

Tour Tip: Tour #4 will stop for description of this amazing site by a man who worked there

Hurricane Mesa Test Facility

Story and photos by Antone Bringhurst

It was built in 1955 to test jet ejection-seats but this famous local site has also been the location for several motion pictures

Jet aircraft were put into service soon after WWII. Escape from a disabled plane became a serious issue as the performance of aircraft increased. Between 1949 and 1956, there were 25 operational ejections at speeds above 500 knots (~575 mph). Eighty percent of these resulted in injury or death to the person ejected.

In the early 1950s the Air Force determined that it needed a facility to test and evaluate ejection systems of high speed aircraft. Test tracks were in existence at Edwards Air Force Base in California and Holloman Air Development Center in New Mexico, but they were on the desert floors and did not provide the capability to observe and study the escape process from beginning to end. The Air Force decided that it needed a test track that would allow for an object to be ejected near the edge of a cliff. The site requirements were for a relatively flat surface 2 ½ miles long ending at the edge of a precipice with a drop of at least 1,000 ft. Prospective sites in many regions of the United States were examined. Lower Smiths Mesa, later renamed Hurricane Mesa, was the site chosen.

In early 1953 Coleman Engineering Co. of Los Angeles, along with 10 or 12 other engineering firms, were asked to develop a proposal for the preliminary design of a test facility for aircraft ejection systems. Coleman's design was chosen, and in June of 1954 it was awarded the contract to design and build the test facility. The name given



the project was “Supersonic Military Air Research Track”. It was referred to as “Project SMART”. The contract called for the facility to be completed within 18 months, i.e. by November of 1955. The track design was to accommodate vehicle velocities of up to mach 2, which is approximately 1,800 mph.

Hurricane Mesa sits 1,500 feet above its valley floor. In 1954 there were no roads to the top of the Mesa, it had no electrical power, and its water supply was judged to be inadequate. Early access was via Upper Smiths Mesa. The following construction components had to be completed within the 18 month period: construction of a road,



delivery of electrical power, delivery of water from the Virgin River 1,800 feet below, construction of a 12,000 foot long

concrete test track, anchored to bed rock, continuously welded steel tracks installed and aligned to tolerances of .005 of an inch,

construction of a blockhouse control center, camera towers built, storage facilities for rockets completed, electronic telemetry facilities developed, shop and administrative facilities built, security fence completed, etc. All of these construction components were completed in 13 months! The first track test firing occurred on 8 July 1955. During the construction phase, as many as 200 workers were employed.

The military had a variety of aircraft and each had a different ejection system. These various systems were tested at different velocities using state of the art electronically instrumented dummies. A sophisticated camera system was used to track the ejected dummies through their flight paths. Some tests used chimpanzees rather than dummies. A total of 334 tests were conducted between July of 1955 and December of 1961. During this period approximately 100 persons were employed at the base.

A high percentage of aircraft ejections occur at take off and landing. It soon became apparent that all ejection systems must be capable of safely ejecting a pilot from a disabled plane at ground level. Once this was determined, the Air Force decided that it no longer needed a test track at the edge of a precipice. The functions at Hurricane Mesa were transferred to Edwards Air Force Base in California.

Soon after the Air Force terminated project SMART, Stanley Aviation purchased the facility and continued testing ejection and other systems. The facility is now called the Hurricane Mesa Test Facility and is owned and operated by Universal Propulsion Company of Phoenix, Arizona a subsidiary of Goodrich. 🇺🇸

In the early 1950s the Air Force determined that it needed a facility to test and evaluate ejection systems of high speed aircraft. At 1500 feet above the desert floor Hurricane Mesa proved the ideal spot

