

BRIEF HISTORY OF KINGMAN ARMY AIRFIELD

*©Joshua S. Edwards
Cornerstone Environmental Consulting, LLC
February 2015*

In 2015, Cornerstone archaeologists surveyed a portion of the Kingman Army Air Field (KAAF: Figures 1 and 2) prior to construction of two photovoltaic renewable energy projects. Given that the area was known to be within the KAAF, and near to the headquarters (on the east side of Route 66), the surveyors were not surprised to find that the ground surface was littered with bullets. Local residents are familiar with these findings, as there are hundreds of thousands of bullet slugs commonly found for many square miles around the project area.

In May of 1942 the Army Air Force authorized construction of the KAAF in Kingman, one of the nation's six aerial gunnery schools, which was where over 35,000 cadets earned their certificates (Figures 1 and 2; Stone 1991; Stein 1998; Hesse et al. 2010). The Wartime Aircraft Gunnery School was created in response to the United States' entry into World War II the previous year. Construction began hastily in June 1942 and is estimated to have cost 9 million dollars. Buildings and structures were pre-cut and assembled on-site by specialized construction teams. The primary use of the facility was as an Army Air Force Gunnery School, but the associated Kingman Ground to Ground Gunnery Range and Kingman Air to Air Gunnery Range were located about six miles north of the present city limits of Kingman. From this point, the former practice gunnery ranges extended northward approximately 31 miles, generally following the Hualapai Valley, covering half a million acres from the Cerbat Mountains to the Hualapai Reservation.

Although construction of the base was rapid under the command of Lt. Colonel Harvey P. Hughn, the project encountered many hurdles along the way, including issues with food delivery and a distinct lack of housing. To abate these problems, work on Davis Dam was temporarily suspended and the crews were sent to Kingman to help with construction of the new base. On August 4, 1942, the Army Air Force Flexible Gunnery School was officially declared open for business three months after the project was authorized.

Also in August of 1942, the Kingman Ground-to-Ground Gunnery Range was established as part of the Army Air Forces Flexible Gunnery School under the jurisdiction of the West Coast Flying Training Command (USACOE 2010). Within the boundary of the range, the Department of Defense constructed approximately 89 buildings in an area referred to as the Ordnance Magazine and Target Range. In addition to this area, the range consisted of five ground-to-ground moving target ranges, two .22 caliber bullet moving target ranges with 20 targets per range, 15 skeet ranges, one 50-trap moving base range, a shotgun turret range, and two malfunction ranges. Students typically used shoulder-fired and gun turret systems using .30 caliber and .50 caliber bullets and shotgun small arms ammunition including .22 and .45 caliber bullets. The weapons



Figure 1. Aerial photo of Kingman Army Air Field.



Figure 2. Photo of the Kingman Army Air Field.

that were used at the Kingman Ground-to-Ground Gunnery Range are categorized as small arms, which include rifles, automatic rifles, pistols, machine guns, and shot guns (USACOE 2010).

Yucca Army Air Field (YAAF) was activated on December 1, 1941, as an emergency landing area, and was acquired by the U.S. Army Air Forces in 1943-44. The base encompassed 2,284 acres and included a satellite airfield for the use of the Flexible Gunnery School at KAAF. YAAF ultimately consisted of two 6,000' asphalt runways, taxiways, control tower, a total of 45 buildings, roads, a railroad spur, electrical utilities, water utilities, and a sewage disposal plant. The adjoining Yucca Air to Air Gunnery Range was located to the southwest of YAAF and consisted of 550,000 acres with four airfields. The U.S. Army Air Forces operated several other associated emergency/auxiliary landing fields in the area including Cyclopic Auxiliary Army Airfield (AAAF) #1, Hackberry AAAF #3, Topock AAAF #5, Lake Havasu AAAF #6 (now the Lake Havasu City Airport), Signal AAAF #7, Port Kingman Airport, and also used Red Lake for emergency landings.

The Wartime Aircraft Gunnery School at KAAF was initially set up to handle two classes of about 200 students at any one time. The first class was on January 8, 1943 and was composed of 40 bombardiers. Over the next two years class sizes grew to 300 students and more instructors were brought in (Steele 2013). Each class would fire 1,200 rounds per student for one week on the Kingman Air to Air Gunnery Range and then move to YAAF to fire 1,000 more rounds. Initially, .30 caliber ammunition was used but it was phased out as the .50 caliber Browning Machine Gun (BMG) became available. Activities included skeet firing training and night gunnery training, and P-39 and P-63 aircraft were towed along flight lines and were used as targets for aircraft (KAAM 2015). B17s were the primary aircraft assigned to the base, but other aircraft were also used for training, including the BT18, AT6, AT11, B24, P38, B26, and A26, and the AT23, which was also used for target towing.

On May 7, 1943, the base was officially named the Kingman Army Air Field (KAAF; Site AZ G:9:8[ASM]; a.k.a. Kingman Army Airfield; Wilson 1996; Stein 1998). The facility consisted of approximately 488 structures and buildings including staff housing, a post headquarters complex, three runways, a railroad siding, recreation building, grocery store, hospital, U.S. Post Office, photo lab, gas station, six exchanges, tailor shop, bakery, chapels, theater, guardhouse, radio tower, and a library, among many other structures (Stone 1991:C-8). With all its wells and reservoirs, the base had a supply of 500,000 gallons of water daily.

On February 21, 1943, the first class in air-to-air firing at KAAF began using tow targets being pulled by AT-6s (KAAF 2015). The first wave of trainees included the 1120th, the 1121st, 1122nd, and 1123rd Flexible Gunnery Training squadrons. Also taking up residence at this time were the 100th Guard Squadron, otherwise known as the Military Police. On December 10, 1943, the new base commander, Colonel George E. Henry, reported for duty. In 1943, graduates numbered 10,861. This number increased to 24,008 by August of 1944, and by September, 214,826 gunners had graduated from the seven schools (AAFHS 2015). On April 22, 1944, the KAAF was consolidated and the host unit was designated as the 3018th Army Air Force Base

Unit. Each of the units on the base became subdivisions of 3018th, which was one of the top training schools in the United States by 1944. On June 15, Colonel Donald B. Phillips was inaugurated as the new base commander.

Many famous entertainers visited the troops at the base, including Bob Hope, the Three Stooges, and Kay Kaiser and his orchestra. The base also gained notoriety from the presence of an all African-American unit, the 334th Aviation Squadron, that was activated from Mather Field, California, and women from the TB-26 Co-Pilot School. Bugs Bunny became the base's official mascot (Figure 3), with sanction from Warner Brothers, due to the abundance of rabbits on the base and firing range. Famous students at the base included actor Charles Bronson, who drove trucks to Yucca every day, and Clayton Moore, who played The Lone Ranger.



Figure 3. The Kingman Army Air Field logo featuring Bugs Bunny.

By 1945 the war had ended and there was no longer a need for the gunnery school. Command of the base transferred to Colonel Walter L. Wheeler on April 1, 1945. On June 30 the base was temporarily inactivated, and Colonel Lance Call became the base commander to supervise the deactivation. On November 15, 1945, the property was declared surplus and the base designation changed again, becoming the 4184th. Base command changed twice more to Lt. Colonels James L. Meadows and John J. Radigan. At midnight, February 25, 1946, the gunnery training base became history having seen 35,000 cadets earn their certificates there (Figures 4 and 5).

On February 26 the name of the base was changed to War Assets Administration Sales & Storage Depot 41 (or simply as Depot 41) and was known as such until 1948. An estimated 7,000 aircraft were flown into Kingman and stored there. Initially some of the aircraft were sold, but long-term storage of so many aircraft was deemed not cost-effective and many were disassembled and rendered down into aluminum ingots. Over 70,000,000 pounds of aluminum were rendered, mostly from B-17s bombers, which was completed in 1948. Between 1946 and



Figure 4. Historical photo of cadets training at Kingman Army Air Field.



Figure 5. Historical photo of cadets training at Kingman Army Air Field.

1950 the various leases were cancelled, and ownership was transferred to Mohave County (MMHA 2015). The City of Kingman Airport now occupies the location.

Today, only a few of the original buildings remain and the property houses a large number of civilian airliners that are remarketed or recycled into spare parts and/or into their base metals. Stone (1991) conducted a cultural resources evaluation of several proposed development areas within the Kingman Airport and documented the remains of seven structures and 24 other features associated with the KAAF. Stone (1991) estimated that at least 100 features remained in the early 1990s that were in good enough condition to warrant further documentation and possibly preservation. The Kingman Army Airfield Historical Society has created a museum in one of the original hangars presenting the history of the KAAF through displays including narrated artifacts and photos. For a more complete description of the KAAF and the Kingman Army Air Forces Flexible Gunnery School Radio Tower see Chilcoat (1995, n.d.) and Stein (1998), respectively.

KAAF Ground-to-Ground Gunnery Range

While most of the bullets scattered across the ground surface within the KAAF were fired from aircraft, the project area happened to be located downrange from the KAAF Flexible Gunnery School Ground-to-Ground Gunnery Range. The primary focus of our investigations was a group of 1500-2000 bullets concentrated in a 9 by 45 ft linear deposit, with a 3-foot-wide area of densely packed bullets (Figures 6 and 7). This site is likely the remains of an earthen target that is no longer present. This hypothesis entails the firing into a target made from or backed by local sediment that was piled up.

The bullets are represented by four distinct calibers and the .30 caliber slugs make up approximately 90% of all bullets (Table 1).

Table 1. Bullet Slug Dimensions

Width	Length	Caliber	Metric
1/2"	2 1/4"	.50 BMG	12.8x57.5mm
7/16"	1 7/8"	.45 ACP	11x47.1mm
5/16"	1 3/4"	.30-06	7.8x34.8mm
5/16"	1 1/8"	.30-06	7.8x28.5mm

The .50 caliber cartridge was developed for the Browning .50 caliber machine gun in the late 1910s. The round was used widely during WWII in the M2 Browning Machine Gun but was also shot through long-range target and sniper rifles (BMG; Chinn 1951). The .45 caliber bullets were probably fired from a Reising and Thompson submachinegun. By late 1944 the Thompson rifles were replaced by the M3/M3A1 submachine gun, although these saw little combat use in World War II.



Figure 6. Photo of bullet concentration, facing west.



Figure 7. Photo of bullet concentration.

Two distinct lengths of .30 caliber bullet slugs were analyzed, with the 7.8×34.8mm bullets having two slight variants (Figure 8). These rounds were likely of various types for training purposes and were probably often fired through an M1 Garand Carbine rifle (a.k.a. .30 M1 Carbine, 7.62×33mm, and .30 SL), which has been used widely since WWII and is still in use, and the M1919 Browning machine gun. This was a very common round during WWII, and was also shot through the M1903 Springfield, M1941 Johnson Light Machine Gun, M1917 Browning machine gun, and the M1918 Browning Automatic Rifle, among others. The .30-06 remained the U.S. Army's primary rifle and machine gun cartridge for nearly 50 years before being replaced by the 7.62×51mm NATO (commercial .308 Winchester) and 5.56×45mm NATO rounds.

The bullets were mostly fired from the northwest side of Route 66 from Malfunction Range No. 4 (MRS04) a Moving Base Range, MRS03 (with 15 Skeet Ranges), and MRS02, onto MRS05 (Range Complex No. 1). Range Complex No. 1 extends approximately 2.5 northwest to southeast and 6 miles south-southwest to north-northeast (USACOE 2010) and was composed of several sub-ranges, including a Shotgun Turret Range, Moving Target Range Nos. 1-5, .22 Caliber Moving Target ranges, and the 300-Yard Rifle Range.



Figure 8. Photo of bullets with scale.

References

Chilcoat, Rob

1995 The Chronological History of Kingman Army Air Field. Ms. on file, Mohave County Historical Society, Kingman, Arizona.

n.d. The Kingman Army Air Field/Storage Depot 41 Story. Ms. on file, Mohave County Historical Society, Kingman, Arizona.

Chinn, George M.

1951 *The Machine Gun, History, Evolution and Development of Manual, Automatic and Airborne Repeating Weapons, Vol. 1.* Bureau of Ordnance, Department of the Navy, U.S. Government Printing Office, Washington D.C.

Hesse, S. Jerome, David M.R. Barr, Eric Petersen, and Jennifer E. Hider

2010 Archaeological Survey of Approximately 1,500 acres for the Proposed Kingman Airport Land Release Project in Kingman, Mohave County, Arizona. SWCA Cultural Resources Report No. 10-337, Tucson.

Kingman Army Air Field & Depot 41 (KAAF)

2015 Kingman Army Air Field & Depot 41, Electronic Document, <http://kingmanaafdepot41.weebly.com/1943.html>, accessed February 3, 2015.

Kingman Army Airfield Museum (KAAM)

2015 Kingman Arizona Historic District, Electronic Document, <http://kingmanhistoricdistrict.com/points-of-interest/army-air-field-museum/index.htm>, accessed January 25, 2015.

Mohave Museum of History and Arts (MMHA)

2015 Mohave Memories: Kingman Army Airfield. Electronic Document, <http://www.mohavemuseum.org/kaaf.htm>, accessed February 3, 2015.

Steele, Kim

2013 Kingman's World War II Effort on Display at Airport: Army Airfield Gunnery School Trained Thousands During its Brief History. *Kingman Daily Miner*, July 26, 2013.

Stein, Pat

1998 Kingman Army Air Forces Flexible Gunnery School Radio Tower: National Register of Historic Places Registration Form. Ms. on file, State Historic Preservation Office, Phoenix, Arizona.

Stone, Lyle

1991 *Cultural Resources Evaluation of Proposed Development Areas at the Kingman Municipal Airport, Mohave County, Arizona.* Archaeological Research Services, Inc., Tempe.

U.S. Army Corps of Engineers (USACOE)

2010 Fact Sheet: Kingman Ground-to-Ground Gunnery Range. Winter 2010.

Wilson, Loren B.

1996 Kingman Army Air Forces Flexible Gunnery School Radio Tower: National Register of Historic Places Registration Form. Draft on file, State Historic Preservation Office, Phoenix, Arizona.