Crash of Flight 615

Timothy Swenson

Cover Art:

Flight Simulator aircraft by Greg Pepper, United livery by Eric Joiner, image by Tom Gibson.

Introduction

It was a cool cloudy morning in the East Bay on August 24, 1951. Patches of low clouds from the marine layer were interlaced in the hills above Union City. For those that were up in the very early morning hours, the drone of a radial aircraft engine could be heard. United Flight 615, a four engined DC-6, was making its approach to Oakland airport, having flown overnight from Chicago, originating from Boston.

On board the plane, most of the passengers were still sleeping from the overnight flight. The stewardesses were starting the final arrangements to prepare for landing.

At 4:28 am, a loud crash and explosion was heard in the hills behind the Masonic Home, in Union City. The loud noise woke up many of the locals. As they came out to see what was happening, a second explosion was heard. Smoke from a grass fire ignited from the engines and aircraft fuel, could be seen rising from the hills, marking the crash site of United Flight 615.

Soon, emergency personnel were winding their way through the hills, trying to reach the remote hillside where the plane has crashed. For those first reaching the site, the state of the wreck clearly showed that this would not be a rescue mission, but one of recovering the bodies of the victims. In an instant the lives of forty four passengers and six crew members were snuffed out.

At the time, the crash of Flight 615 was the worst air disaster in California history. Fifty years later, it is tied with another accident as the 5th worst air disaster in California.

The Aircraft

Flight 615 was made with a Douglas DC-6B, tail number N37550, manufactured in April 1950 and delivered to United Airlines on April 14, 1950. The plane had a total of 361 flying hours. The DC-6B aircraft is a four engine plane with 5 crew members. In its original configuration the plane was configured to carry 54 passengers. In later years the passenger configuration would be changed to carry as many as 102 passengers.

The DC-6 was originally conceived as a military transport and as a follow on to the DC-4 or military C-54. The YC112 project was started in 1944 with the aircraft finally rolling off of the assembly line in 1946. Given that World War II had just ended, the Army Air Force did not need as many transports as originally conceived, so the Douglas Aircraft Corporation redesigned the interior of the aircraft to hold passengers, and sold the aircraft for civil transportation.

Douglas used the same wings as the DC-4 and lengthened the body by about 6.5 feet. The major improvement was cabin pressurization. The DC-6 would compete with the Boeing Stratoliner and the Lockheed Constellation, who both had cabin pressurization.

Cabin Pressurization would allow the aircraft to cruise at a higher altitude increasing the range of flight.

The DC-6B had a wing span and length of 105 ft and a height of 28 ft. The four Pratt & Whitney CB-16 piston engines could produce 10,000 horse power, allowing the plane to cruise at 315 miles per hour and reach a maximum airspeed of 400 miles per hour. The plane had a range of 3,000 miles and a maximum ceiling of 25,000 ft.

The first DC-6 was delivered in March 1947. After some initial problems, the plane was redesigned and became the DC-6B. The DC-6A model was designed for cargo transportation and the DC-6C was designed to convert between passenger and cargo. The military would purchase the DC-6 and designate it as the C-118. The first Presidential aircraft, "The Independence", was a modified C-118.

The first DC-6's were delivered in 1947 to United Airlines and American Airlines. Soon National Airlines, Braniff and Delta took deliveries of DC-6's. Eastern Airlines and TWA were flying the Constellation. The first DC-6B was delivered to United Airlines in early 1951.

Prior to Flight 615, there were five previous fatal crashes with the DC-6. Three of them were with United Airlines. The last before Flight 615 was United Flight 610, flying from San Francisco to Denver. The aircraft crashed into a mountain side just outside Ft. Collins, Colorado, as it was approaching Denver. There were 50 fatalities and no survivors. Flight 610, like most of the other crashes, was attributed to crew error. Only a few of the early crashes were attributed to the aircraft design.

The Crew

Flight 615 was piloted by Captain Marion W. Hedden, age 42. He had logged a total of 12,032 flying hours, with 417 in the DC-6 and 14 in the DC-6B. He had a total of 819 hours of instrument flying time. He had qualified to fly the DC-6 on January 15, 1951 and the DC-6B on April 26, 1951. At the time of the crash he had a valid airman certificate and was up to date on his physicals.

Second in command was First Officer George A. Jewett, age 35. Jewett had logged a total of 5,842 flying hours, with 2,848 in the DC-6 and 21 in the DC-6B. He had a total of 173 hours of instrument flying time. As with Capt. Hedden, he had a valid airman certificate and was up to date on his physicals.

The two engineers on the flight were Check Flight Engineer Arthur W. Kessler, age 43, and Flight Engineer Mario A. Durante, age 36. The DC-6B only has one Flight Engineer, but Kessler was along to perform a Check Ride, an airplane equivalent of a driving test. The stewardesses were Marilynn M. Murphy, age 24, and La Verne M. Sholes, age 22.

The Flight

United Airlines Flight 615 originated in Boston, with stops in Hartford, Cleveland, Chicago, Oakland and a final destination of San Francisco. The flight departed Boston 5:32 p.m. EST on August 23. The longest leg of the trip was from Chicago to Oakland. For this leg, a new crew joined the flight in Chicago.

Flight 615 departed Chicago just before 11:00 p.m. on August 23. On board were 44 passengers, two of them infants, and six crew members. Besides passengers, the plane was carrying 5,360 pounds of U.S. Mail, baggage and freight.

Flight 615 flew at an altitude of 18,000 feet, from Chicago to Oakland, taking a number of different airways. Once Flight 615 was flying over Denver, the plane was allowed to fly direct to Milford, Utah, make a turn, and then direct to Oakland.

The approach to Oakland is made over Stockton, then over the Altamont, flying toward the Newark marker, and then directly to Oakland. At 3:54 a.m., Flight 615 was cleared to the Newark marker with instructions to descend and maintain 6,000 feet. Once over the Altamont, Flight 615 was to contact Oakland Approach Control. At 4:16 a.m., Flight 615 reported being over the Altamont and then contacted Oakland Approach Control.

Flight 615 asked permission for direct flight to the Newark marker and then a straight-in approach to Oakland. Oakland Approach Control granted the permission and instructed Flight 615 to maintain at least 500 feet above the cloud tops.

The weather in the local area was partly cloudy with some clouds hugging the local hills. On summer evenings, a marine layer comes into the East Bay from the ocean, bringing in low level clouds. For the local residents this marine layer acts as a natural air conditioner, cooling the area off from the day time highs. It also means that there are patchy clouds from 800 feet to about 3000 feet.

At 4:22 a.m. Flight 615 reported that it was approaching a specific radial of the Hayward Compass Locator and asked for an Instrument Landing System (ILS) approach. Oakland Approach Control had Flight 615 stand by because another aircraft was in the area. Flight 615 soon replied that it was approaching Newark and to disregard the ILS request.

At 4:25 a.m. Flight 615 was cleared for a straight-in approach to Oakland. At 4:27 a.m. Flight 615 reported leaving Newark and being in bound for Oakland. This was the last radio transmission made by Flight 615.

At minute later Flight 615 impacted on Tolman Peak while descending to land. Given that the aircraft has flying at normal speed for a descent, it was later determined that the air crew had no idea that they were over the hills and approaching a ridge.

Flight 615 crashed just south of the crest of Tolman Peak, dug into the hillside, leaving two engines embedded in the hill. Inertia flipped the aircraft over the peak where it landed just on the north side of Tolman Peak. About 45 minutes after the initial crash,

fuel fires caused a couple of explosions, starting a grass fire and causing part of the wreckage to fall down a wooded ravine into Dry Gulch. The explosions rattled homes in Decoto and wakened residents as far away as Hayward.

The fuselage skidded 200 yards down the ravine, with a number of parts falling 600 yards to the bottom, including two engines and one wheel that ended up in the creek bed. Bodies, luggage, cargo, and assorted bits and pieces where scattered from the peak all the way to the bottom of the ravine, some hanging in the oak trees.

Joseph Hendricks, who leases the land around Tolman Peak, was woken by the sound of the crash. He first mistook the noise for thunder. He saw the glow of the fire started by the crash and climbed up the hill to discover the crash.

The Recovery

Rescue units from Decoto, Alvarado, Hayward and Alameda County Sheriff's department were called out to the site. Rescuers reached the site about 45 minutes after the crash. They first had to put out the brush and grass fires, before they could reach the aircraft. A Coast Guard airplane was used to help the rescuers find a path to the crash site. The rescuers found the bodies mangled and battered beyond recognition.

A rough road was created by bulldozers to a location near the entrance of the ravine. Horses were used to move the bodies from the ravine, down the creek and to a number of jeeps waiting at the end of the bulldozed road. The jeeps carried the bodies to a farm house, where they were loaded into hearses and taken to the auditorium of Decoto Elementary School. The auditorium would become a temporary morgue. Chief Deputy Coroner Bernard D. Bungurz was called out to oversee the identification of the bodies. FBI fingerprint experts assisted in the identification process.

Because the bulldozed road to the site was narrow, deputies were posted at either end of the road to facilitate traffic control. Each deputy had a radio and would communicate with the deputy at the other end to get permission to send the next set of vehicles to or from the crash site.

One of the deputies said this about the crash site, "The best way to describe it was like you had thrown a ripe fruit against a wall. It looked as if the plane had popped open on impact and scattered its cargo and all the people over the hillside like the pulp and seeds of a pomegranate."

The crews worked all day in recovering the bodies, bringing out thirty two bodies to the Auditorium, leaving nine bodies at the jeep staging area. Other bodies were located at the crash site, but they were not moved due to darkness.

There were two hundred men working the site, from deputies, postal inspectors, airline officials, FBI agents, and representatives of the Civil Aeronautics Board. Three priests came to the crash site to perform Last Rites for the victims. They were Father Eugene

Alves of Hayward, Father Ralph Duggan of Decoto, and Rev. Edward Birmingham of Holy Redeemer College in Oakland.

Elvin Rose of the Alvarado Fire Department, and Chief Roland Bender and Alfonso Roderigues of the Decoto Fire Department, where some of the rescuers from the local area. Bendel was quoted as saying "It's terrible. I'm almost sick from the sight of it. The wreckage is scattered over a couple of acres. No one could have lived. There is nothing left of that plane but a few pieces of jumbled metal." After spending some days working at the site, Alfonso Roderigues came home covered with poison oak, which grows abundant in the ravine.

(Decoto Elementary School and Auditorium)

Walt Trobe, a professional photographer, was standing on a hill just about a half mile away from the crash site when the second explosions went off. "They lit up the whole place and wreckage flew everywhere. There was hardly anything left when they were over," he said. He had received a call about the crash, traveled to Decoto, and climbed the hill just behind the Masonic Home. "Some sheriff's officers where there but no one seemed to know how to get to the crash. You could see the plane burning against the sky. Finally we started walking. By the time we got to the top of the first ridge, some cars were starting to get through, so the deputies went back. I walked over to the next ridge. From there I could see the whole thing. A big section which looked like part of the fuselage was burning and there were grass fires all around it. Some wreckage was scattered out behind. All of a sudden, there was a tremendous explosion. Then another. The whole sky lit up. Wreckage and parts and stuff flew everywhere."

Glenn Stackhouse, a reporter for the Hayward The Daily Review newspaper had just come back from Korea where he was reporting in the Korean War. He described the scene this way, "I should be used to scenes of death and violence but in my whole time in Korea, I never saw anything which struck me harder than this. I guess I just can't get used to seeing little kids dead and mangled."

A United Airlines mechanic, Hugo J. Holmlund, whose wife and children were on the flight, was at the Oakland airport when news of the crash arrived. He rushed to the crash site and pushed his way past the deputies screaming, "Chris! John! Pauline! Where are you? My God, I've got the find them." When he tried to go down into the ravine the deputies tried to stop him. He picked up some rocks and threatened the officers. "Go to Hell. My wife and baby are down there. You can put me in jail, but I'm going down there," he cried. He was eventually subdued and led away from the crash.

Bob Tank flew an Oakland Tribune photographer over the site of the crash. He reported that one engine and part of a wing could be seen a half mile from where the aircraft struck the ground. "We flew just 50 feet above the ground and could see at least a dozen separate chunks of the plane scattered all around. And the bodies were visible, too, lying here and there among the wreckage. The entire hill is burned off and parts of the plane were burning four hours later. We could see the ambulances and cars winding up the steep roads and out on the highway, cars were bumper to bumper."

Instrument Navigation

Before one can understand why Flight 615 crashed, one needs to know something about how aircraft in those days handled flying on instruments.

Aircraft use radio beacons to determine where they are and where to fly to. These beacons send out a 360 degree signal. The instrument in the plane that uses the beacon is the Automatic Direction Finder (ADF). The ADF shows the direction to the beacon and the "radial", or direction from the beacon. If the aircraft is due south of the signal, then the aircraft is on the 180 radial of the beacon and it would have to fly a course of 360 degrees to get to the beacon.

Aircraft can travel across the country by flying from one beacon to another beacon, until they reach their destination.

The beacons tell you which way to the beacon, but they don't tell you how far you are from the beacon. Using a second beacon to triangulate between the two will tell you exactly where you are. In the case of Flight 615, the crew was flying toward the Newark beacon and they had to report into air traffic control when they reached a specific radial of the Hayward beacon.

With some instrument procedures, aircraft are supposed to make a turn when it reaches a beacon. To know when you are directly above the beacon, the directional beacons are designed to not broadcast their signal directly above them. There is a cone of silence right above the beacon. On the ADF, a flag will pop up in the instrument window indicating that the signal is no longer being received. The aircraft is supposed to fly toward the beacon until the signal is lost, and then make a 270 degree turn toward where they want to fly.

The Investigation

All civil air crashes are investigated by the Civil Aeronautics Board (CAB), now called the National Transportation Safety Board (NTSB). The CAB sent out a number of personnel to perform the investigation. The CAB personnel came to the site, measured the marks in the ground, recorded where the parts of the aircraft landed, interviewed local witnesses, checked the settings in the instrument panels, checked radio records, and researched other aspects of the plane crash.

On March 6, 1952, the CAB published the Accident Investigation Report on the crash. The report detailed the accident, the flight, the investigation, the analysis, the findings, and a probable cause.

The CAB reports that the aircraft impacted the ground at an elevation of 983 feet Mean Sea Level (MSL), with a magnetic heading of 296 degrees, roughly North West. The aircraft was descending, indicated by the fact that the hill just to the south was slightly higher than Tolman Peak. The aircraft crashed as described above. The wreckage was strewn over an area 1,640 feet in length and 900 feet wide.

It was determined that the aircraft was in the process of preparing to land. The main landing gear was in the down position, but the nose wheel was just coming down. On the DC-6B, the main landing gear comes down before the nose wheel is extended. The flaps were also in a landing configuration of 30 degrees. Evidence showed that the engines where producing thrust and the propellers were in the forward thrust position. The aircraft was estimated to be traveling between 225 and 240 miles an hour when it crashed.

Looking at the two Automatic Direction Finders (ADF) radio receivers showed that the Captain's was turned to the Newark beacon and the First Officer's was turned to the Hayward beacon.

The Magnetic Direction Indicator was locked at the magnetic heading of 300 degrees. The other instruments like the air speed, flap position indicator, rate of climb indicator and the turn and bank indicator where too destroyed to be useful.

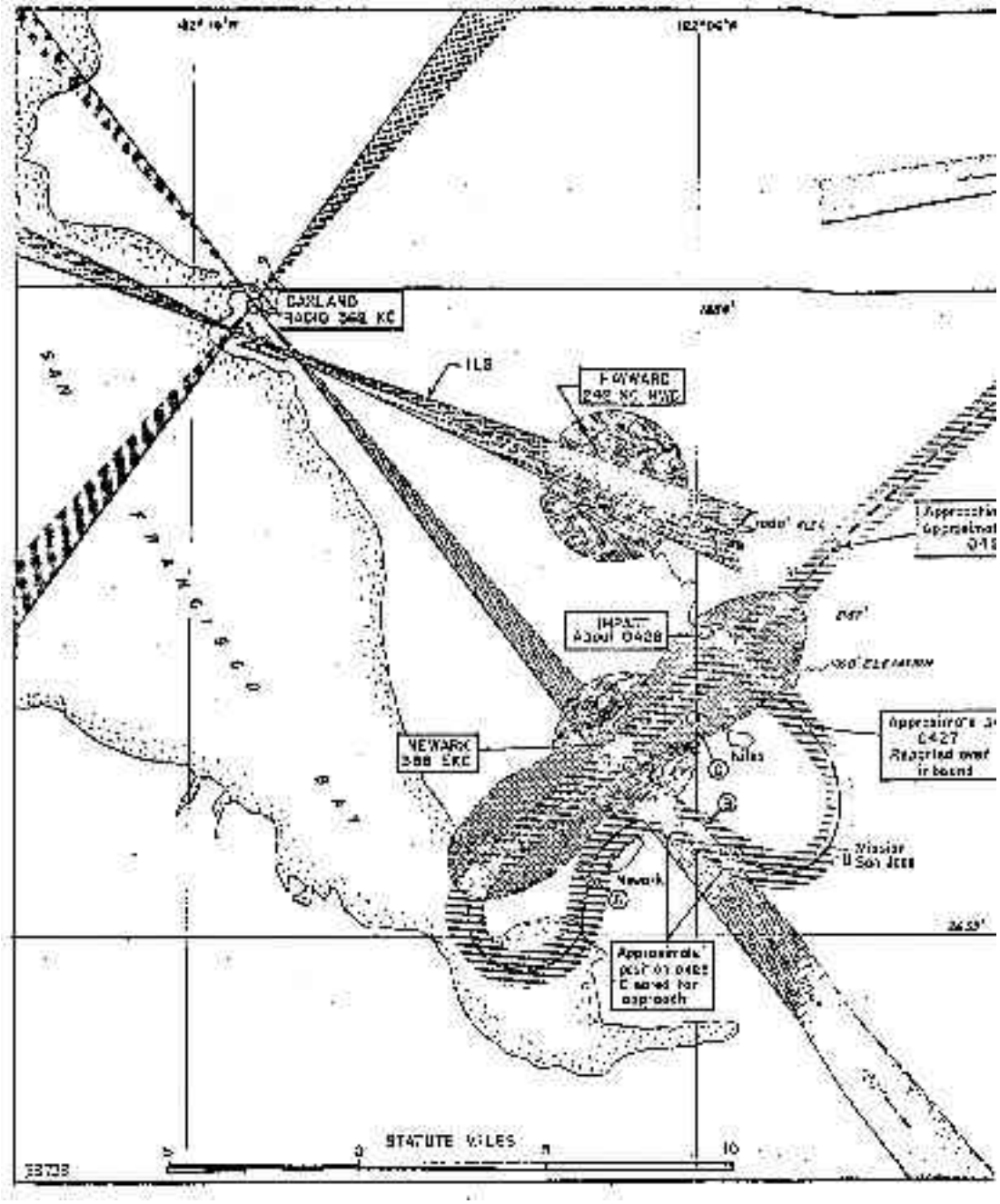
Looking over the structural, electrical, radio and engines showed no signs of any failure or malfunction. Initially, it was proposed that some form of sabotage might have caused the crash. This was the reason that the FBI was on site at the crash to help with the investigation.

The CAB was able to find three witnesses to Flight 615 when it was flying over the Newark and Fremont area. On August 31, 1951, the CAB arranged to have United fly another DC-6B to simulate the path that Flight 615 took from Altamont all the way to the crash site. The flight was flown with a United crew, but with CAB personnel on board to supervise the simulation. On the ground, the CAB stationed the witnesses at the locations where they had seen Flight 615. Using radio communication, the witnesses were able to direct the simulation aircraft to move to where the witnesses said Flight 615 was. Using this information the CAB was able to estimate the general flight path of Flight 615.

The CAB believed that Flight 615 made the turn to the left once it left the Newark marker, but it did not make a complete 270 degree turn. Instead it looks like it make a 180 degree turn then a right turn of 90 degrees and then a 180 degree turn to the north. This would put Flight 615 3-4 miles East of where they should have been. Flight 615 was over the hills when it headed north, instead of the flat land next to the Bay. Since neither the pilot nor co-pilot had dialed in the signal for Oakland on the ADF, they were not able to tell that they were on the wrong radial when approaching Oakland.

The probable cause from the CAB report states:

> "The Board determines that the probable cause of this accident was the failure of the captain to adhere to instrument procedures in the Newark area during an approach to the Oakland Municipal Airport."



(Diagram of flight from the CAB report)

The Passengers

Here is a list of the forty four passengers killed on Flight 615:

Ball, Lieutenant J. G. Dorothy S., of North Carolina, a Navy nurse.
Beveridge, William Dean, 29, of New Jersey.
Britton, Major B. L. of Virginia.
Colegrove, Andrew of Conn.

Danielson, Major Theordore R., 41. Engineer training officer stationed at the Presidio.
D'Anna, Lieutenant Junior Grade Lawrence.
Davis, Madison T., of Altadena, CA.
Fejes, Private John
Fitzpatrick, PFC Robert, of Salem, Mass.
Gommell, Viola, of Albany, and her son,
Grommell, Richard, 8, and
Grommell, Nancy, 5.
Groto, Jr., Private First Class Joseph M., of Rhode Island.
Gunn, Clayton E., 49. A Santa Rosa cattle rancher and President of Continental Auto Leasing System of Oakland.
Hitson, James Lee of Tennessee.
Holmund, Pauline, 24, Menlo Park, and sons,
Holmund, Hugh Chris, 2, and
Holmund, John Paul, 7 months.
Johnson, Dean, 57, of Oregon, and his brother
Johnson, Ernest F., 53, both of the C D Johnson Lumber Company.
Kelser, Sergeant C. R., of Pennsylvania.
Leibich, Frederick, 19, and his brother
Leibich, Wayne, 10, of Belmont.
Leach, John, F., of Oakland.
Lyons, Irving, 58, of Oakland.
McDonald, George, and his wife,
McDonald, Agnes, of Illinois.
Napton, Lieutenant William B., 30, of Arden Park, North Sacramento. Registrar at of the USAF Infirmary at McClellan AFB, Sacramento.
Petrie, Robert of Oregon.
Rex, Private Raymond E. of Ohio.
Robbins, Private First Class James, Ohio.
Rose, Iral, 37, Redwood City and her daughter,
Rose, Kathleen, 3.
Saldana, Sergeant Joseph, 22 of San Jose, recently discharged from the Army after 4 years of service.
Schwartz, Navy Electrician's Mate R. I. of Ohio.
Sena, Josephine, 35 of Oakland.
Stilley, Howard L., 45, of Oakland.
Toman, Joseph, of Oregon.
Van, Eric P., of Oregon.
Weaver, George H., of Pennsylvania.
Willauer, Katherine, of Menlo Park, and her sons,
Willauer, Dennis, 4,
Willauer, Leslie, 14 months, and their daughter,
Willauer, Anna Lee, 14.

50 Years Later

Today, the site of the crash of Flight 615 is covered by Dry Creek/Pioneer Regional Park, part of the East Bay Regional Park system. Two trails lead up to Tolman Peak forming a loop trail. The closest park entrance is off of Tamarack Dr. in Union City. The whole loop trail can be hiked in about 3 hours for the average hiker.

(Map of Tolman Peak Trail - Courtesy East Bay Regional Park District)

On the 50th Anniversary of the crash of Flight 615, "The Argus" newspaper ran a story on the crash, with interviews of a few local residents that remember the crash and those that helped out in the recovery.

(Satellite photo of Tolman Peak - Courtesy USGS)
(The peak is located at the two trees just to the right of the trail junction)

Mike Christ, a member of the Union City Historical Museum, trekked out to the site soon after the newspaper article was published. He was able to gather a number of remaining artifacts from the aircraft to create a display for the Union City Historical Museum.

Lana Gunn

Lana Gunn is the daughter of Clayton Edward Gunn, a victim of Flight 615. She was only 9 months old at the time of her fathers' death and has no recollection of event or her father. What she has learned about her father has been through her mother and her older brother.

Lana's father, Clayton Edward Gunn, was a 43-year-old rancher living in Santa Rosa. He was married to Leah, and had a son Clayton Edward Gunn Jr. and a daughter, Lana. He owned two ranches in California, the Los Robles Ranch near Santa Rosa, and a 7,000 acre ranch near Oroville. He also owned a 36,000-acre ranch in Montana and a ranch in Nevada. Besides ranching, he owned a Chrysler car dealership in Chicago. Because of his car dealership, he would make the trip from Oakland to Chicago many times.

He made trips to his different ranches and to Chicago so much that he even had his own plane. Some time before his final trip, he had crashed in his own airplane, causing him to walk with a limp, and forcing him to fly commercially.

(Lana Gunn and her Son, Toby visiting UCHM Flight 615 display)

Lana was told by her brother Clayton Jr., who was 11 years old at the time, that he remembers that night of the crash. An early morning phone call woke up both Leah and Clayton Jr. Leah talked for a few minutes on the phone, and Clayton Jr. remembers silence and then crying and sobbing. Leah was so affected by her husbands' death, that she did not keep any of his possessions after his death.

In November, 2003 Lana and her son, Toby, traveled from Chico to Union City to visit the Union City Historical Museum and see the display with some parts of Flight 615. After the visit, she and Toby made the hike out to Tolman Peak to see where the plane crashed.

Tom and Dosh Worth

Tom Worth and his sister Dosh (now McClendon) are the children of Lt. William B. Napton, an Air Force officer who was killed on Flight 615. Tom was only seven months old and his mother was 3 months pregnant with Dosh, at the time of the crash. Both of them grew up not really knowing their father.

Tom's father was flying back from Chicago having just finished some military training.

In April 2005, Tom, Dosh, and her husband, spent a Saturday morning hiking to the crash site. Later that afternoon they dropped by the Union City Historical Museum to see the display on Flight 615 and to talk about the exact location of the crash.

"Needless to say, his death affected the lives of my sister and me, as well as our mother, profoundly, in terms of where we would have grown up, who we would have met, and what kind of lives we would instead have lived..", Tom said.

(Tom Worth and his sister, visiting the UCHM Flight 615 display)

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