State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 33-17939
HRI #
Trinomial CA-RIV-9470
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

Page 1 of 30 ***Resource Name or #:** B-24J Liberator #42-73387 Crash Site at Lake Perris SRA

P1. Other Identifier: B-24J Liberator Crash Site at Lake Perris SRA

***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County:** [redacted]

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** [redacted]

c. Address: N/A City: Lake Perris Zip: 92571

d. UTM: Zone: 11; [redacted]

e. Other Locational Data: The site is approx. [redacted] Perris Reservoir

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

[redacted]he site consists of an approximately 12-acre debris field associated with the May 16, 1944 crash of a U.S. Army Air Forces Consolidated B-24J Liberator Bomber. [redacted] The site's irregular width averages between 40 and 322' above the bench. The site's debris field contains the shattered and partially burned fragments of the doomed bomber's fuselage, wings, engines, cockpit instruments, weapons, and landing gear strewed along the landscape. The shape, type, material, and serial numbers on some of objects were critical in identifying the wreckage as belonging to a World War II era Liberator bomber, as well as identifying the site's location, width, and boundaries. In addition, there are the reported, but as yet, undocumented dismembered remains of three of the seven airmen who perished in the crash. These, as well as additional crash-related artifacts, may lie hidden within the site's rugged boulder-strewn and scrub-covered terrain.

***P3b. Resource Attributes:** HP34-Military Property; AH10-Machinery; AH12-Graves/Cemetery

***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Looking North at Aircraft Debris and Steel Cable, 29 March 2009, LP09Mar29.jpg

***P6. Date Constructed/Age and Sources:** 1942/Crash: 16 May 1944
☒ Historic ☐ Prehistoric
☐ Both See Continuation Sheet for Sources

***P7. Owner and Address:**
State of California, Department of Parks and Recreation, Southern Service Center, 8885 Rio San Diego Drive, Suite 270, San Diego, CA 92108

***P8. Recorded by:** Alexander D. Bevil, Historian II; same as P7.

***P9. Date Recorded:** 30 Nov 2009

***P10. Survey Type:** California Register Nomination

***P11. Report Citation:** None

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☒Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☒ Other (List): LPB24-J Liberator Crash Site Archaeological Artifact Catalog

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 3S / 3CS

*Resource Name or # B-24J Liberator #42-73387 Crash Site at Lake Perris SRA

B1. Historic Name: Consolidated B-24J-40-CO/U.S. Army Air Forces Liberator #42-73387 Crash Site [redacted]
B2. Common Name: B-24J Liberator Crash Site at Lake Perris SRA
B3. Original Use: Private Land B4. Present Use: California State Recreation Area
*B5. **Architectural Style:** N/A
*B6. **Construction History:** Bomber constructed between late 1943 and early 1944

*B7. **Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**
*B8. **Related Features:** The site contains ferrous, non-ferrous metal, glass, plastic, and synthetic rubber fragments associated with a 1944-built B-24J Liberator bomber's fuselage, possible tail assembly, control, communications, and weapons systems scattered across a 26-acre debris field. Fragments of human bone have been reportedly found and reburied [redacted] over 40 years ago.

B9a. Architect: N/A b. Builder: Consolidated Aircraft Company, San Diego, CA
*B10. **Significance: Theme:** World War II Military Training Accident **Area:** [redacted] County, CA
Period of Significance: 16 May 1944 **Property Type:** Military Aircraft Crash/Grave Site **Applicable Criteria:** CR-1

The United States Army Air Forces B-24J Liberator #42-73387 crash site is eligible for listing on the California Register under Criterion 1 for its historic association with the development of the United States' military aviation history, particularly during World War II. The May 16, 1944 crash occurred during the war's 1942 to 1945 transitional period, when the United States government was committed to defeating the Axis Powers through a massive military mobilization and training program. The only known surviving World War II-era March Field-related crash site in the [redacted], it is directly associated with the National Register of Historic Places-listed base's history during its transitional development from a United States Army Air Forces [USAAF] tactical to an advanced strategic heavy bomber training facility during the war. The crash, which occurred while the Liberator's crew was engaged in a night training exercise, is tragically associated with a historic trend and pattern of events: the loss of 14,903 USAAF airmen who died participating in thousands of non-combat flying or training missions within the continental United States between 1942 and 1945. Historically, this represents the largely overlooked dangers and sacrifices that these young men experienced trying to master new, complicated, and often technically flawed high-performance combat aircraft in less than ideal flying conditions. Despite attempts by the USAAF to obliterate evidence of the wreck immediately after the crash, or by salvagers who reportedly removed the aircraft's engines during the postwar period, the crash site's approximately 12-acre debris field still contains numerous smashed and burned structural, communication, and weapons-related fragments specific to the aircraft that help to identify the site's location. Relatively unchanged since the crash, the site's rugged rock and scrub-covered setting still contains the scattered remains of three of the bomber's seven-man crew, making it a potential military war grave site.

See DPR 523L Continuation Sheet beginning at Page 9 for more information.

B11. Additional Resource Attributes:

*B12. **References:** See Continuation Sheets pages 20 to 22.

B13. Remarks: The resource should also be regarded as a military war grave site.

*B14. **Evaluator:** Alexander D. Bevil, Historian II, California State Parks, Southern Service Center
8885 Rio San Diego Drive, Suite 270
San Diego, CA 92108

*Date of Evaluation: 30 November 2009

(Sketch Map with north arrow required.)

See DPR 523K Sketch Map

(This space reserved for official comments.)

*Required information

ARCHAEOLOGICAL SITE RECORD

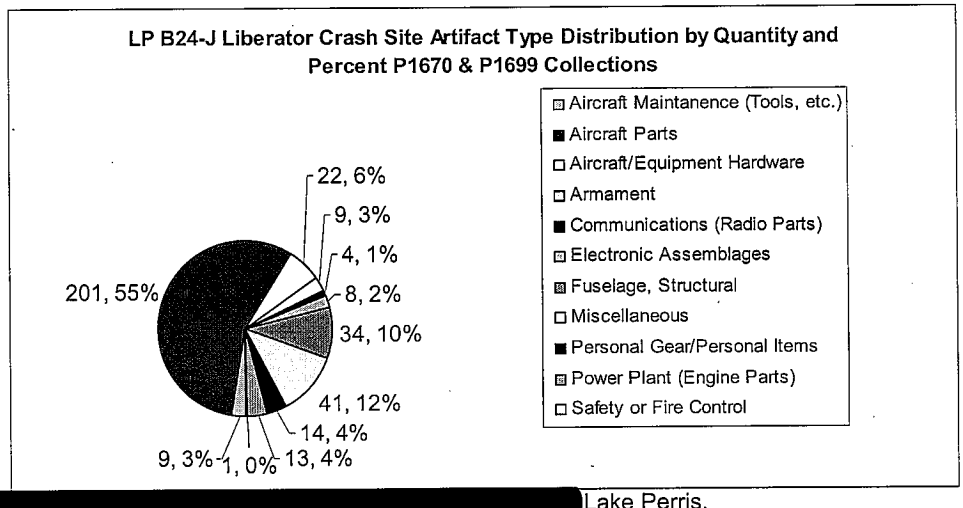
*A1. **Dimensions:** a. **Length** 519m. / 1702ft. (north/south) × b. **Width** 98m. / 322ft. (east/west; average)
Method of Measurement: ☐ Paced ☐ Taped ☒ Visual estimate ☒ Other: Global Positioning System (GPS) and NAD83
Method of Determination: ☒ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☒ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☒ Other (Explain): Field survey, surface artifacts, historic research, and documentation
Reliability of Determination: ☒ High ☐ Medium ☐ Low Explain: Extant debris field with numerous surface artifacts, historic research, and documentation
Limitations: ☒ Restricted access ☐ Paved/built over ☐ Disturbances ☒ Site limits incompletely defined
☒ Vegetation ☒ Other (Explain): Time constraints and accessibility (steep rocky terrain and dense woody vegetation).

A2. Depth: ☐ None ☒ Unknown Method of Determination: All observable artifacts were found above-ground; however, some were partially buried

*A3. **Human Remains: ☐ Present ☐ Absent ☒ Possible ☐ Unknown (Explain):** Four unrecognizable badly burned human remains recovered immediately after the crash; three unaccounted; subsequent poorly documented accidental discovery and reburial of a human skull fragment reported near [redacted]

*A4. **Features:** See Sketch Maps for location of select crash-related objects located within the debris field, December 2003.

*A5. **Cultural Constituents:** The P1670 and P1699 Archaeological Catalogs list as many as 356 artifacts directly related to the United States Army Air Forces B-24J Liberator heavy bomber that crashed into [redacted] on May 16, 1944. The items have been identified and categorized based on artifact type and category specific to the aircraft. The totals are shown below and include at least 201 aircraft parts, 22 aircraft equipment hardware, 9 aircraft maintenance/repair tools, 9 armament/weapon parts, 4 radio parts, 8 electronic assemblages, 34 structural fuselage fragments, 41 miscellaneous items, 14 personal gear/items, 13 engine parts, and 1 fire/safety control. See attached Archaeological Artifact Catalogs for artifact photographs and descriptions.



*A6. **Were Specimens Collected?** ☐ No ☒ Yes See attached Archaeological Artifact Catalog

*A7. **Site Condition:** ☒ Good ☐ Fair ☐ Poor (Describe disturbances.): Undisturbed undeveloped parkland

*A8. **Nearest Water:** The site is located [redacted] Lake Perris.

*A9. **Elevation:** 1,800-2,569 feet above sea-level

A10. Environmental Setting: [redacted]

A11. Historical Information: See DPR 523B and DPR 523L Continuation Sheets beginning with Page 9 to 16.

*A12. **Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☒ 1914-1945 ☐ Post 1945 ☐ Undetermined The site is historic based on artifact types and historical documentation of the event.

A13. Interpretations (Discuss data potential function[s], ethnic affiliation, and other interpretations): N/A

A14. Remarks: The site may be eligible for listing on the California Register as a historic site. It may also qualify as a historic WWII-era gravesite.

A15. References: See Continuation Sheet page 8 of 30.

A16. Photographs: See Continuation Sheets pages 23 to 30 and attached Archaeological Catalog.
Original Media/Negatives Kept at: California Department of Parks and Recreation, Southern Service Center

*A17. **Form Prepared by:** Rachel Ruston, Archaeological Specialist; Alexander D. Bevil, Historian II **Date:** 13 November 2009
***Affiliation and Address:** State of California, Department of Parks and Recreation, Southern Service Center, 8885 Rio San Diego Drive, Suite 270, San Diego, CA 92108

A15. References (Con't.):

References pertaining to the study of machine/equipment hardware includes Adams (2002), Black (1986), Nelson (1968), and Philbin (1978). Reference to buttons and military buttons in particular includes Brandes & Moriarty (1977). Praetzellis (2004), Rock (1984), Roenke (1978), Schroeder (1973), Sutton & Arkush (1998), Van Wormer (1996), have also been consulted during the laboratory analysis period. References used in the analysis of this collection specifically related to the B24 Liberator include: Birdsall (1973), Internet sources and personal communication with Alexander Bevil regarding the identification of many of the items from the P1670 and P1699 collections.

Adams, William Hampton. "Machine Cut Nails and Wire Nails: American Production and Use for Dating 19th-Century and Early-20th-Century Sites." In *Historical Archaeology* 36(4):66-88, 2002.

B-24J Fuselage Information: http://users.rlc.net/catfish/liberatorcrew/06_B-24_Specs.htm.

Bevil, Alexander. Historian II. California State Parks. Southern Service Center. Personal Consultation with Rachael S. Ruston, 2009.

Birdsall, Steve. *Log of the Liberator: An Illustrated History of the B-24*. Garden City: Doubleday and Company, 1973.

Black, Art. "An In-Progress Study of Cut Nails." Paper Presented at 1986 Society for Historical Archaeology Annual Meetings, Sacramento, 1986.

Brandes, Ray and James Robert Moriarty, III. *A Guide to Artifacts of California. University of California, San Diego.* Manuscript on file California Department of Parks and Recreation, Sacramento, 1977.

Browning M2a .50 cal. Machine gun Breach Information: www.pt103.com.

Nelson, Lee H. "Nail Chronology as an Aid to Dating Old Buildings." *American Association for State and Local History Technical Leaflet 48*, 1968.

Philbin, Tom. *The Encyclopedia of Hardware*. Hawthorn Books: New York, 1978.

Praetzellis, Mary, ed. "SF-80 Bayshore Viaduct Seismic Retrofit Projects Report on Construction Monitoring, Geoarchaeology, and Technical and Interpretive Studies for Historical Archaeology." Report on file at California Department of Transportation District 4, Oakland, 2004.

Rock, James T. "Cans in the Countryside." In *Historical Archaeology*. Volume 18:97-111, 1984.

Roenke, Karl G. "Flat Glass: Its Use as a Dating Tool for Nineteenth Century Archaeological Sites in the Pacific Northwest and Elsewhere." *Northwest Anthropological Research Notes. Memoir No. 4*, 1978.

Schroeder, Joseph J. Jr. *1923 Sears & Roebuck Catalogue*. Northfield, Ill.: Miniature Reproduction Digest Books, Inc., 1973.

Sutton, Mark Q. and Brooke S. Arkush. *An Introduction to Archaeological Laboratory Methods, Second Edition*, 1998.

Van Wormer, Stephen R. "Revealing Cultural Status and Ethnic Differences Through Historic Artifact Analysis." In *Proceedings of the Society for California Archaeology*. Volume 9:310-323, 1996.

***B10. Significance (Cont'd):**

Historic Context

The B-24J Liberator Crash Site at Lake Perris SRA is one of the numerous districts, buildings, structures, sites, and objects associated with the United States' remarkable aviation history and with a pattern of historical aviation-related events that occurred locally and nation-wide during World War II. The crash occurred during the transitional phase of the war between 1942 and 1945 when the United States was committed to defeating the Axis Powers through a massive military mobilization and training program. Done in conjunction with a complete retooling and expansion of its industrial resources, the nation was committed to produce enough arms and men to halt and eventually defeat Axis aggression. As a result, the United States emerged from the war as a world leader in aviation, a title it continues to hold. However, fraught with risk, the path toward that end has been paid for by the lives of thousands of young men. Indeed, not all died in combat overseas; many young men, like those aboard B-24J Liberator #42-73387, died as a result of disastrous training mishaps trying to master new, complicated, and often technically flawed high-performance combat aircraft in less than ideal flying conditions.

The seven airmen who crashed and died [redacted] on the night of May 16, 1944, had been practicing routine "touch-and-go" night landings out of March Base [redacted]. The aircraft's pilot, United States Army Air Forces [USAAF] 2nd Lieutenant Joseph W. Shaw, assisted by his co-pilot, 2nd Lieutenant Herman Minden, were required to fly their large, four-engined bomber down close to and make contact with its landing wheels on one of the base's two concrete runways. Rolling along the runway, they were to increase throttle, climb, circle the field, and repeat the process. Descending towards the runway [redacted], they reportedly overshot the runway where one of the aircraft's propellers and landing gear struck and tore away some 200 feet of the base's steel fabric perimeter fence. Lt. Shaw radioed the base's control tower that he was going to gain altitude, and go around and try to land. The tower noticed that he was turning slightly to the left [redacted] and radioed for him to turn right onto the base's normal flight pattern. Neither he, nor any of his crew responded, even after additional pleas from the tower to turn right. Approximately two minutes later, around 11:53 p.m., tower personnel noticed a flash on a mountain ridge [redacted].[1]

Around the same time, local farmers George A. Damiano and Harold Monroe were driving [redacted] past March Field, when, according to Damiano, "We saw an explosion that lit up the sky like daylight." Monroe reported that after the "huge explosion . . . on the peak . . . , "the fire immediately engulfed the [redacted] sic] side of the mountain." They raced to Monroe's house nearby and telephoned March Field. Because there was no improved road up to the crash site, they offered to guide rescuers up to the crash site. Investigators at the scene found the plane completely destroyed, with no survivors. They surmised that the aircraft's right wingtip had struck the ridge while banking to the right, and subsequently hit [redacted] at ground level before sliding down [redacted]. The "huge explosion" witnessed by Damiano and Monroe would have been caused by some 2,700 gallons of raw aviation gasoline spilling onto hot exhaust manifolds from the aircraft's ruptured wing fuel storage bladders. Surviving debris suggests that the aircraft was carrying small "dummy", non-explosive practice bombs. Damiano reported that only four badly burned bodies belonging to the plane's seven-man crew were recovered. The remaining three were never found; probably incinerated, crushed, or blown apart and scattered amid the debris field, which, according to Damiano, "was scattered over a large area and some down the [redacted] side of the mountain."[2]

A few days after the crash, an USAAF Accident Review Board determined that Lt. Shaw showed poor technique on his landing approach, which caused him to strike and carry away a portion of the fence. Because of this, he was unable to retract his under wing-mounted landing gear. The board determined that in order to have climbed to the altitude at which he struck the mountain the aircraft's four Wright-Cyclone engines must have been functioning properly. However, there is no mention of the base commander's comment that one of Lt. Shaw's aircraft engine propellers struck the fence during the aborted landing. The Board concluded that the aircraft's low altitude and steep climbing angle prevented either Lt. Shaw or his co-pilot from seeing the mountain [redacted] high peak in front of them. The Board also did not mention that darkness may have been a factor in their failure to see the ridgeline. More importantly, it could not understand why they failed to respond to repeated radio messages from the control tower to turn right and follow the normal traffic pattern away from the mountain.[3]

Earlier that evening, from 6:30 to 8:30 p.m, Lt. Shaw had successfully accomplished local instrument and radio orientation flying a different four-engine Liberator bomber over the base at altitudes between 10,000 and 15,000 feet. During his landing approach, according to the statement of on-board Instructor Pilot, Captain M. M. Heisel, Lt. Shaw's aircraft experienced serious multiple engine failure. With only two engines operating, he radioed a "Mayday" to the control tower anticipating a crash landing. Fortunately, he was able to land the plane. Instead of standing down after their harrowing ordeal, Lt. Shaw, along with his crew and on-board instructors, resumed night flying training at 10:45 p.m. in another aircraft, the ill-fated Consolidated B-24J Liberator #42-73387. During his first landing attempt, he approached and landed on the air field's southeast to northwest runway. Captain Heisel reported that Lt. Shaw, despite using on-board instrumentation, exhibited a slight show of confusion after his first landing, when he attempted to make a right-hand instead of a left-hand turn away from approaching aircraft. However, after only one night landing, both pilot and radio operation instructors inexplicably left the aircraft. The former had instructed Lt. Shaw to take off and "shoot a few more landings." It was during his second landing that he undershot the runway, hit the perimeter fence, taking off, and eventually hitting [redacted]. During the resulting crash investigation, Captain Heisel stated that, despite Lt. Shaw's confusion, his knowledge and ability to instrument fly a Consolidated B-24J Liberator was above average. Yet the investigating team summarily concluded the crash's primary fault lay in "pilot error."[4] However, the crash of Lt. Shaw's aircraft was not a singular event that can be easily dismissed as "pilot error." It was one of many local events associated with a tragic nation-wide historic trend related to one of the fundamental problems in the development of American air power during World War II: the recruitment and training of thousands of young men to fly and master new, complicated, high-performance aircraft in a limited amout of time.[5]

Even before the Imperial Japanese Navy's December 7, 1941 aerial attack on Pearl Harbor, the United States was involved in a massive mobilization of men and the production of war matériel, which would eventually help stop and destroy the Axis Powers. Between 1942 and 1943, the USAAF experienced a phenomenal spike in the training of some 2.1 million officers and enlisted men. Composed primarily of volunteers, these young men had volunteered for various reasons: unsullied patriotism, flight/combat pay, or merely a desire to escape being drafted into the infantry. Many possessed a youthful romance with flying. As young boys growing up during the Golden Age of American Aviation, they had whittled balsa wood into airplane models; followed the storied careers of pioneer pilots Charles Lindbergh, Wiley Post, and Jimmy Doolittle; or thrilled to the aerial exploits of barnstorming stunt pilots at local county fairs. No doubt, Lt. Shaw and his crew were no different. The twenty-four-year-old Louisville, Kentucky native had joined the USAAF on March 11, 1943. Lt. Shaw's training, like that of thousands of his fellow airmen, could be compared to what the USAAF's official recruiting manual described as "assembly line production" modeled after that of Henry Ford's automobile factory. Prospective "bomber boys" like Lt. Shaw were trained first as individuals and then as parts of a closely coordinated team. However, as the war progressed, the training process' greatest enemy was time—time to prepare qualified airmen as rapidly as possible for deployment overseas.[6]

Prior to his advancement to multi-engine bomber training, Lt. Shaw had undergone a series of rigorous physical, mental aptitude, and psychological examinations. After which, he was sent to a classification center, where he was subjected to a series of psychomotor hand, eye, and foot coordination tests, the results of which qualified him for specialized training as a potential pilot, navigator or bombardier. All would have to attend a nine-week preflight training program at a ground school, most of which were hastily assembled tent cities literally in the middle of nowhere. Here, recruits were introduced to the intricacies of military discipline, daily physical conditioning, and classroom studies ranging from simple addition to calculus and physics. Those pilot cadets that passed their physical and subject exams were transferred to a primary flying school like that at Randolph Field, Texas. All were expected to make their solo flight after about eight hours of instruction in a primary trainer. Only about one in ten successfully soloed and advanced to attend a basic flying school, which consisted of about seventy hours of practicing formation flying, night landings and simulated instrument flying in a trainer, the cockpit of which one cadet described as resembling "the Grand Canyon full of alarm clocks." Next was advance training, where those specializing in fighters logged seventy hours mastering aerial gunnery and combat aerobatics; prospective bomber pilots like Lt. Shaw flew multiengine aircraft, with an emphasis placed on formation and instrument flying. Those who didn't "wash out" [fail] or "buy the farm" [die] during the nine-week advance training period were awarded their silver pilots wings and reported for a transition program at advance training bases like

March Field, California. Here, according to a contemporary training manual, the cockpit of a B-24 would become "as familiar to [the new pilot] as his family's front porch." After two months, the rookie bomber pilot, along with a slightly less-experienced co-pilot, bombardier, and navigator, along with an air and ground crew, was assigned to a specific bomber and squadron. Together, they would undergo their final advanced heavy bomber training in the States before they and their bomber were transferred as a unit to either the European or Pacific Theater of Operation.[7] The latter period of a bomber pilot's training was a difficult transition, especially for young pilots who had never flown a multi-engine aircraft with a "tricycle" landing gear like the B-24 Liberator. Even experienced pilots were unanimous in their opinion that the B-24 Liberator was a difficult aircraft to handle, sometimes describing its flight characteristics as "a fat lady doing a ballet." Indeed, most Liberator pilots and air crews . . . " felt it was an accomplishment [just] to fly it."[8]

One of the main reasons for the aircraft's finicky flight characteristics was its wing/fuselage combination. While its 110-foot-long, thin Davis Laminar wings were, according to one pilot, among "the most beautiful and graceful one could ever hope to see," they were mated to a thick, heavy, "pugnacious porcupine-gunned" 67-foot-long aluminum-skin fuselage. In addition, with the introduction of the B-24J in August 1943, the aircraft's combat flying weight had increased from 42,000 in the previous "D" production variant to a loaded weight of between 50,000 and 70,000 pounds. The aircraft's four turbo-charged fourteen-cylinder Pratt & Whitney R-1830-65 Twin Wasp air-cooled radial engines had not been upgraded to handle the increased load. All of which resulted in, what experienced Liberator pilots' described as "unstable, mushy flight characteristics" during take-offs and landings. According to another critic, the lumbering, ungainly, twin-tail finned B-24 "flew like a truck." However, with a 8,800-pound bomb load, the B-24J was an excellent and badly needed flying "truck" that could take the war to the enemy. Like the Boeing B-17 Flying Fortress, which only had a 2,000-pound bomb load, it was heavily armed, with ten 50-caliber machine guns, two each in four electric-powered Plexiglas gun turrets and two individual waist positions. As solidly built as its Boeing counterpart, many Liberator ground crews were amazed to see aircrafts come back from long-range combat missions after sustaining phenomenal amounts of enemy aircraft and flack damage.[9]

The B-24's long-range combat capability first made history on June 11, 1942 when a flight of twelve B-24Ds were involved in the first long-range U.S. military mission against a European target during World War II, flying 2,400 miles round-trip from Egypt to bomb the German-held oil refinery at Ploesti, Rumania. On August 1, 1943, 178 Liberators returned to Ploesti. The longest mass bomber raid in military history at the time, it resulted in the destruction of 40 percent of Nazi Germany's synthetic oil production. Unlike the previous raid, however, losses were high: fifty Liberators were shot down, with 500 crewmen killed, captured, or interned. Nevertheless, the raid proved the Liberator's potential and foresaw its role, along with the B-17, and the British Halifax and Lancaster bombers, in the massive Allied air assault against Nazi Germany. In addition, and perhaps just as important, dramatic photographs of the raid published in *Life* and other popular magazines would help boost public morale. Taken by crewmen participating in the raid, they would be among the wars most iconic photographs of American resolve and resoursefulness.[10]

Liberator #42-73387 was one of 2,792 B-24J variants built at Consolidated Aircraft's primary plant in San Diego, California. The longest production run of any USAAF bomber variant in history, the first B-24J rolled off the San Diego Plant's assembly line on August 31, 1943. Consolidated built or contracted out the construction of an additional 3,886 B-24Js at aircraft plants in Fort Worth, Dallas, Tulsa, and Willow Run [Michigan] until the introduction of the slightly different B-24L in September 1944. On a larger scale, Liberator #42-73387 was one of 18,188 Liberators manufactured between 1941 and 1945. The largest number produced of any American airplane in history, Liberators served in American, British, Free French, and other Allied air forces. It, along with the other variants, participated in more combat missions on more war fronts, over a longer period than any other Allied or Axis bomber. On a much larger scale, these Liberators were among the 304,000 airplanes, along with thousands of tanks, jeeps, aircrafts, and tons of ammunition and other war matériel, that United States added to its "Arsenal of Democracy" to fight the Axis Powers. In addition, Liberator #42-73387 was built by American factory workers, who, prior to the war had been unemployed semi- or unskilled workers, farmers, or housewives who had never worked in large factories. Through their efforts, they would turn the United States into a great military power that was capable of unleashing nearly unlimited world-wide destruction.[11]

The crash of Consolidated Aircraft B-24J Liberator #42-73387 is also directly associated with the history of March Field and its role as a key USAAF training and bombardment post on the West Coast during the war. Originally known as "Allessandro Field," where Army Air Service aviators from San Diego's Rockwell Field used to land and refuel during long-distance cross-country flights, it became a dedicated United States Army air base on March 6, 1918. By 1940 it was known as Headquarters of the Southwest Air District, March Field. One of twenty large USAAF bases within the continental United States, with auxiliary air fields and practice bombing ranges at Muroc, Needles, Blythe, Thermal, Shavers Summit, Rice, and Desert Center, it was home to the largest air fleet west of the Mississippi, which flew off the largest flying field on the Pacific Coast at the time. March Field's primary mission was to provide air defense over the Southwestern United States, from California to Oklahoma. In addition, it also dispatched air units to USAAF bases across the Pacific Ocean.[12]

During the time of Lt. Shaw's fateful flight, the base's command was reorganized into the 420th Army Air Field Base Unit, 4th Air Force, March Field. Besides defending the American Southwest, the base's primary mission had transformed from training tactical fighter and bomber groups to strategic heavy bomber crews. Those that survived or didn't wash out, were sent, along with their aircraft, to bomber groups throughout the Pacific Theater. The transition was not without its problems, however. For example, orders emanating from the new command structure were often vague, confusing, and uncoordinated, which lowered the base's efficiency and morale. So much so that there were alleged instances of exchanges of petty, yet derogatory remarks between transient combat flight crews and the base's maintenance personnel. Although these problems were reportedly "all worked out, for the most part, in a very short time," they could they have played a role in the crash of Lt. Shaw's Liberator.[13]

Almost since its inception, March Field, like most USAAF air bases, experienced its fair share of aircraft-related accidents; however, they reached their peak between 1940 and 1945. The types of accidents often involved aircraft flying to or from March Field that crashed in the surrounding mountains. For example, on December 18, 1940, a March Field-based Boeing B-17 "Flying Fortress" bomber engaged in a routine two-hour training mission inexplicably plowed into [redacted], some thirty miles northeast of March Field in Mt. San Jacinto State Park. All six airmen were killed instantly in the fiery crash, which reduced the twenty-two ton bomber to scattered piles of scrap metal.[14] On October 12, 1941, a pilot flying a Douglas B-23 "Dragon" bomber from Albuquerque to March Field crashed while trying to navigate through a heavily fog-bound [redacted]. All on board the twin-engine plane were killed instantly after it plowed into a field, exploded, and burned. The charred remains of only three of the seven man crew were identified.[15]

A heavy fog was also a factor for the third type of crash involving aircraft taking off or landing at March Field. On the morning of July 1, 1942, twenty-five-year-old 1st Lieutenant Robert K. Murphy, piloting a B-24 Liberator, took off from March Field's runway on the start of a routine training mission. However, he had failed to gain sufficient altitude and crashed his plane into a knoll [redacted]. The earliest reported crash at March Field involving a B-24 Liberator, the aircraft may have been carrying a full bomb load because the resulting blast, which killed Lt. Murphy and his eight-man crew, rattled windows and the nerves of thousands of [redacted] residents [redacted].[16]

As the tempo of bomber crew training increased, so did the casualties. From late 1942 to the end of the war, as many as twenty-nine March Field-based aircraft were lost in training-related accidents. Of the air crews, one hundred-fourteen men were killed outright or died soon after, with thirty-one injured seriously, and eleven missing and presumed dead. Eighty-nine of the one hundred-fourteen men killed, along with all the injured airmen, were on board B-24s, including Liberator #42-73387.[17]

Herman Melville noted in his poem, *The March into Virginia*, that "All wars are . . . fought by boys."[18] This is tragically reflected in the makeup of B-24J Liberator 42-73387's crew. In addition to its twenty-four-year-old pilot was its twenty-one-year-old co-pilot, 2nd Lt. Herman Minden, from Sacramento, California. The rest of the officers killed on board the fiery crash were the aircraft's twenty-two-year-old navigator, 2nd Lt. Robert Bingham, from Albany, New York; and Flight Officer (Warrant Officer Junior Grade) Jaime V. Gama of Los Angeles, California, the aircraft's twenty-year-old bombardier. The three enlisted airmen who died on board the doomed aircraft were all corporals: twenty-one-year-old Radio Operator Kenneth Wettstein of Salt Lake City, Utah, Flight Engineer Albert Benefiel of Hamilton, Mississippi; and twenty-year-old Flight Engineer George Kovich. A Salem, Oregon native,

Kovich was a base instructor unlucky enough to be assigned to assist the aircraft's flight engineers.[19]

The loss of these seven airmen is associated with a tragic historic trend and pattern of events that occurred during the United States' involvement in World War II. While 40,061 USAAF personnel were killed in all overseas theaters between 1942 and 1945, 14,700 additional airmen were killed like those on board B-24J Liberator 42-73387 participating in thousands of non-combat flying or training missions within the continental United States. Historically, this represents the largely overlooked dangers and sacrifices that these young men experienced and made while serving their country.[20]

Nor was March Field the only U.S. Army Air Forces training base that lost planes and aircrews during operational training missions during the war. In his biography, retired Reserve Air Force Brigadier General James "Jimmy" Steward had witnessed the crashes of two B-24 Liberators while participating in the 445th Bomb Group's advance training program near Sioux City, Iowa. The first occurred on August 26, 1943, when an aircraft on a night training flight crashed, killing all nine men on board. Another full crew died a few minutes before midnight on September 2, 1943, when their aircraft went down in flames a short distance from the base. Two days later, a third crash claimed eight victims.[21]

Statistically, B-24J Liberator 42-73387 was among the highest number of mulit-engined American bombers involved in non-combat-related flying accidents that resulted in crashes within the continental United States during World War II. Of the 13,873 American aircraft destroyed between 1942 and 1945, 1,713 were B-24 Liberators, nearly 124 more than its nearest rival, the B-17 Flying Fortress. Of these crashes, 746 aircraft were total wrecks, with 490 resulting in 2,796 fatalities. Placed within a larger context, they represent 18 percent of the total number (14,903) of fatalities involving USAAFnon-combat-related aircraft accidents in the continental United States during the war. Compared to combat losses, the Liberator crashes only represent 3 per cent of the United States' armed forces combined loss of 22,951 operational aircraft from both the European and Pacific Theaters. Nevertheless, the continental crashes and deaths represented the loss of much-needed aircraft and aircrews who never had a chance to prove themelves in combat.[22]

Two months before the crash of B-24J Liberator 42-73387, Consolidated Aircraft Corporation completed a study of 123 B-24 emergency and crash landings based on official Army data and reports. The accidents occurred both inside and outside the United States, and under varying climatic conditions. The resulting causes were attributed to fire, material failure, and human error. Interestingly enough, 31 percent of the crashes were contributed to the latter; allegedly occurring due to poor landing or take-off proceedures.[23]

Whether it was pilot error caused by an inadequately trained young pilot trying to fly a hard to handle aircraft (Lt. Shaw had only accrued 40 of his 394 flight-training hours in a B-24J bomber), fatigue, or fear (he had narrowly missed crashing earlier that day), the success or failure of any particular flying mission could be, according to military historian Donald L. Miller, reduced to "chance: the all-determining force in an airman's life." Tragically, Lt. Shaw and his fellow crewmen never had the chance to prove themselves or their aircraft fighting against the forces of tyranny. As in combat, training casualties were a fact of life; yet men killed in training accidents do not receive Purple Hearts. Nevertheless, their deaths were no less a casualty then if they were killed in combat. The seven young men who died in the crash of B-24J Liberator No. 42-73387 [redacted] were heroes, who, according to author Joseph Campbell, were among those who have given their lives "to something bigger than themselves."[24]

According to crash witness George A. Damiano, instead of trying to salvage the wreckage after the crash, the March Field personnel began "blasting the area to bury the plane." The base command had apparently reasoned that having the charred smashed remains of a large bomber [redacted] might prove unnerving for young trainees flying similar aircraft. However, Harold Monroe remembered that the plane's engines could still be seen [redacted] During the postwar period, according to Damiano, "[metal] salvagers pulled cables up to the engines and used trucks to drag them off [redacted] At least one of these thick, braided steel cables is partially buried amid the remaining aircraft wreckage.[25]

While Damiano refused to revisit the site due to the carnage he had witnessed, Monroe reportedly revisited the "site several times [redacted]." He noted the results of the Army's demolition: "a portion of a wing was under a rock and some dirt about one hundred yards downhill . . . [redacted][26]

Monroe also reported finding what might have been a grisly reminder of the human tragedy associated with the crash site:

> On one visit I found a portion of a skull that the rain had uncovered the day before. I found a piece of metal from the wreckage and buried it deep enough so that it wouldn't be exposed again. [redacted][27]

Although there is no evidence to suggest that the skull fragment may or may not have belonged to one of the airplane crash victims, the fact remains that somewhere scattered among the rocky terrain may still be the unrecovered remains of three missing crewmen associated with the crash site. This would make the crash site of B-24 Liberator 42-73387 a possible war graves site: a burial place for military personnel who died while on active service. Wrecked military ships, airplanes, tanks, or other vehicles containing human remains can qualify as war graves.[28]

Comparison of the Crash Site with Similar Historic Resouces

Unlike a National Register-listed B-24D crash site on Atka Island, Alaska, in which the bifurcated Liberator sits on the frozen tundra, B-24J Liberator #42-73387's structural integrity is not intact.[29] However, according to the guidelines for both the California and National Registers of historic properties, the latter's debris field on [redacted] would be eligible as a historic site, where the location itself possesses historic associative value.[30]

Two other historic World War II-era crash sites that can be used as comparison to B-24J Liberator #42-73387's eligibility as a potential historic site are located on United States Bureau of Land Management [BLM] property in the State of Oregon. The first is the crash site of a B-24 that also crashed into a mountain during training. Flying [redacted] from Gowen Field near Boise, Idaho, the bomber crash occurred in February 1945 near the [redacted] border. All eleven men on board died in the crash. Also similar to the [redacted] crash site, the crash was so catastrophic that the USAAF recovery team that scoured the area was unable to retrieve all human remains associated with the crash. It wasn't until the late 1990's that a CILHI [Central Identification Laboratory, Hawai'i] forensic recovery team was able to fully excavate and recover both human remains and personal effects from the fifty-plus-year-old crash site. BLM's Hines, Oregon office manages the crash site as a historic archaeological site and monitors its condition every couple of years. BLM has also loaned the War Hawk Air Museum in Nampa, Idaho some aircraft parts associated with the craft, as well as interpretive information for display. BLM staff also work with historic aircraft crash enthusiasts wishing to visit the site.[31]

The other World War II-related crash site is located [redacted] in the Oregon desert. It consists of a recently discovered debris field associated with the February 11, 1945 crash of a twin-engine Lockheed P-38 Lightning fighter/bomber. Its twenty-five-year-old pilot may have experienced "target fixation" while conducting gunnery training, plowing into the ground at the end of a dive. The BLM recognizes the P-38 crash site as a historic military crash site.[32]

Due to increased public visitation to both crash sites, the BLM's Lakeview District had initiated a plan to manage the P-38 crash site, along with a nearby fatal Vietnam War-era Grumman A-6 Intruder crash site as historical properties. Completed in June 2006, the plan calls for the interpretation of each site in order to educate visitors on the story behind each accident and to protect the integrity of the aircraft remains.[32]

The [redacted] crash site has been protected since the early 1970s by the creation of Lake Perris State Recreation Area. However, it wasn't until fairly recently that anyone managing the area knew of the crash site's location or history. It was this lack of knowledge, along with the area's rugged terrain and lack of any roads or trails to the crash site that has kept it relatively undisturbed. It was only until recently that well-meaning, but misguided individuals removed a large number of small crash-related items from the site.[33]

Historic Evaluation

The United States Army Air Forces B-24J Liberator #42-73387 crash site is eligible for listing on the California Register under Criterion 1 for its historic association with the development of the United State's military aviation history, particularly during World War II. The May 16, 1944 crash occurred during the war's 1942 to 1945 transitional period, when the United States government was committed to defeating the Axis Powers through a massive military mobilization and training program. The only known surviving World War II-era March Field-related crash site in the [redacted] Lake Perris area, it is directly associated with the National Register of Historic Places-listed base's history during its transitional development from a USAAF tactical to an advanced strategic heavy bomber training facility during the war. The crash, which occurred while the Liberator's crew was engaged in a night training exercise, is tragically associated with one of the fundamental problems in the development of American air power during World War II: the recruitment and training of thousands of young men to man and operate the thousands of airplanes, aircrafts, tanks, guns, vehicles, and other military vehicles produced by American factories. The seven crewmembers that died [redacted] were among the 14,903 USAAF airmen who died within the continental United States during the war. Historically, their deaths represent the relatively forgotten dangers and sacrifices that these young men experienced while participating in thousands of non-combat missions flying new, complicated, and mostly undeveloped high-performance aircraft in harm's way, often under poor flying conditions. Despite attempts by the USAAF and postwar salvagers to obliterate evidence of the wreck, the crash site's 12-acre debris field still contains enough crash-related material evidence that help identify the site's location. Relatively unchanged since the crash, the site's rugged rock and scrub-covered setting also reportedly contains the scattered remains of three of the bomber's seven-man crew, making it a potential war graves site.

search + replace for consistency

Historic Integrity

As mentioned earlier, most of the twenty-two tons of metal, glass, and synthetic rubber that made up Consolidated Aircraft B-24J Liberator #42-73387's fuselage, windows, wings, engines, and other large structural members were either destroyed in the crash, later blown up, salvaged, or are now hidden by brush or soil overburden. In addition, a total of 356 artifacts directly related to the bomber were recently recovered and removed from the crash site. Unfortunately, these items were gathered and stored outside the debris field without recording their original locations. Nevertheless, a California State Parks historian and archaeologist, in consultation with experts at the San Diego Air & Space Museum, have identified and cataloged these artifacts. Subsequent field surveys and investigations may reveal more artifacts that, when mapped, can help illustrate the dynamics and extent of the crash. Such an undertaking, though, may prove difficult due to the area's steep, rocky terrain and dense underbrush. Nevertheless, a preliminary reconnaissance survey indicates that there is a good amount of surviving evidence dating from the May 16, 1944 crash still strewn about the site that can help to identify the crash's location. This, along with the following additional aspects, contribute to the site's historic integrity:

Location

Both primary historical sources and physical artifacts directly associated with a World War II-era B-24 Liberator bomber indicate that [redacted] was where the crash of B-24J Liberator #42-73387 occurred. Relatively unchanged since the crash, the site's location also contains the scattered unrecovered remains of three of the bomber's seven-man crew.

Setting

According to historic topographic maps and witness statements, the crash site's general topography, including its elevation, slope gradient, rocky outcroppings and other natural features within the natural drainage have remained the same. It also contains characteristic native scrub trees and shrubs, along with perennial and seasonal grasses and low-growing forbs that would have been growing during the historic event. In addition, the area has not been altered with improved roads, trails, or other park-related structures.

Materials

While the bomber is no longer intact, there are at least fourteen separate sites within the historic crash site's debris field containing artifacts directly associated with B-24J Liberator #42-73387. Ranging in size from a

huge landing gear/wheel assembly to a single machine gun link, they help to convey the thousands of individual elements that went into a typical World War II heavy bomber's construction. For example, several artifacts contain manufacturer serial numbers that pertain only to B-24 parts. They also reveal the types of strategic and non-strategic materials that went into the manufacture of a World War II-era bomber: sheet and cast aluminum, Bakelite, synthetic rubber, compressed fiberboard, Plexiglas, optical glass, steel, and brass.

Feeling

The location and dispersal pattern of the various fuselage, wing, and rudder fragments, along with the smashed, torn, and burnt parts and fragments of internally mounted control, communications, fuel, and weapon systems within the crash site's debris field, help convey a sense of total devastation and the forces involved in the reduction of a powerful 22-ton heavy bomber into hundreds of small pieces of scrap metal within a matter of seconds. The location and sometimes surprise discovery of partially buried airplane parts and fragments, along with the reported discovery and reburial of a human skull fragment, conveys a somber feeling that it may be a potential military war graves site.

Association

The historic crash site's location, setting, materials, and feeling combine to form a direct link with the site to the crash. Together they help convey the site's historic association with the only known surviving World War II-era March Field-related crash site in the [redacted] Lake Perris area.

Character-Defining Elements of the Property

- Rugged terrain, including granitic outcroppings, thick scrub brush, seasonal and perennial forbs and grasses
- 12-acre debris field
- Scattered airplane parts associated with the crashing and complete destruction of a World War II-era Consolidated B-24J Liberator heavy bomber

Endnotes:

[1] Estes AFAFS, Washington D.C. to Chief AFAFS, Winston Salem, North Carolina, *Brief of Aircraft Accident No. 7369, Telegraph Message to the Chief, Office of Flying Safety, Winston-Salem, North Carolina* (1944 May 18) 1; and Walthall, COAAB, March Field, California Headquarters, Army Air Forces, *Telegraph Message to the Chief, Office of Flying Safety, Winston-Salem, North Carolina* (1944 May 19) 1.

[2] George A. Damiano, "Reminiscence of Crash" (Unpublished Manuscript, n.d.) 1; and Harold Monroe, "Reminiscence of Crash" (Unpublished Manuscript, n.d.).

[3] Walthall, *Telegraph Message to the Chief* (1944 May 19) 1; Walthall, COAAB, March Field. California Headquarters, Army Air Forces, *Telegraph to the Chief, Office of Flying Safety, Winston-Salem, North Carolina* (1944 May 17) 1; and Edward Jablonski, *America in the Air War, The Epic of Flight Series* (Alexandria: Time-Life Books, 1986) 131.

[4] Walthall , *Telegraph to the Chief* (1944 May 17) 1 and, *Telegraph to the Chief* (1944 May 19) 1; Captain M. M. Heisel, United States Army Air Corps, *Statement of Instructor Pilot* (ca. 1944 May 19) 1; and Major Charles P. Roberts, United States Army Air Corps, Aircraft Accident Officer, *Description of Accident* (ca. 1944 May 19) 1.

[5] Anne Milbrooke, et al, *Guidelines for Evaluating and Documenting Historic Aviation Properties* (Washington, D.C.: U.S. Department of the Interior, National Park Service, National Register of Historic Places, 1998) 5 and 27.

[6] Donald L. Miller, *Masters of the Air: America's Bomber Boys Who Fought the Air War against Nazi Germany* (New York: Simon and Schuster, 2006) 164.

[7] Art Wilson, *Runways in the Sand: the History of Blythe Army Air Base in World War II* (Blythe: Author, 2008) 76; California State Military Museum [CSMM], *Historic Posts, Camps, Stations and Airfields: March Field* (Courtesy of the March ARB Public Affairs Office, The California State Military Department http://www.militarymuseum.org/MarchAFB.html, 2009); Miller, *Masters of the Air* 164-165; Jablonski, *America in the Air War* 44, 48, 50, and 131; United States Department of the Interior, National Park Service, *Randolph Field Historic District. National Historic Landmark* (In *From Sand Dunes to Sonic Booms*, http://www.nps.gov/nr/travel/aviation/ran.htm, 2009).

[8] "Bomber Crash Kills Seven," *Los Angeles Times* (1944 May 18) A2; Doolittle, James H., with Carroll V. Glines, *I Could Never Be so Lucky Again: an Autobiography* (New York: Bantam Books, 1991) 228; United States War Department, U. S. Army Air Forces, Headquarters Army Air Base, March Field, [redacted] California, *Report of Aircraft Accident* (1944 May16). An aircraft with a "tricycle landing gear" has one steerable landing wheel in the front, called the "nose wheel", and two or more main landing wheels, normally under the wings, slightly aft of the aircraft's center of gravity. See Attachment #2. A retractable tail skid protected the rear bottom of the aircraft's fuselage from "nose-up or tail-dragging" landings. Most other types of aircraft had a "conventional" landing gear arrangement, with their center of gravity behind the cockpit, making their tails rest on a small pivoting landing wheel. This arrangement, as found in the Boeing B-17, gave an aircraft a "nose-up" configuration when parked on a runway.

[9] Jablonski, *America in the Air War* 131; Joseph F. Baugher, *Consolidated B-24J Liberator* (http://home.att.net/~jbaugher2/b24_18.html, 2007 June 3); Steve Birdsall, *Log of the Liberator: an Illustrated History of the B-24* (Garden City: Doubleday and Company, 1973) 40; Allan G. Blue, *The B-24 Liberator: A Pictorial History* (New York: Charles Scribner's Sons, 1977) 53; *Starr Smith, Jimmy Steward, Bomber Pilot* (St. Paul: Zenith Press, 2005) 56; and William Wagner, *Reuben Fleet and The Story of Consolidated Aircraft* (Fallbrook, California: Aero Publishers, 1976) 267.

[10] Carl Hoffman, *Hunting Warbirds: the Obsessive Quest for the Lost Aircraft of World War II* (New York: Ballentine Books, 2001) 42-43 and 47; Edward Jablonski, *Airwar, Terror from the Sky—Tragic Victories* (vol. 1, Garden City: Doubleday, 1971) 157 and *Outraged skies—Wings of Fire* (Vol. 2, Garden City: Doubleday, 1971) 161; Robert W. Sternfels, *Ploesti: When Heroes Flew the Skies* (HomeOfHeroes.com http://www.homeofheroes.com/wings/part2/09_ploesti.html, 1999-2007); Wagner, *Reuben Fleet* 265, 266, 298; and *World War II: Eyewitness to the Raid on Ploesti* (http://www.historynet.com/world-war-ii-eyewitness-to-the-raid-on-ploesti.htm, Weider History Group, 2009).

[11] Baugher, *Consolidated B-24J Liberator*; Birdsall, *Log of the Liberator*, 56, 195, 202; California State Military Museum, *March Field;* Hoffman, *Hunting* Warbirds 42-43 and 47; and Blue, *The B-24 Liberator* 51, 195, and 202.

[12] CSMM, *March Field*; Glen L. Lewis, *The March Field Story* (March Air Force Base, California, United States Department of the Air Force, Office of Information, 22nd Bombardment Wing Headquarters, 1976) 132; Major Arthur F. McConnell, Jr., ed., Information Office 22nd Bombardment Wing, *March A.F.B, 1918-1962: a Pictorial History of March Air Force Base* (March Air Force Base: J. Frank & Son, Inc., 1962) n.p.; Tom Cameron,

"Guardians of the Pacific Coast," *Los Angeles Times* (1941 Jan 2) A6; "March Field Air Base Becomes Training Center," *Los Angeles Times* (1940 July 22) B1; John Pike, *Fourth Air Force* (GlobalSecurity.org. http://www.globalsecurity.org/military/agency/usaf/4af.htm, 2009); United States War Department, United States Army Air Forces, Office of Flying Safety, *The United States Army Air Forces in World War II, Army Air Forces Statistical Digest, World War II, Table 215 – Airfields in Continental US By Air Force or Command and by Type of Airfield: 1941 to 1945* (http://www.usaaf.net/digest/t215.htm).

[13] CSMM, *March Field;* Lewis, *The March Field Story* 133, and 135; Pike, *Fourth Air Force;* and Stephen D. Mikesell and Stephen R. Wee, *March Field Historic District* (National Register of Historic Places Nomination, 1992 April 10) 58 and 63.

[14] "March Field Air Base Becomes Training Center," B1; and "March Field Bomber Crashes into [redacted]" *Los Angeles Times* (1940 December 19) 1.

[15] "Bomber Blast Kills Seven," *Los Angeles Times* (1941 October 13) 1.

[16] "Bomber Crash Takes Nine Lives," *Los Angeles Times* (1942 July 2) 1.

[17] "Four Killed in B-24 Crash near March Field," *Los Angeles Times* (1943 June 9) 2; "Search Parties Reach Lost B-24; 10 aboard Dead," *Los Angeles Times* (1943 November 3) 1; "Big Bomber Hits Auto on Road," *Los Angeles Times* (1943 December 9) 1; "Police Assist Army in Missing Bomber Search," *Los Angeles Times* (1944 February 1) A3; "Three Crashes Kill 11 Fliers," *Los Angeles Times* (1944 February 3) 9; "Bombers Going to March Field Crash, Killing 12," *Los Angeles Times* (1944 February 15) 1; "Ten Killed when B-24 Crashed Near Mojave," *Los Angeles Times* (1944 April 10) 1; "Two B-24 Liberators Crash over Yuma," *Los Angeles Times* (1944 April 27) 12; "Four Killed in Plane Crash," *Los Angeles Times* (1944 March 26) 3; "Bomber Crash Kills Seven," A2; "Eight Airmen Die in Crash," *Los Angeles Times* (1944 June 5) A1; "Eight Reported Killed as Two Bombers Collide," *Los Angeles Times* (1944 July 5) 1; "Six Army Flyers Die in March Field Crash," *Los Angeles Times* (1944 November 14) 1; "Eleven Die in Crash near March Field," *Los Angeles Times* (1944 November 19) 1; "Southland Crash Kills Nine of Bomber Crew," *Los Angeles Times* (1945 March 1) 1; "Army Bomber with 11 Missing," *Los Angeles Times* (1945 May 14) 1; and "Army Names Men of Lost Bomber," *Los Angeles Times* (1945 May 15) 7.

[18] Quoted in Miller, *Masters of the Air*, 166, from Herman Melville, *The March into Virginia* (1866).

[19] Walthall Telegraph Message to the Chief (1944 May 17) 1 and (1944 May 19) 1; Estes, *Brief of Aircraft Accident No. 7369* 1; Roberts *Description of Accident* 1; Walthall, COAAB, March Field, California, Headquarters, Army Air Forces, *Brief of Aircraft Accident No. 7369* (1944 May 18) and Headquarters Army Air Base, March Field, Riverside, California, *Report of Aircraft Accident No. 066* (1944 May 16) 1.

[20] Art Wilson, *Runways in the Sand: the History of Blythe Army Air Base in World War II* (Blythe: Author, 2008) 75; and United States War Department, United States Army Air Forces, Office of Flying Safety, *The United States Army Air Forces in World War II, Army Air Forces Statistical Digest, World War II, Table 212 – Aircraft Accidents – Number and Rate: Fiscal Years 1921 to 1945* (http://www.usaaf.net/digest/t212.htm). (http://www.usaaf.net/digest/t212.htm).

[21] Starr Smith, *Jimmy Steward, Bomber Pilot* (St. Paul: Zenith Press, 2005) 53 and 60.

[22] Office of Flying Safety, *Table 212*; United States War Department, United States Army Air Forces, Office of Flying Safety, *The United States Army Air Forces in World War II, Army Air Forces Statistical Digest, World War II, Table 213 – Aircraft Accidents in Continental U.S. – Number and Rate: Dec 1941 to Aug 1945 (http://www.usaaf.net/digest/t213.htm)*; *Table 214 – Airplane Accidents in Continental U.S., by Principal Model of Airplane – Number and Rate: 1942 to 1945 (http://www.usaaf.net/digest/t214.htm)*; and John Ellis, *World War II: a Statistical Servey* (New York: Facts on File, 1993) 259. A normal B-24J Liberator bomber crew consisted of 10 men. Four were officers: a pilot, co-pilot, navigator, and bombardier. The remainder were non-commissioned officers: flight engineers and a radioman, who also operated the aircraft's defensive .50 caliber Browning machine guns in the nose, dorsal, belly, and rear gun turrents, as well as two opposing .50 caliber Brownings mounted in the waist between the bomb bay and tail section.

[23] Consolidated Aircraft Corporation, San Diego, California, *Report No. ZA-103, B-24 Type Airplanes, Summary of Emergency and Crash Landings* (Author: San Diego, March 17, 1944) 3 and 10.

[24] Miller *Masters of the Air* 131; and Wilson, *Runways in the Sand*, 75.

[25] Damiano, "Reminiscence of Crash"; and Monroe, "Reminiscence of Crash." See attached Continuation Sheet for photographs showing steel cable amid debris field wreckage. Even if there were little or no human remains associated with the death of a soldier or airman, during World War II the United States military would often send a sealed sandbag-filled wooden coffin to a surviving spouse or parents in order to simulate the weight of a body for a funeral ceremony. Pat Macha, Electronic Mail Communications with Alexander D. Bevil (2009 May 04).

[26] Damiano, "Reminiscence of Crash"; and Monroe, "Reminiscence of Crash."
[27] Ibid.
[28] Macha, Electronic Mail Communications.
[29] United States, Department of the Interior, National Park Service, *Atka B-24D Liberator*, in *From Sand Dunes to Sonic Booms: A National Register of Historic Places Travel Itinerary* (http://www.nps.gov/history/nR/travel/aviation/atk.htm).
[30] United States, Department of the Interior, National Park Service, *National Register of Historic Places*, *How to Apply the National Register Criteria for Evaluation*, *National Register Bulletin 15* (Washington, D. C.: Author, 1990; Revised 1991, 1995, 1998; Revised for the Internet 1995, 2001, 2002) 5.
[31] Scott Thomas, District Archaeologist, United States Department of the Interior, Bureau of Land Management, Hines, Oregon, Electronic Mail Communication with Alexander D. Bevil (2009 March 20).
[32] "BLM Declares Two Military Aircraft Crash Scenes as Historical Sites", in *Aero News Network,* http://www.aero-news.net/index.cfm?ContentblockID=d669daa8-9716-4247-b3e9-aecf7cf0bc04, 2007 June 11; and William Cannon, District Archaeologist, United States Department of the Interior, Bureau of Land Management, Lakeview District, Lakeview, Oregon, Telephone Communication with Alexander D. Bevil, 20 March 2009.
[33] Larrynn Carver, Associate State Archaeologist, Inland Empire District, Personal Interviews, Electronic Mail Communications, and Telephone Conversations with Alexander D. Bevil (February to December 2009; and January to November 2010).

***B12. References:**

Baugher, Joseph F. *Consolidated B-24J Liberator.* http://home.att.net/~jbaugher2/b24_18.html, 2007 June 3.

Birdsall, Steve. *Log of the Liberator: An Illustrated History of the B-24.* Garden City: Doubleday and Company, 1973

"BLM Declares Two Military Aircraft Crash Scenes As Historical Sites." In *Aero News Network.* http://www.aero-news.net/index.cfm?ContentblockID=d669daa8-9716-4247-b3e9-aecf7cf0bc04, 2007 June 11.

Blue, Allan G. *The B-24 Liberator: A Pictorial History.* New York: Charles Scribner's Sons, 1977.

California State Military Museum. *Historic Posts, Camps, Stations and Airfields: March Field.* Courtesy of the March ARB Public Affairs Office. The California State Military Department. http://www.militarymuseum.org/MarchAFB.html, 2009.

Cannon, William. District Archaeologist. United States Department of the Interior. Bureau of Land Management. Lakeview District. Lakeview, Oregon. Electronic Mail Communication with Alexander D. Bevil, 20 March 2009.

Carver, Larrynn. Associate State Archaeologist. Inland Empire District. Personal Interviews, Electronic Mail Communications, and Telephone Conversations with Alexander D. Bevil, February to December 2009; and January to November 2010.

Consolidated Aircraft Corporation. San Diego, California. *Report No. ZA-103. B-24 Type Airplanes. Summary of Emergency and Crash Landings.* Author: San Diego, 1944 March 17.

Doolittle, James H. with Carroll V. Glines. *I Could Never Be So Lucky Again: an Autobiography.* New York: Bantam Books, 1991.

Ellis, John. *World War II: a Statistical Servey.* New York: Facts on File, 1993.

Estes AFAFS, Washington D.C. to Chief AFAFS, Winston Salem, North Carolina, *Brief of Aircraft Accident No. 7369*, 1944 May 18.

Headquarters Army Air Base. March Field [redacted] California. *Report of Aircraft Accident No. 066*, 1944 May 16.

Heisel, M. M., Captain, United States Army Air Corps. *Statement of Instructor Pilot*, n.d. [ca. 1944 May 19].

Hoffman, Carl. *Hunting Warbirds: the Obsessive Quest for the Lost Aircraft of World War II.* New York: Ballentine Books, 2001.

Jablonski, Edward. *Airwar.* Vol. 1. *Terror from the Sky – Tragic Victories.* Garden City: Doubleday, 1971.

_____. *Airwar.* Vol. 2. *Outraged Skies – Wings of Fire.* Garden City: Doubleday, 1971.

_____. *America in the Air War. The Epic of Flight Series.* Alexandria: Time-Life Books, 1986.

Lewis, Glen L. *The March Field Story.* March Air Force Base, California. United States Department of the Air Force. Office of Information. 22nd Bombardment Wing Headquarters, 1976.

Los Angeles Times
"Army Bomber with 11 Missing," 1945 May 14, 1.
"Big Bomber Hits Auto on Road; 4 Killed, 10 Hurt," 1943 December 9, A8.
"Army Names Men of Lost Bomber," 1945 May 15, 7.
"Bomber Crash Takes Nine Lives," 1942 July 2, 1.
"Bomber Blast Kills Seven," 1941 October 13, 1.
"Bombers Going to March Field Crash, Killing 12," 1944 February 15, 1.
Cameron, Tom. "Guardians of the Pacific Coast," 1941 Jan 2, A6.
"Eight Airmen Die in Crash," 1944 June 5, A1.
"Eight Reported Killed as Two Bombers Collide," 1944 July 5, 1.
"Eleven Die in Crash near March Field," 1944 November 19, 1.
"Four Killed in B-24 Crash near March Field," 1943 June 9, 2.
"Four Killed in Plane Crash," 1944 March 26, 3.
"March Field Air Base Becomes Training Center," 1940 July 22, B1.
"March Field Bomber Crashes into Marion Peak," 1940 December 19, 1.
"Police Assist Army in Missing Bomber Search," 1944 February 1, A3.
"Search Parties Reach Lost B-24; 10 aboard Dead," 1943 November 3, 1.
"Six Army Flyers Die in March Field Crash," 1944 November 14, 1.
"Southland Crash Kills Nine of Bomber Crew," 1945 March 1, 1.
"Three Crashes Kill 11 Fliers," 1944 February 3, 9.
"Ten Killed when B-24 Crashed Near Mojave," 1944 April 10, 1.
"Two B-24 Liberators Crash over Yuma," 1944 April 27, 12.

McConnell, Jr., Major Arthur F., ed. Information Office 22nd Bombardment Wing. *March A.F.B, 1918-1962: a Pictorial History of March Air Force Base*. March Air Force Base, California: J. Frank & Son, Inc., 1962.

Macha, Pat. Electronic Mail Communications with Alexander D. Bevil, 2009 May 04.

Mikesell, Stephen D. and Stephen R. Wee. *March Field Historic District*. National Register of Historic Places Nomination, 1992 April 10.

Milbrooke, Anne et al. *Guidelines for Evaluating and Documenting Historic Aviation Properties*. Washington, D. C.: U.S. Department of the Interior. National Park Service. National Register of Historic Places, 1998.

Miller, Donald L. *Masters of the Air: America's Bomber Boys Who Fought the Air War against Nazi Germany*. New York: Simon and Schuster, 2006.

Monroe, Harold. "Reminiscence of Crash" (Unpublished Manuscript, n.d.).

Pike, John. *Fourth Air Force*. GlobalSecurity.org. http://www.globalsecurity.org/military/agency/usaf/4af.htm, 2009.

Roberts, Charles P. Major, United States Army Air Corps. Aircraft Accident Officer. *Description of Accident*, ca. 1944 May 19.

Smith, Starr. *Jimmy Steward, Bomber Pilot*. St. Paul: Zenith Press, 2005.

Sternfels, Robert W. *Ploesti: When Heroes Flew the Skies*. HomeofHeroes.com. http://www.homeofheroes.com/wings/part2/09_ploesti.html, 1999-2007.

Thomas, Scott. District Archaeologist. United Stated Department of the Interior. Bureau of Land Management. Burns District. Hines, Oregon. Electronic Mail Communication with Alexander D. Bevil, 2009 March 20.

United States. Department of the Interior. National Park Service. *Atka B-24D Liberator*. In *From Sand Dunes to*

Sonic Booms: A National Register of Historic Places Travel Itinerary. http://www.nps.gov/history/nR/travel/aviation/atk.htm.

_____. *National Register of Historic Places. How to Apply the National Register Criteria for Evaluation. National Register Bulletin 15.* Washington, D.C.: Author, 1990; Revised 1991, 1995, 1998; Revised for the Internet 1995, 2001, 2002.

United States War Department. United States Army Air Forces. Headquarters Army Air Base. March Field. [redacted] California. *Report of Aircraft Accident #066*, 1944 May 16.

_____. United States Army Air Forces. Office of Flying Safety. *The United States Army Air Forces in World War II. Army Air Forces Statistical Digest, World War II. Table 212 – Aircraft Accidents – Number and Rate: Fiscal Years 1921 to 1945.* http://www.usaaf.net/digest/t212.htm.

_____. *Table 213 – Aircraft Accidents in Continental U.S. – Number and Rate: Dec 1941 to Aug 1945*

_____. *Table 214 – Airplane Accidents in Continental U.S., By Principal Model of Airplane – Number and Rate: 1942 to 1945.* http://www.usaaf.net/digest/t214.htm.

_____. *Table 215 – Airfields in Continental US By Air Force or Command and by Type of Airfield: 1941 to 1945.* http://www.usaaf.net/digest/t215.htm.

Wagner, William. *Reuben Fleet and the Story of Consolidated Aircraft.* Fallbrook, California: Aero Publishers, 1976.

Walthall, COAAB, March Field. California, Headquarters, Army Air Forces. *Telegraph Message to the Chief, Office of Flying Safety, Winston-Salem, North Carolina*, 1944 May 17.

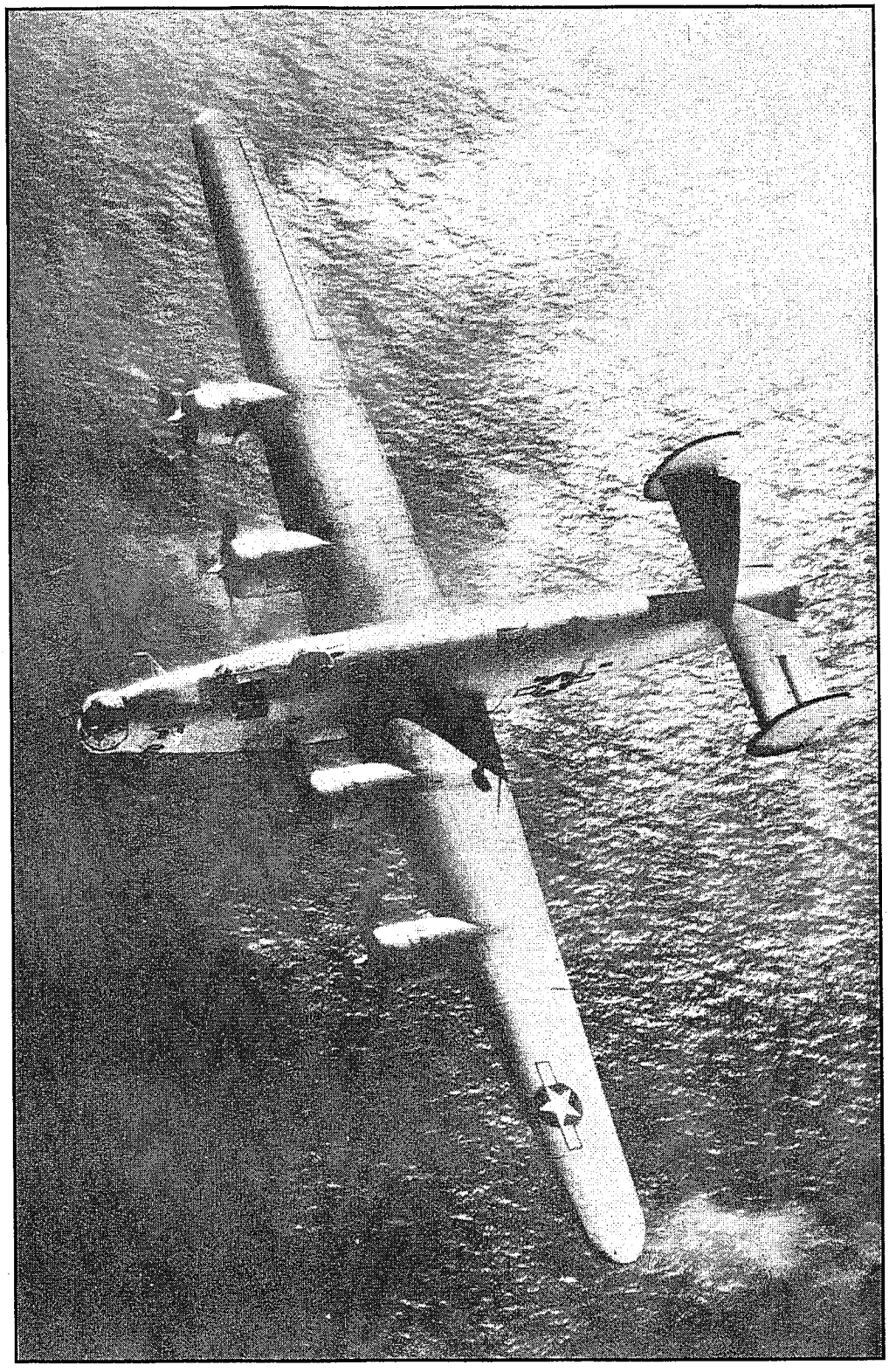
_____. *Brief of Aircraft Accident No. 7369. Telegraph Message to the Chief, Office of Flying Safety, Winston-Salem, North Carolina*, 1944 May 18.

_____. Telegraph Message to the Chief, Office of Flying Safety, Winston-Salem, North Carolina, 1944 May 19.

Wilson, Art. *Runways in the Sand: the History of Blythe Army Air Base in World War II.* Blythe: Author, 2008.

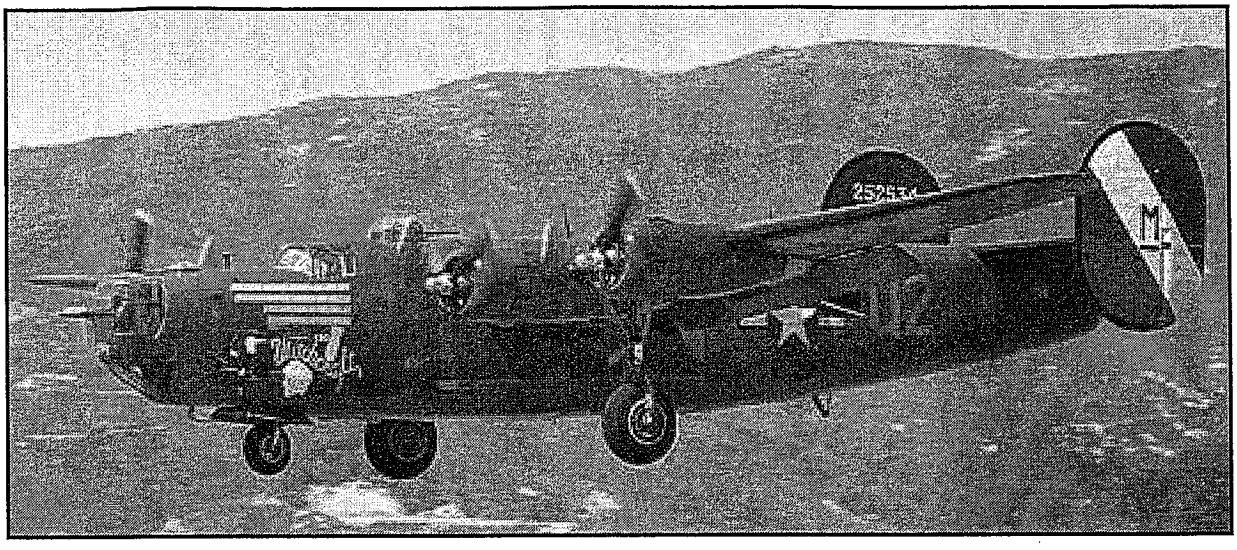
World War II: Eyewitness to the Raid on Ploesti. http://www.historynet.com/world-war-ii-eyewitness-to-the-raid-on-ploesti.htm, Weider History Group, 2009.

Attachment 1:
Image of B-24J Liberator Bomber Similar to B-24J #42-73387

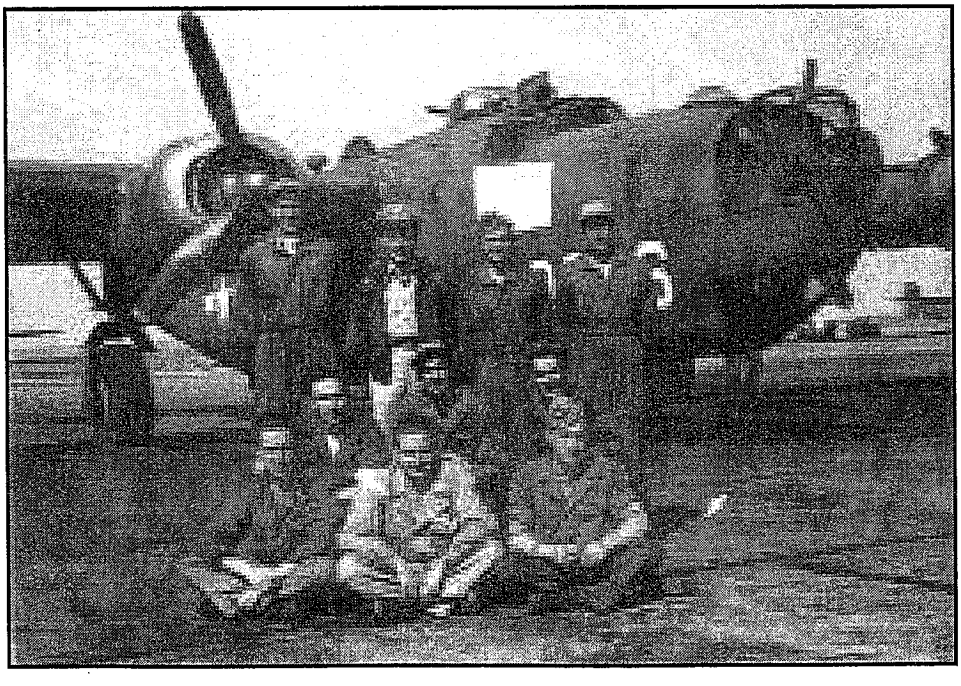


Source: Wagner, William. *Reuben Fleet and the Story of Consolidated Aircraft.* Fallbrook, California: Aero Publishers, 1976.

Attachment 2:
Images of B-24J Liberator Bombers Similar to B-24J #42-73387

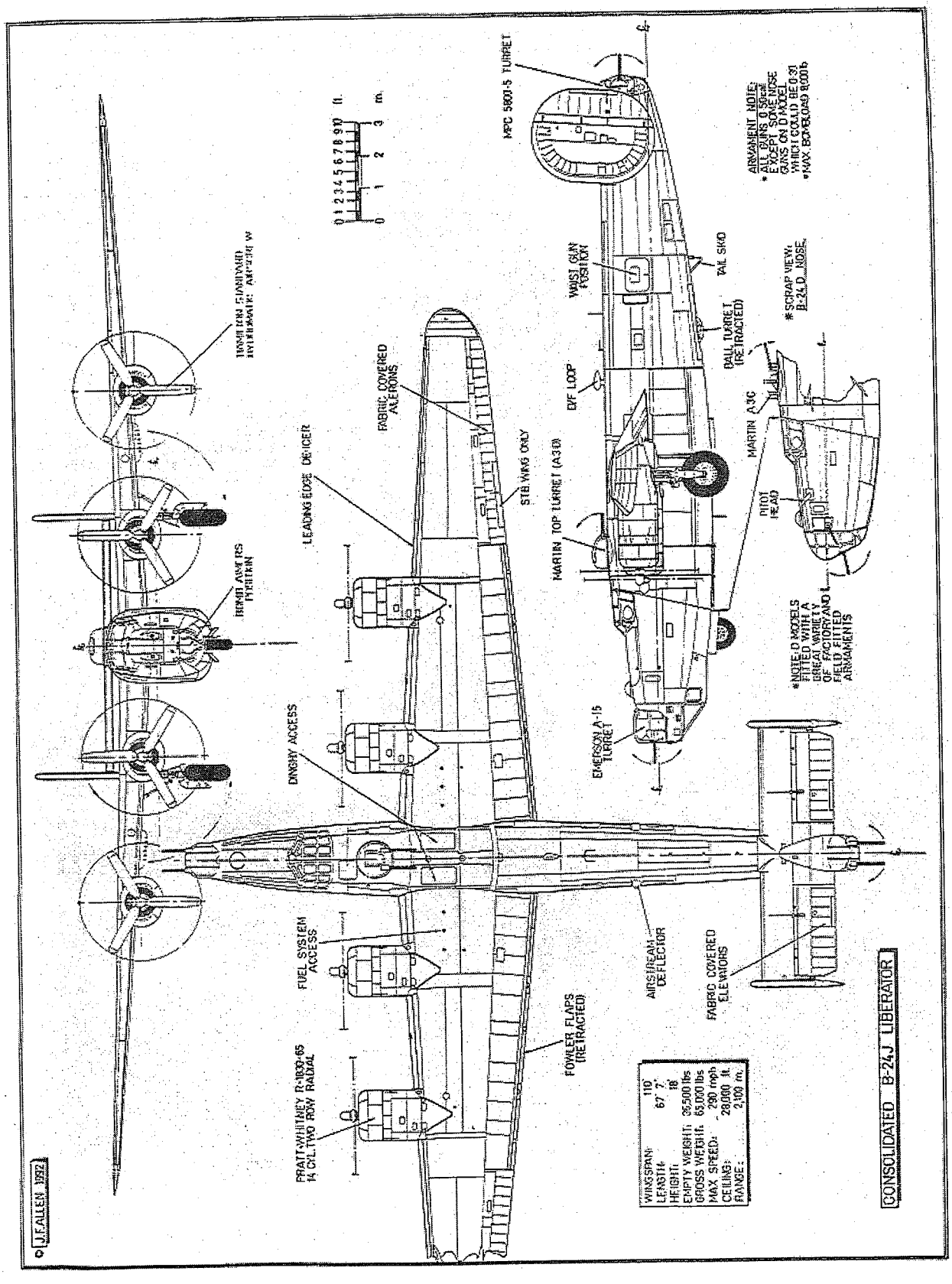


Consolidated B-24J Liberator *Witchcraft* flying near Santa Barbara Airport. Note "Tricycle" Landing Gear Deployed.
Source: Goleta Air & Space Museum Website

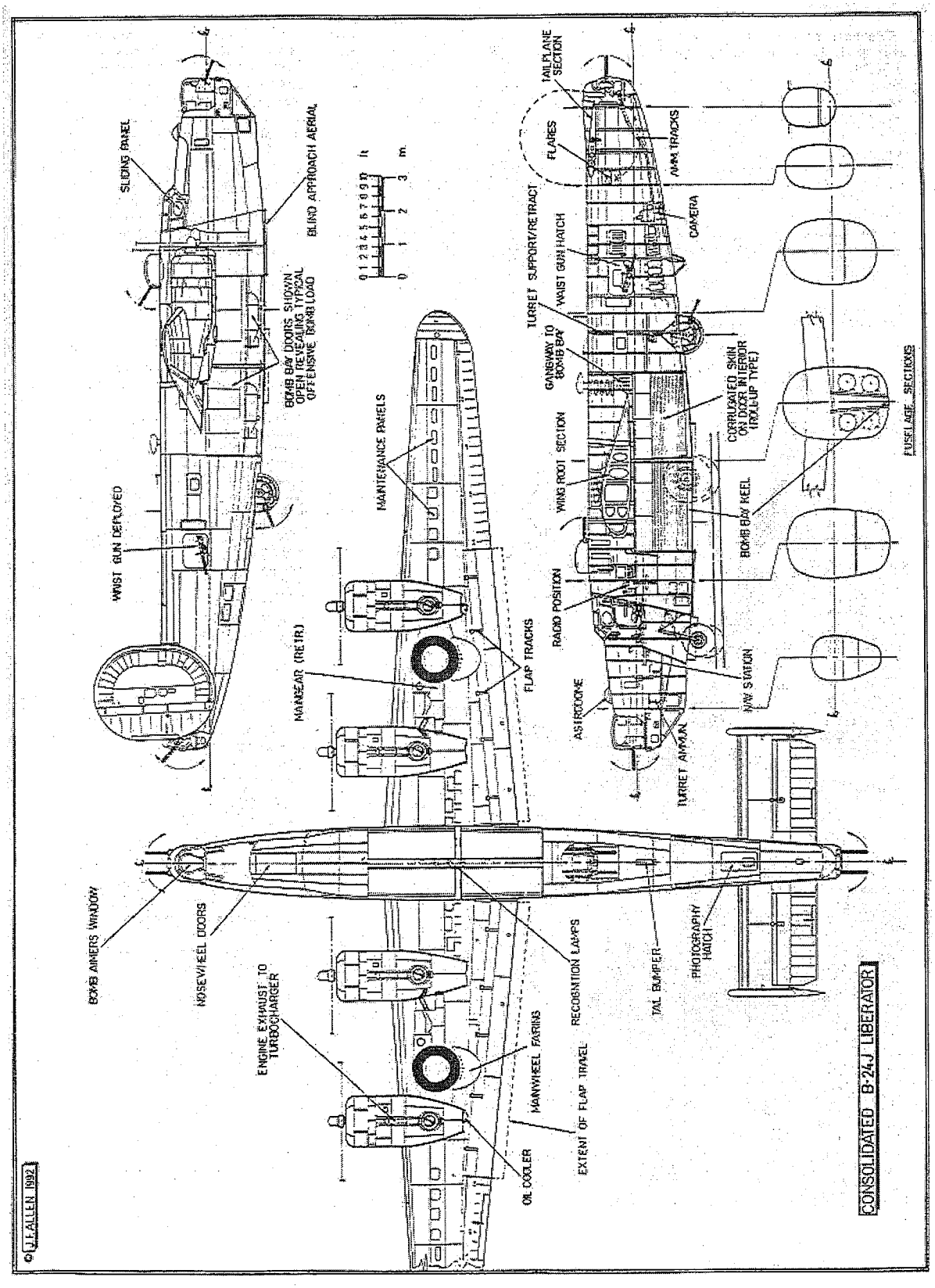


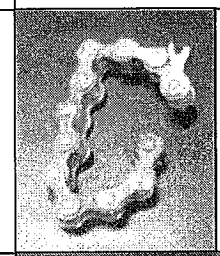
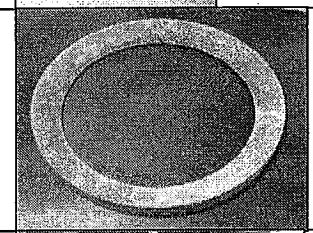
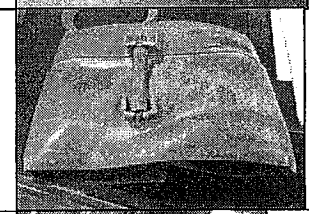
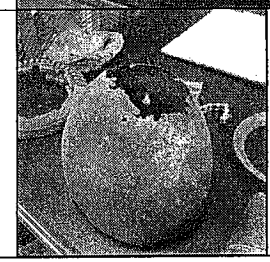
B-24J-5-DT, #42-51322
767th Bomber Squadron.
Torretto, Italy
Source: YellowAirplane.com

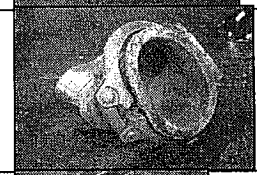
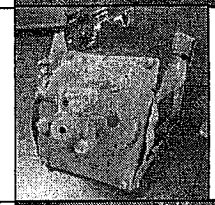
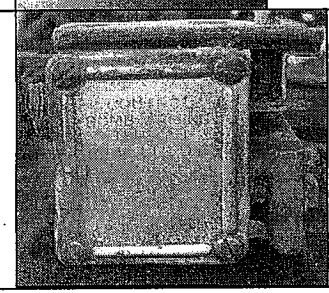
Attachment 3:
Schematic of B-24J Liberator Bomber Similar to B-24J #42-73387
Source: The B24 at War for Australia
http://www.fortunecity.com/meltingpot/statuepark/620/liberator.html

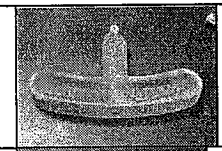
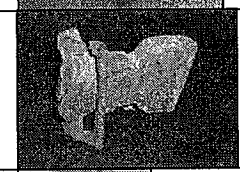
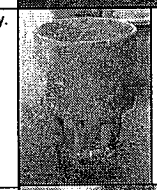
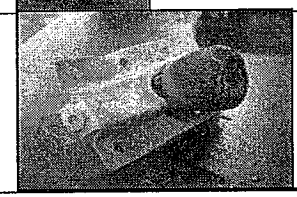


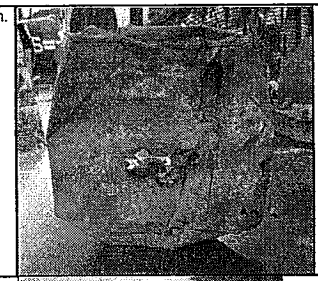
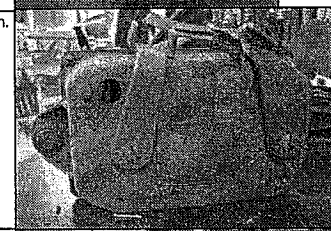
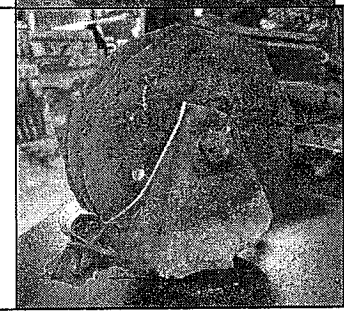
Attachment 4:
Schematic of B-24J Liberator Bomber Similar to B-24J #42-73387
Source: *The B24 at War for Australia*
http://www.fortunecity.com/meltingpot/statuepark/620/liberator.html

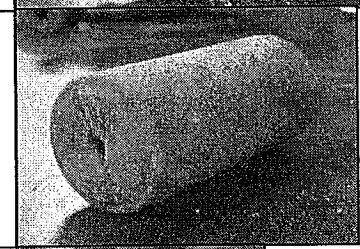
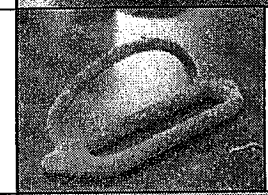


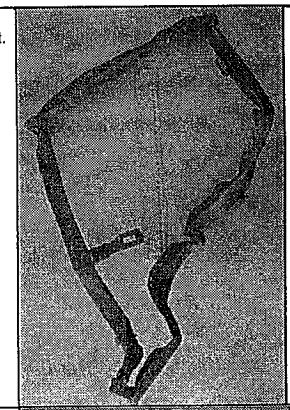
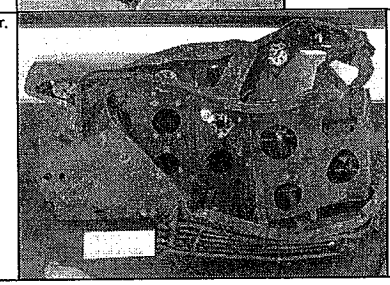
Park Unit:	Lake Perris State Recreational Area	STATE OF CALIFORNIA-THE RESOURCES AGENCY									[redacted] LPB24-J-40-CO Army Air Corps Liberator #42073387Crash Site Collection	
Accession ID:	P1670	DEPARTMENT OF PARKS AND RECREATION										
Site:	LPB24-J Liberator Crash Site	ARCHAEOLOGICAL CATALOG										
Object ID	Unit	Object Name	Type	Medium	Count	Weight		Length		Width	Description/Notes	Photo
P1670-01-001		Chain Link	Aircraft Part	Stainless Steel	1	2.18	lb.	6.50	in.	0.50 in.	Possibly Chain Link for a Gun Traverse Hand-crank Mechanism. Fragmentary and twisted.	
P1670-01-002		Seating Ring for Propeller Blade	Aircraft Part	Steel	1	1.75	lb.	6.50	in.	0.50 in.	Seating Ring for Propeller Blade. Complete.	
P1670-01-003		Engine Exhaust Collector	Aircraft Part	Steel	1	6.25	lb.	6.50	in.	4.50 in.	Engine Exhaust Collector. Complete.	
P1670-01-004		Practice Bomb Nose Cone	Armament	Steel	1	1.50	lb.	7.50	in.	7.75 in.	Practice Bomb Nose Cone. Fragmentary.	

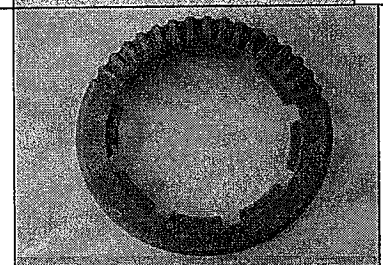
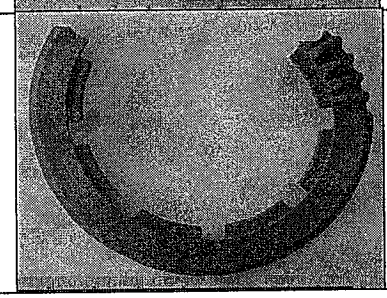
P1670-01-005		Distributor Assembly	Aircraft Part	Bakelite, Fiberglass, Metal	1	1.50	lb.	5.25	in.	3.75	in.	Distributor Assembly. Fragmentary.	
P1670-01-006		Exhaust Manifold Coupling	Aircraft Part	Cast Alloy Steel and/or Molybdenum	1	1.00	lb.	3.25	in.	0.50	in.	Exhaust Manifold Coupling. Complete, bent.	
P1670-01-007		Possibly Oil Storage Tank Valve Assembly	Aircraft Part	Steel	1	2.25	lb.	7.25	in.	5.75	in.	Possibly Oil Storage Tank Valve Assembly. Fragmentary and bent.	
P1670-01-008		Possibly Right or Left Pitot Tube Housing	Aircraft Part	Steel	1	1.25	lb.	20.00	in.	3.25	in.	Possibly Right or Left Pitot Tube Housing. Fragmentary and bent.	
P1670-01-009		Possibly Main Circuit Breaker	Aircraft Part	Metal, Wiring, Switches	1	0.27	lb.	3.00	in.	1.75	in.	Possibly Main Circuit Breaker. Fragmentary and bent.	
P1670-01-010		Bomb Arming Switch Type A-1	Armament	Metal Alloy	1	0.50	lb.	2.75	in.	3.00	in.	Bomb Arming Switch Type A-1. Label reading"J.P. Seeburg Corp, Chicago". Complete.	

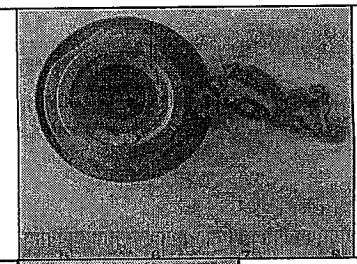
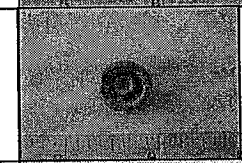
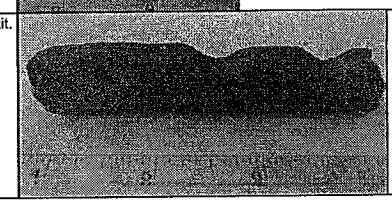
P1670-01-011		Engine Fire Extinguisher Pull Handle	Aircraft Part	Steel, Red Paint	1	0.14	oz.	3.50	in.	2.25	in.	Engine Fire Extinguisher Pull Handle. Painted Red. Complete.	
P1670-01-012		Bombsite or Drift Motor Glass Shard	Aircraft Part	Glass Shard	1	0.11	oz.	2.75	in.	1.50	in.	Bombsite or Drift Motor Glass Shard. Fragmentary.	
P1670-01-013		Browning M2a.50 cal. Bullet Ammo Belt Link	Armament	Steel	1	0.04	oz.	1.50	in.	1.75	in.	Browning M2a.50 cal. Bullet Ammo Belt Link. Complete.	
P1670-01-014		Latch for Radioman's Case	Personal Gear	Metal	1	0.08	oz.	1.75	in.	1.50	in.	Latch for Radioman's Case. Fragmentary and bent.	
P1670-01-015		Vaccuum Tube Base	Radio Set Part	Metal	1	0.06	oz.	1.75	in.			Vacuum Tube Base. Fragmentary.	
P1670-01-016		Sliding Window Latch	Aircraft Part	Metal	1	0.10	oz.	4.00	in.	1.75	in.	Sliding Window Latch "32P1445". Fragmentary and bent.	

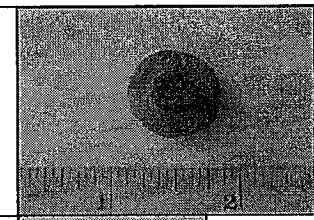
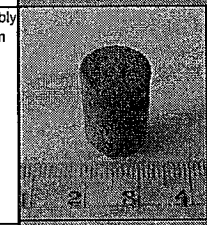
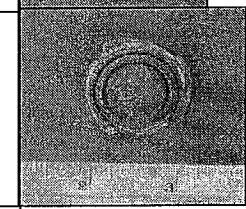
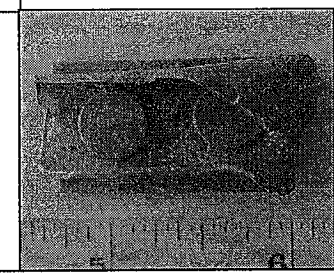
P1670-01-017		Lubricant, "Flying A" Brand Oil Can	Aircraft Maintanence	Metal	1	0.27	oz.	6.00	in.	5.75	in.	Lubricant, "Flying A" Brand Oil Can. Complete and crushed.	
P1670-01-018		Spark Plug with Wiring	Engine Part	Metal, Ceramic	1	0.29	oz.	4.50	in.	3.25	in.	Spark Plug with Wiring. Fragmentary and bent.	
P1670-01-019		Bomb Release Switch		Stainless steel.	1	2.50	lb.	7.50	in.	4.75	in.	Aircraft Part; Bomb Release Switch. Fragmentary.	
P1670-01-020		Pulley	Aircraft Part	Metal	1	1.25	lb.	7.50	in.	5.00	in.	Pulley. Fragmentary.	

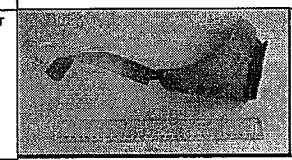
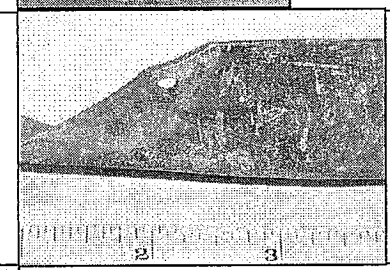
P1670-01-021		American Bosch Magneto Plate	Aircraft Part	Metal	1	0.15	lb.	3.00	in.	2.25	in.	American Bosch Magneto Plate. Fragmentary.	
P1670-01-022		Browning M2a .50 cal. Buffer Cap	Weapon Part	Metal	1	0.50	lb.	3.00	in.			Browning M2a .50 cal. Buffer Cap. Fragmentary and twisted.	
P1670-01-023		Belt Strap Loop	Personal Gear	Metal	1	0.24	lb.	4.50	in.	2.00	in.	Belt Strap Loop. Complete.	
P1670-01-024		Oxygen Regulator & Tank	Personal Gear	Steel and Aluminum	1	2.50	lb.	14.00	in.	9.00	in.	Oxygen Regulator & Tank; "Aro type A-13, Pat No. 0-506-1, Serial No. AC42-37116 Order No. W535ac-27417". Complete and bent.	

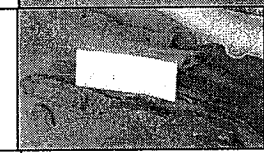
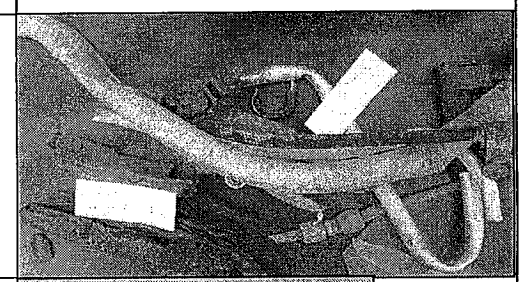
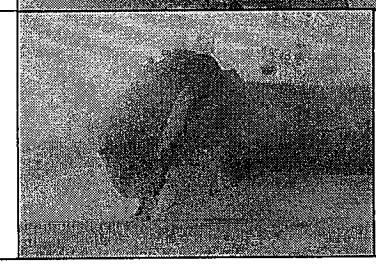
P1670-01-025		Bracket for Amunnition Box for .50 cal. bullets	Armament	Metal	1	1.25	lb.					Bracket for Amunnition Box for .50 cal. bullets. Fragmentary and bent.	
P1670-01-026		Radio Transmitter	Radio	Misc. Metal	1	7.00	lb.	12.00	in.	8.00	in.	Metal frame of a Radio Transmitter. Complete and crushed.	

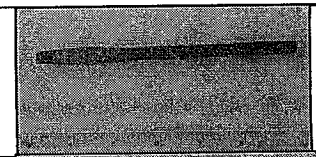
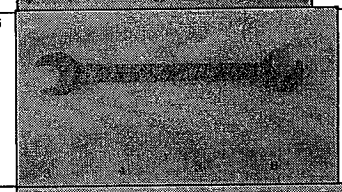
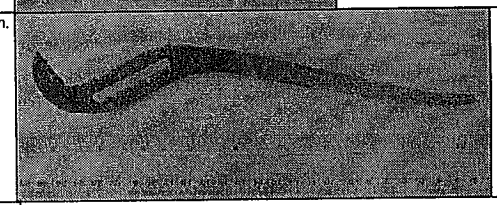
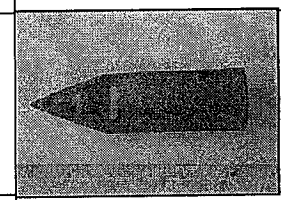
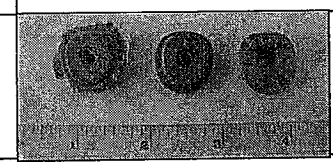
P1670-01-027		Practice Bomb	Armament	Steel	1	6.50	lb.	30.01	in.			Practice Bomb. Fragmentary and bent.	
P1670-01-028		Propeller Pitch Gear	Aircraft Part	Metal	1	2.50	oz.					Propeller Pitch Gear. Complete.	
P1670-01-029		Propeller Pitch Gear	Aircraft Part	Steel	1	1.50	oz.					Propeller Pitch Gear Fragment.	

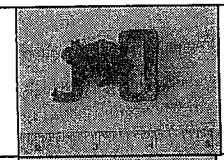
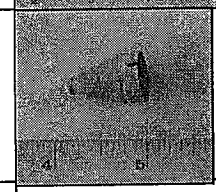
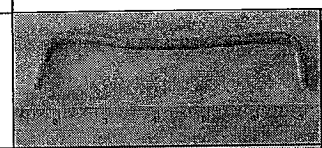
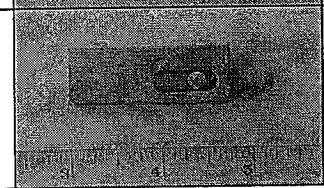
P1670-01-030		Canteen Top	Personal Item	Non-ferrous metal	1	0.23	oz.					Canteen top from a mess kit. "Schrader U.S.A. PAT. No. 1.975.415-2.154 254" with two stars. Complete.	
P1670-01-031		Metal Button	Personal Item	Ferrous metal	1	0.01	oz.					Metal button/snap from clothin/garment.	
P1670-01-032		Knife Handle	Personal Item	Wood	1	0.03	oz.	3.50	in.			Wooden knife handle from mess kit. Complete.	

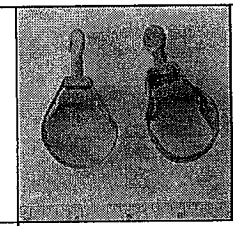
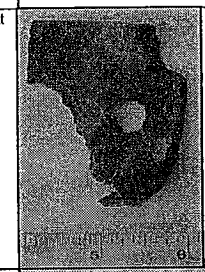
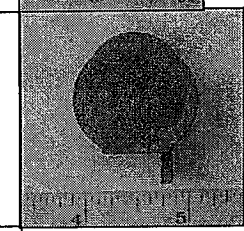
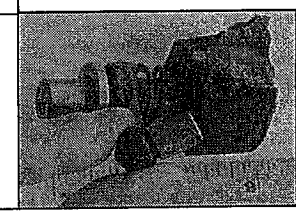
P1670-01-033		Button	Personal Item	Leather or Wood	1							Wood or Leather button from clothing/garment. Flexible shank-fabric type.	
P1670-01-034		Ammunition	Armament	Non-ferrous Metal	1	0.01	oz.	1.00	in.			Spent center-fired munition, possibly from a .45 cal. pistol (possibly from a military issued firearm).	
P1670-01-035		Plastic Cap	Miscellaneous	Plastic	1	0.01	oz.					Container top. Black plastic threaded cap. Fire-affected.	
P1670-01-036		Glass Shard	Aircraft Part	Glass	1							Small clear glass shard with rim.	No Photo
P1670-01-037		Plane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.14	oz.					Airplane fuselage. Reddish paint/primer paint visible.	

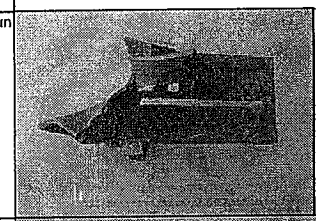
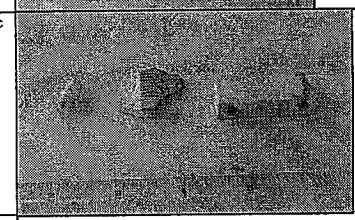
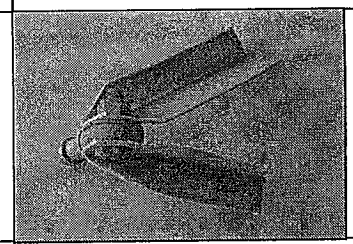
P1670-01-038		Plane Fuselage	Aircraft Part	Non-ferrous Metal	3	0.11	oz.					Airplane fueslage. Pinkish paint/primer paint visible on these three fragments.	
P1670-01-039		Plane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.14	oz.	13.50	in.			Airplane fuselage. Straight piece with pinkish paint/primer paint visible. "32F78900".	
P1670-01-040		Plane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.05	oz.					Airplane Fuselage. Bracket assemblage; triangular shape; black dashed lines on sides "32W02647R".	
P1670-01-041		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.07	oz.					Airplane Fuselage. Fragmentary straight piece with bracket, "32 L1 T20...".	
P1670-01-042		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.13	oz.					Airplane fuselage. Fragmentary straight piece with hardware, black paint visible.	
P1670-01-043		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.16	oz.					Airplane fuselage. Fragmentary straight piece, with burned paint.	
P1670-01-044		Airplane Part	Aircraft Part	Non-ferrous Metal	1	0.43	oz.					Bracket with articulated arm; cotter pin and hardware attached. Maker's mark on top of bolts: AERO; on bracket:"_-10 50"?; on arm "34-0-1014-7R"; Sub Sys No. "32 0 10 10 _ 4 6 P".	
P1670-01-045		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.18	oz.					Airplane Fuselage. Burned, bent part fragment with greenish paint visible. "ASSY 32 H _ 2011-0 ASSY" "ASSY 194V" (in a circle).	
P1670-01-046		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.09	oz.					Airplane Fuselage. Burned straight piece of a bracket assemblage. Fragmentary.	

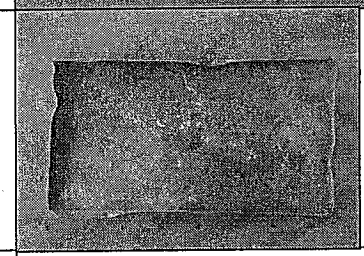
P1670-01-047		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.03	oz.					Airplane Fuselage. Burned bracket assemblage with black rubber weather stripping attached. Fragmentary.	
P1670-01-048		Metal Tie-down	Aircraft Part	Non-ferrous Metal	1	2.18	oz.	6.50	in.	0.50	in.	Metal strap/tie down. Complete, "25 (in a circle) 32P1445-12 ASSY No. 32P1445".	
P1670-01-049		Rubber Weather Stripping	Aircraft Part	Rubber	.10	0.19	oz.					Burned black rubber weather stripping fragments.	
P1670-01-050		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	5	0.09	oz.					Airplane Fuselage. Possibly wing fuselage. Fragmentary.	
P1670-01-051		Airplane Fuselage	Aircraft Part	Non-ferrous Metal	1	0.75	oz.					Wing/tail/rib fuselage. Mark of a "6" or a "9" (in a circle).	
P1670-01-052		Hydrolic Parts	Engine Part	Non-ferrous	11	2.18	oz.	6.50	in.	0.50	in.	Metal tubing, hosing and clamp parts from an engine hydrolic system.	
P1670-01-053		Engine Mount Cross-section	Aircraft Part	Ferrous Metal	1	1.25	oz.					Engine Mount Cross-section with hardware present. Fragmentary, crimped and bent with grounded wiring attached.	

P1670-01-054		Flathead Screwdriver	Tool	Ferrous Metal	1	0.14	oz.	6.00	in.			Flathead Screwdriver. Rusted. Probably fit into a wooden handle. Complete.	
P1670-01-055		Small Wrench	Tool	Ferrous Metal	1	0.01	oz.	3.50	in.			Small Wrench. Wrench size=7/16 in. Complete.	
P1670-01-056		(1/2) Channel Lock	Tool	Ferrous Metal	1	0.29	oz.	10.75	in.			(1/2) Channel Lock. Size unknown.	
P1670-01-057		Electronic Assembly Parts	Airplane Parts	Ferrous and Non-ferrous Metal, Ceramic	5	0.09	oz.					Electronic Assembly Parts. Wiring and insulators with hardware, Fragmentary.	
P1670-01-058		Rotory Switch	Airplane Parts	Ferrous and Non-ferrous Metal, Ceramic	1	0.08	oz.					Electronic Assembly Parts. Rotory switch with wiring. Complete.	
P1670-01-059		Metal Plate	Equipment Hardware	Ferrous Metal	1	0.09	oz.	3.50	in.			Hardware. Metal plate with two holes. Complete.	
P1670-01-060		External Antenna Mount	Aircraft Part	Ferrous Metal	1	0.20	oz.	5.00	in.	1.50	in.	Possibly Radio Part. External Antenna Mount	
P1670-01-061		Radio Plate	Aircraft Part	Ferrous Metal	1	0.01	oz.					Interior Metal Plate from a Radio Transmitter. Fragmentary	
P1670-01-062		Snaps	Miscellaneous	Non-ferrous Metal	3	0.04	oz.					3 Snaps with "Lift the dot". Complete.	
P1670-01-063		Metal Eyelet	Equipment Hardware	Non-ferrous Metal	1	0.01	oz.					Metal Eyelet. Complete.	

P1670-01-064		Metal Buckle	Equipment Hardware	Ferrous Metal	1	0.05	oz.					Metal buckle for strap (ie.: oxygen tank or equipment).	
P1670-01-065		Metal Nipple	Miscellaneous Airplane Part;	Non-ferrous Metal	1	0.01	oz.	75.00	in.			Metal nipple with groove for fitting into another part.	
P1670-01-066		Vinyl	Aircraft Debris	Vinyl	14	1.44	oz.					Reddish/Pinkish vinyl/plastic fragments.	
P1670-01-067		Metal Fragment	Aircraft Part	Non-ferrous Metal	1							Clamp. "Tinn. 4 A". Fragmentary.	
P1670-01-068		Wing Nut	Equipment Hardware	Ferrous Metal	1	0.01	oz.	1.25	in.			Hardware. Bent wing nut. Fragmentary.	
P1670-01-069		Metal Handle	Equipment Hardware	Ferrous Metal	1	0.03	oz.	5.50	in.			Metal handle for aircraft radio/equipment/ drawer. Bent slightly and broken at the threads. Fragmentary.	
P1670-01-070		Sliding Toggle	Aircraft Part	Non-ferrous Metal	1	0.05	oz.	2.50	in.	0.75	in.	Sliding Toggle. "32B493 6".	
P1670-01-071		Miscellaneous Metal Fragment	Aircraft Part	Non-ferrous Metal	1			2.25	in.	0.25	in.	Miscellaneous Metal Fragment. "32B33 87".	
P1670-01-072		Miscellaneous Hardware	Aircraft Part	Non-Ferrous Metal	4	0.01	oz.					Miscellaenous Fasteners.	
P1670-01-073		Miscellaneous Hardware debris	Aircraft Part	Non-ferrous Metal	4	0.06	oz.					Miscellaneous bent metal fragment, flathead screws and airplane parts.	
P1670-01-074		Melted Airplane Pieces	Aircraft Parts	Non-Ferrous	13	0.75	oz.					Unidentifiable melted debris from airplane.	
P1670-01-075		Miscellaneous Metal fragment	Aircraft Part	Non-ferrous Metal	1	0.01	oz.					Metal fragment with curved edge. Fragmentary.	
P1670-01-076		Sheet Metal Screw	Aircraft Hardware	Non-ferrous Metal	1	0.02	oz.					Square-headed sheet metal screw. head= .5in. diam.= .25in.	

P1670-01-077		Metal Hose Clamps	Aircraft Hardware	Ferrous Metal	2	2.18	oz.	6.50	in.	0.50	in.	2 Metal Hose Clamps. Complete with hardware attached.	
P1670-01-078		Melted Plastic	Aircraft Part	Plastic	2	0.04	oz.					White Plastic. Fragmentary.	
P1670-01-079		Engine Tag	Airplane Part	Non-ferrous Metal	1			2.25	in.			Metal Engine Tag fragment. "Pratt & Whitney" with description of Engine, etc.	
P1670-01-080		Metal Outlet Cover	Aircraft Hardware	Non-ferrous Metal	1	0.01	oz.					Metal Outlet Cover "4235347".	
P1670-01-081		Possible Windshield/Gun Turret Mount	Aircraft Part	Ferrous and Non-ferrous Metal	1	0.39	oz.					Possible Windshield/Gun Turret Mount with paint visble with brush strokes. Fragmentary.	
P1670-01-082		Hardened Rubber Mount	Aircraft Part	Rubber	1	0.03	oz.					Hardened Rubber Mount. Fragmentary.	
P1670-01-083		Mount Fragment	Aircraft Part	Non-Ferrous	1	0.06	oz.					Mount Fragment. Fragmentary.	
P1670-01-084		Possible Wheel Hub Fragment	Aircraft Part	Non-Ferrous	1	0.50	oz.					Possible wheel hub fragment. Curved with grooves. Fragmentary.	
P1670-01-085		Actuator	Aircraft Part	Ferrous and Non-Ferrous Metal	1	0.24	oz.					Actuator. Hand-scored "882" and "883" on part. Complete.	

P1670-01-086		Possible Windshield Framing	Aircraft Part	Non-ferrous Metal	1	0.05	oz.					Possible Windshield Framing. Aluminum Magnesium Alloy. Fragmentary.	
P1670-01-087		Electronic Switch Assembly	Aircraft Part	Ferrous	1	1.00	oz.					Electronic Switch Assembly. Complete, grounded wiring attached. Probably mounted on dash. "25 (in a circle) 32P10617".	
P1670-01-088		Instrument Mount	Aircraft Part	Non-ferrous	1	0.13	oz.					Instrument Mount. Fragmentary.	
P1670-01-089		M2a Browning .50 cal. Machine Gun Breach (half of)	Weapon Part	Ferrous and Non-ferrous Metal	1	8.00	oz.					M2a Browning .50 cal. Machine Gun Breach (half of). Bent from impact of plane crash.	
P1670-01-090		Ceramic Insulator	Aircraft Part	Ceramic	3	0.07	oz.					From an electronic part. 3 ceramic insulator shards with threaded holes.	
P1670-01-091		Metal Bracket	Aircraft Part	Ferrous and Non-ferrous Metal	2	0.25	oz.					Metal Bracket. Fragmentary with hardware present.	
P1670-01-092		Angle Bracket	Aircraft Part	Ferrous and Non-ferrous Metal	1	0.24	oz.					"1...24S-D", "32D1033- 2P" Green paint, red paint.	
P1670-01-093		Plexy Glass	Aircraft Part	Plastic/Plexy Glass	2	0.13	oz.					Fire-affected Plexy Glass shards.	

P1670-01-094		Glass Shards	Aircraft Part	Glass	13	0.33	oz.					Glass Shards. 1 patinated, 1 melted and several stuck together.	
P1670-01-095		Metal Base/Lid	Miscellaneous Container Part	Non-ferrous Metal	1	0.10	oz.	7.50	in.	4.50	in.	Metal Base/Lid for conatiner. Complete.	
P1670-01-096		Various Metal Wire/Springs/Armoured Cable	Aircraft Parts	Ferrous Metal	6	0.11	oz.					Various Metal fragments. 1 Wire fragment, 4 Springs, 1 Armoured Cable fragment.	
P1670-01-097		Lubricant Can	Miscellaneous Airplane Maintanence	Ferrous Metal	1	0.19	oz.	6.50	in.	5.00	in.	Metal Lubricant Can. Fragmentary, mostly complete.	
P1670-01-098		Lubricant Can	Miscellaneous Airplane Maintanence	Ferrous Metal	1	0.16	oz.	6.00	in.	4.50	in.	Metal Lubricant Can. Fragmentary, mostly complete.	
P1670-01-099		Lubricant Can	Miscellaneous Airplane Maintanence	Ferrous Metal	1	0.14	oz.	7.00	in.	5.50	in.	Metal Lubricant Can. Fragmentary, mostly complete.	
P1670-01-100		Lubricant Can	Miscellaneous Airplane Maintanence	Ferrous Metal	1	0.19	oz.	6.50	in.	6.00	in.	Metal Lubricant Can. Fragmentary, mostly complete.	
P1670-01-101		Airplane Fuselage	Aircraft Part	Ferrous and Non-ferrous Metal	13	0.24	oz.					Airplane Fuselage miscellaneous metal plane debris. Fragmentary.	
P1670-01-102		Small Metal Bracket	Aircraft Part	Non-ferrous Metal	1	0.02	oz.					Small Metal Bracket. "32B1J2". Complete.	
P1670-01-103		Airplane Fuselage	Aircraft Part	Ferrous and Non-ferrous	1	0.01	oz.					Airplane Fuselage. "32B0 08-500". Fragmentary.	
P1670-01-104		Airplane Fuselage	Aircraft Part	Ferrous and Non-ferrous	1	0.01	oz.					Airplane Fuselage. "...B1012 2". Fragmentary.	

P1670-01-105		Possible Aluminum Lubricant Tube	Miscellaneous Airplane Maintanence	Non-ferrous	50	0.02	oz.					Fragmentary possibly used to be a tube of lubricant.	
P1670-01-106		Metal Bracket /Instrument Mount	Aircraft Part	Ferrous	1	0.33	oz.					Bent Instrument Mount. Fragmentary.	
P1670-01-107		Tiny Metal Fragments	Airplane Debris	Ferrous Metal	100	0.04	oz.					Tiny metal fragments from collection.	
P1670-01-108		Soil	Miscellaneous Organic Material	Organic	1	0.22	oz.					Soil removed from Crash Site artifacts.	
P1670-01-109		Possibly Charred Organic Material	Miscellaneous Organic Material	Organic	2	0.04	oz.					Miscellaneous Organic Material with black fibers present in Organic conglomerate.	
P1670-01-110		Asbestos/Corregated Cardboard	Miscellaneous Container packing.	Asbestos/Corregated Cardboard	1	0.01	oz.					Miscellaneous Container packing. Cardboard base of cylindrical container.	
P1670-01-111		Rock Fragments	Miscellaneous	Granite and Schist	30	0.05	oz.					Bedrock and schist rock from Terry Peak/Lake Perris Crash Site.	
P1670-01-112		Coverall Material	Miscellaneous	Microfiber with organic material attached	2	0.04	oz.					Fragments of material from Coveralls that were possibly worn under a heavy flight suit. Charred material attched to material and 32+/- charred, metled, vitrified fragments of miscellaneous/ unidentifiable (organic) material bagged with coverall material.	

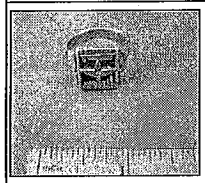
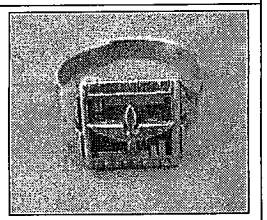
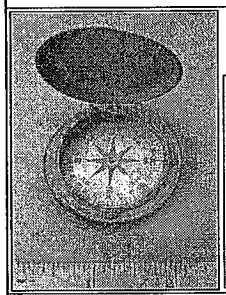
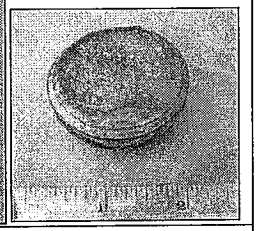
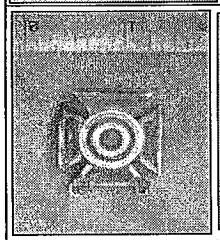
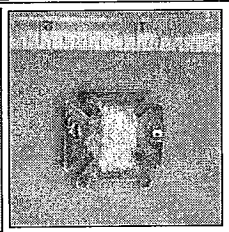
Park Unit:	Lake Perris SRA	STATE OF CALIFORNIA-THE RESOURCES AGENCY									
Accession ID:	P1699	DEPARTMENT OF PARKS AND RECREATION									
Site:	CA-RIV-9470	ARCHAEOLOGICAL CATALOGUE									
Object ID	**Object Name**	**Medium**	**Count**	**Weight**		**Length**		**Width**		**Thickness**	**Description/Notes**
P1699-01-01	U.S. Army Air Force N.C.O. Airman's Service Ring	Precious Metal (posibly gold and silver), Semi-precious stone (possibly onyx)	1	0.02	oz.	1.00	in.	0.75	in.		Personal Item; adjustable band, rectangular face with onyx inlay and silver Airforce icons including wings and propeller and wings on the sides. Possibly a piece missing on the inside of the ring behind the inlay.
P1699-01-02	U.S. Army Compass	Non-ferrous	1	0.07	oz.						Personal Item; brass compass. Army issued, condition is good, cover is bent from impact; "U.S." engraved on top.
P1699-01-03	U.S. Army Marksman Qualification Badge	Non-ferrous	1	0.02	oz.	1.10	in.	1.00	in.		Personal Item; bent from impact. Sticky adhesive material on the back.
P1699-01-04	Zipper slider and zipper pull tab	Ferrous	1	0.01	oz.	1.00	in.				Rusted zipper slider with zipper pull tab.

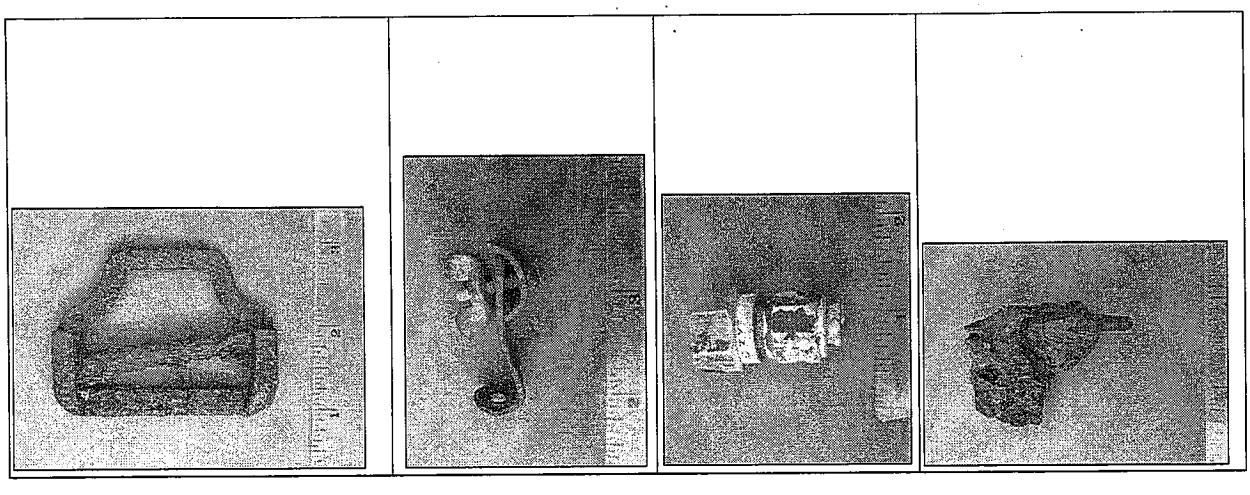
P1699-01-05	Belt buckle/latch	Ferrous	1	0.13	oz.	2.75	in.	2.00	in.		Personal Item; rusted metal belt buckle.
P1699-01-06	Tubing mounting bracket	Ferrous and non-ferrous	1	0.03	oz.	2.50	in.	5.00	in.		Aircraft hardware; intact tubing mounting bracket with wing nut still attached.
P1699-01-07	Coupling for an oxygen check valve	Non-ferrous	1	0.05	oz.	1.75	in.	0.75	in.		Equipmant Hardware; "OXY", "Oxygen Check Valve", "_ _ _ TAKER", "SP_ ...4032_"
P1699-01-08	Carbonized chunk of miscellaneous crash site debris	Organic	1	0.03	oz.						Miscellaneous; unidentifiable fire-affected material.

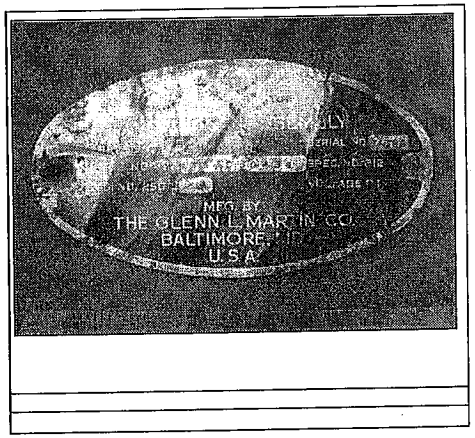
P1699-01-09	Dorsal Gun Turret Manufacturer's Plate	Non-ferrous	1	0.07	oz.	7.00	in.	4.00	in.			Aircraft Assembly Manufacturer's Plate; fire-affected and bent; "Martin U.S.A., Patents Pending Trademark Gun Turret Assembly Type 250CE5 Serial No 7418 C Order No. W535 AC 30436 Spec. No 212 OWG. No. 250 CE 50 Voltage 24 MFG by Glenn L. Martin Co. Baltimore, MD U.S.A. " Sticky adhesive on the back, plate has possibly been bent to lay flat.
Records			9	0.43	oz.							
3/4/2010												

Consolidated B-24J-40-CO/U.S. Army Air Forces
Liberator #42-73387 Crash Site at Lake Perris SRA
Additional Collection

Photos


MFG BY
THE GLENN L MARTIN CO.
BALTIMORE
U.S.A.