmet was not a trivial matter: Latching problems contributed to three fatal crashes in the late 1950s.* ***|3|*** *"Housing" accommodations at Groom Lake were spartan. The site was chosen for its remoteness and proximity to nuclear test ranges. Unwelcome visitors could be spotted miles away.* ***|4|*** *Final assembly in a Lockheed hangar at Watertown Strip.* ***|5|*** *The U-2 will "lean" on one wing if it's not moving. Pylons support the wings for maintenance. During taxiing for takeoff, "pogo" landing gear fall away. The scene shows how much infrastructure was built up in a relatively short time, but the aircraft were still being housed and serviced out in the open.*



I1I *A U-2 takes off at Groom Lake. Spotters in these cars watched with binoculars, talking the pilot through the tricky takeoff.* ***I2I*** *Lockheed, CIA, and Air Force workers commuted to Groom Lake via military aircraft. Early U-2 pilots were selected from USAF. They mustered out and were hired back as civilians, to hide their military connections.* ***I3I*** *The weather office.* ***I4I*** *By the 1960s, the Air Force had taken over the U-2 program—note the insignia—and was making frequent upgrades. These two aircraft are in flight test over Edwards AFB, Calif. The U-2 proved remarkably successful. Today, more than 50 years later, variants of the U-2 are still in service, their retirements extended several times because of their continued utility.* ■