



R.T. Gerow, Dept. of Commerce Airplane & Engine Mechanic No. 4414, and DH-4B (R-3494) at Long Beach Municipal Airport, c. 1929.

Long Beach Aircraft Mechanic's Scrapbook, 1925-1935

Russ Gerow's aviation years in Long Beach, including a brief sketch of Continental Air Map Co., a few anecdotes from the flight line and a gallery of "Golden Age" images

Michael W. Gerow

Over his long and varied career, Russell Templeton Gerow (1897-1993) was at times a car, truck and aircraft mechanic, welder, pilot, aerial photographer, Army enlisted man in both world wars and a tool-and-die maker whose range of vocational activity from 1910 to 1985 touched upon eight decades of what history calls the "American Century."

Born in Hanford, Kings County, California, on November 13, 1897, Russ Gerow was a typical product of agrarian 19th century America. Like most youngsters of his time and place, he grew accustomed to hard work at an early age. His limited formal education was offset by a natural technical aptitude, inquiring mind and a remarkable work ethic. By the mid-1920s, the most exciting technological development of the early twentieth century—aviation—had lured Russ away from the dusty San Joaquin Valley with its siren song. Although his aviation career spanned only 10 years, a significant portion of that time was centered in Long Beach, California, where he compiled an interesting photographic record of some of the people, aircraft and events on the Southern California aviation scene circa 1928-1932. A licensed aircraft mechanic and also an aerial photographer, his employer was Continental Air Map Co., whose operational origins are briefly described.

Continental Air Map Background

At the American Association of Petroleum Geologists' 1930 conference in New Orleans, noted geophysicist Walter A. English presented a paper on the "Use of Airplane Photographs in Geologic Mapping." His presentation—a survey of aerial photographic methods, aircraft and camera equipment operation and techniques useful in oil exploration—stated that:

"The demand for airplane photographs during the World War caused a rapid development in equipment and methods. This demand and the improvements in airplane performance laid the foundation for the present commercial applications of airplane photography. Many oil companies now use photographs in field mapping and find several peculiar features of the photographs of particular value in geologic mapping. Mosaics of various types are used for compilation of data, but line maps and contour maps can be constructed from photographs if maps of a greater degree of accuracy are desired."

English noted that aerial photographs are commercially classified as verticals and obliques. Regarding the former, "this is best seen by examining two overlapping pictures under a stereoscope." In most of the flying done for geologists, English continued, picture mapping requires that "adjacent pictures in a strip shall overlap by not less than 50 percent." In this way, when viewed under a stereoscope, the common area presented by the two pictures "leaps out in relief, giving the geologist great insight into structural features that do not appear in ordinary photos."

Studying under famed UC paleontologist John Campbell Merriam, Walter Atheling English (1889-1976) took his undergraduate degree in that discipline in 1910 and remained at Cal to earn his Master of Science degree in Geology on December 21, 1912. While still a graduate student at the University of California, English was already making a name for himself in geological circles. An article in *The Fresno Bee* for Wednesday, May 21, 1924 ("New Fields Sought Upon Valley's Floor") reported that, "In 1912, Walter A. English made a survey of the petroleum resources of northwestern Kern for the geological department of the United States Government." By the latter half of the following decade, English had personally surveyed sections of California's oil-rich central valley and had authored at least three Geological Survey field bulletins. And in 1927, as government geologist in charge of San Joaquin Valley exploration, 38-year-old Walter English literally sat in the driver's seat of mineral resource development in what was then the greatest petroleum-producing region in the world.

Continental Air Map Company

According to National Air & Space Museum (NASM) records, Walter A. English, Richard C. Kerr and William Hampton formed a partnership on June 8, 1928 "to do business under the name of Continental Air Map Company." The circumstances surrounding the convergence of these three men are not known, but it is possible that Standard Oil of California (Socal) chief geologist George Clark Gester, Kerr's former boss, was involved. English and Gester had also known each other professionally for several years and had even co-authored a paper on the "Geology of the Los Angeles Basin" at AAPG's 1923 conference in Los Angeles.

Paralleling classmate Jimmy Doolittle, who joined the Army, Dick Kerr (1896-1972) had interrupted his geology studies during WWI to obtain his Naval Aviator's wings. Returning to the University of California after the war, Kerr and Doolittle studied under famed Scottish-born geologist Andrew Cowper Lawson (1861-1952), the UC scientist who named the San Andreas Fault and characterized it over its entire length. After graduating around 1923, Kerr gained field experience as a petroleum engineer and geologist with Shell and Socal in the Taft and Bakersfield oil fields where, at some point, he met his future business partner, Walter English, one of the top geophysicists of the era.

The third partner, William Hampton (1899-1932), like many young men of his day, probably saw the rapidly developing field of commercial aviation as an opportunity for a good livelihood coupled with an appealing degree of adventure and excitement. The details of this former Marine combat veteran's entry into aviation are not known, but at some point his path intersected those of English and Kerr, possibly through the aero-brokerage firm that sold Walter English his ex-postal service De Havilland DH-4B.

Flight Operations

Centrally located less than a mile west of today's Los Angeles civic center, Continental Air Map's main office at 114 South Beaudry was central to all the oil major drilling operations in the southern half of the state. Continental's business office, laboratory and dark room were located there, but operations were flown out of Long Beach Municipal Airport, some 20 miles to the south.

As home field to legendary 1920s barnstormer Earl S. Daugherty, Long Beach Airport became Southern California's first municipal airport in 1923 and the central hub of commercial and military aviation between Los Angeles and San Diego. Located on the lee side of Signal Hill, one of the most productive oil fields per acre in history, Long Beach Airport offered a tamped and oiled 400-acre field four-and-a-half miles inland from the coastal towns of Long Beach and San Pedro, home port of the U.S. Navy Battle Fleet.

On May 10, 1928, US Naval Reserve Aviation Base was commissioned on the southern edge of Long Beach Municipal Airport, with Lt (jg) Esten B. Koger, USNR, commanding Reserve Squadron VN-13RD11. Staffed by eight officers and 25 enlisted men, the squadron soon began flight operations using two Vought UO1-C observation aircraft borrowed from NAS San Diego at North Island.

For more than a year prior to the commissioning of NRAB Long Beach, Reserve Squadron VT-40, the predecessor to VN-13RD11, held meetings at the Los Angeles Naval Reserve Armory, a converted garage. The squadron commander was Lt Franklin Young, USNR, who flew with the famed Lafayette Escadrille in WWI. While Young recruited members and directed training, Koger and Lt (jg) Earl S. Daugherty, USNR, acted as liaison with Long Beach city officials, who built and leased the new facility to the Navy for one dollar a year. (In 1930 an equivalent facility on the northeastern corner of the field was commissioned for the Army.) Until the construction of NRAB facilities were complete, the men occupied tents. Aircraft from USS Langley, Lexington and Saratoga, the Navy's first three aircraft carriers in that order, used NRAB's facilities and every night found from three to eight planes secured in the hangar. [Source: Wayne H. Heiser, "U.S. Naval and Marine Corps Reserve Aviation, Volume 1, 1916-1942 Chronology," ISBN 0-997-8267-0-8.]

With expansion of NRAB operations, Curtiss N2C "Fledglings" and Curtiss O2C-1 "Helldivers" entered service on station with VN-13RD11 and, later, VN-16. As Naval Reserve lieutenants, several Continental Air Map pilots, including Richard C. Kerr, Percival T.W. Scott and Marion L. Hoblit, were affiliated with NRAB, possibly as flight and/or ground school instructors to fleet personnel on weekday evenings.

The line of civilian hangars along the field's eastern edge included Continental Air Map Co., whose first aerial workhorse was the veteran De Havilland DH-4B (R-3494). This surplus World War One reconnaissance bomber of British design was powered by a 400-hp Liberty L-12 engine. Made in great numbers under license in America, the "Liberty Plane" was the only US-built aircraft to see combat in WWI. Popular through the 1920s, the ubiquitous DH-4 hauled mail, freight, flew in the movies, pioneered aerial refueling experiments and conducted civilian and military aerial surveys.

Continental Hires a Mechanic

In 1924, Russ Gerow's parents and siblings moved down valley from Visalia to 415 South Seventh Street in Taft, a rough and tumble oil boom town in southwestern Kern County, California. Russ's employer at the time was George Haberfeld, Inc., owner of the Ford Garage at 535 Center Street. A skilled mechanic, Russ's 13 years of experience included WWI service with the Army's 397th Motor Transport Company supporting the 15th Cavalry riding out of Camp Marfa, Texas. In 1925, seeking to take his mechanical skills to the next level, Russ acquired a single-seat Thomas-Morse S4C Scout, a popular surplus WWI fighter trainer, and completely refurbished the machine. A far cry from the cars and trucks that he was accustomed to repairing, the T-M project furnished invaluable training and insight that helped him earn Dept. of Commerce Airplane & Engine Mechanic's License No. 4414 in December 1928.

The timing of Russ Gerow's permanent exodus to the Los Angeles basin is uncertain. He worked in Hollywood for a brief period rigging airplane crashes for early flying epics such as 1927's *Lilac Time*, Gary Cooper's first movie, and *Wings*, starring Jean Harlow. His employer at the time was former Rockwell Field instructor and

famed 1920s movie pilot, Garland Lincoln. Russ also mentioned Dick Grace, another famous movie stunt pilot of the era, as a familiar face on some of those sets.

A frequent visitor to the “West Side” oil patch, Continental Air Map’s co-owner Dick Kerr happened to be in Taft one day and watched Russ’s beautifully refurbished “Tommy” skimming the rooftops along the main street of town. Kerr, himself a Tommy pilot, followed it to a landing and, after interviewing its owner, offered Russ the mechanic’s job at Continental Air Map Company.

On the Flight Line

After moving to Long Beach in 1928, Gerow replaced the fabric of Continental’s Packard-built DH-4 camera ship, while also learning the art of aerial photography under the tutelage of English and Kerr. English had purchased the DH-4B from the U.S. Postal Service in 1927 and modified the aircraft for aerial survey work, converting the former rear mail bay to a second crew station with a steel-truss framework on the floor to mount a camera for vertical photography through an opening in bottom of the plane.

In March 1929, English transferred the DH-4’s title from his sole proprietorship to the corporation. The U.S. Department of Commerce issued the company an R for Restricted license that authorized aerial survey work but prohibited other commercial use. That summer through the following year, the company conducted various aerial survey operations in the San Joaquin Valley oil fields under contract to Standard Oil of California (Socal) and other operators.

In May 1930, Continental acquired a second aircraft. With a 1926 sticker price of \$15,000, the long-winged Douglas M-4 (NC-1475) amassed 913 hrs 53 min of engine time before being ground-looped on January 23, 1930 by Western Air Express pilot Howard B. “Bart” Cox at WAE’s home field at Alhambra, California. Continental purchased the damaged M-4 “as is” for ten cents on the original dollar. Rebuilt by Russ Gerow with improvements that included Bendix brakes and a third crew station with an aerial darkroom, NC-1475 mapped a large portion of California and other locations in the Southwestern U.S. for the U.S. Interior Dept, including Utah’s Bryce, Zion and Cedar Breaks parks.

In addition to company owners Dick Kerr and Bill Hampton, other early Continental pilots included Marion L. “Hob” Hoblit and CalTech graduate P. T. W. Scott. Of the latter three, only Hoblit reached retirement age. A fifth pilot, Joseph D. Mountain, was an Army Reserve lieutenant who, in his spare time, wrote on a number of technical subjects, penned some of the country’s earliest examples of pulp science fiction and went on to become an early pioneer of digital computer data analysis in Westchester County, NY in the early 1960s.

The summer of 1932 found Russ Gerow working as a mechanic on chewing gum czar P. K. Wrigley’s year-old Wilmington-Catalina Airline, which at that time also employed ex-Continental Air Map pilot, P.T.W. Scott, then a TWA employee, on a part-time basis. The island, owned by the Wrigleys along with the Chicago Cubs baseball team, offered passenger service on the “world’s shortest airline,” flying up to 42 trips per day between its seaplane terminal at Hamilton Cove, Avalon, and Wilmington pier on the mainland. During the early 1930s, Russ worked other aviation jobs, including Douglas Aircraft in Kansas City welding on the DC-1 prototype.

After leaving Long Beach, Russ stayed in contact with his friends and colleagues, a move that paid off in 1934 when he was rehired by Continental Air Map as a mechanic and aerial photographer on their biggest job yet—the 320,000 square-mile aerial survey of Socal’s new drilling concession in Al-Hasa, Saudi Arabia’s eastern province on the Persian Gulf.

Russ Gerow Leaves Commercial Aviation

After the hardships of Socal’s second exploration season (Sept. 1934 – June 1935) in Saudi Arabia, Russ Gerow’s return flight from Bahrain to Cairo aboard Imperial Airways’ luxurious H.P. 42 *Hannibal* must have seemed dreamlike, followed by a three-week ocean voyage aboard the *SS Excambion* from Alexandria to Jersey City. Not long after his return from Arabia, Russ Gerow left aviation for the upstream exploration business, a

career move encouraged by Continental Air Map's owner, Walter English. Joining William Myron Keck's Superior Oil Company in late 1935, Gerow soon headed back to the San Joaquin Valley oil fields where, at Saugus and Bakersfield, he participated in the state's pioneering reflection-seismographic tests, a newly developed deep-penetration oil exploration technique. The Superior seismological team was headed at that time by a young associate of Walter English, Frank B. Ittner who, in 1950, became Superior Oil's vice president of exploration for the western sections of the U.S and Canada.

After Pearl Harbor, Russ again enlisted in the Army and, due to his age and experience, was assigned to Aberdeen Proving Ground where he trained as an optical sighting system repairman. In 1943, he was released from active military duty at the specific request of Bob Moran, Jr., a friend and former Superior Seismology Dept. geophysicist, electrical engineer and instrument designer who headed a secret R&D lab at CalTech. As Moran wrote after Gerow's death, "Russ did an excellent job of running a small experimental machine shop at a time when skilled machinists were impossible to find." At CalTech, Russ served as a tool-and-die maker on top secret government weapons projects, earning postwar recognition from the Office of Scientific Research & Development for machining the complex electro-mechanical components designed by Moran and his engineers for the first atomic bombs of the Manhattan Project, known then as Operation Silver Plate.

After the war, Russ briefly worked at China Lake Naval Weapons Center but rejoined Superior Oil and continued working for Moran, retiring in 1962 as shop foreman of the company's geophysical laboratory in South Pasadena, Calif. Having married late in life, and with three children still in school, Russ embarked on a new career as shop foreman for Servo Products, a local machine tool controls company founded by renowned inventor/engineer Francis L. Moseley. Retiring again in the late 1970s, Russ moved to California's central coast and occasionally consulted with Moseley on technical problems into the mid-1980s. Surviving Kerr and Mountain by more than 20 years, and English by 17, the last original member of Continental Air Map Company "flew west," as airmen say, just months before his ninety-sixth birthday. Perhaps ironically, Russ even outlived Socal's original 60-year Arabian oil lease, which expired on May 29, 1993—just two weeks before he did.

A Few Memories from the "Good Ol' Days"

In his four years as a working mechanic and aerial photographer on the Long Beach flight line, Russ Gerow crossed paths with several noted aviation personalities of the day, including Charley Rocheville, Gladys O'Donnell, Roscoe Turner and Wallace Beery. But the one he probably knew best was his next-door neighbor on the airport, Milo Burcham, the subject of several anecdotes that Russ still recalled with a chuckle more than 50 years later.

"O Solo Mio!"

Next to Continental Air Map stood the O'Donnell School of Aviation, owned by James Lloyd O'Donnell and his wife Gladys, a founding member of the Ninety-Nines and a famed aviatrix in her own right. Their chief flying instructor at the time was a young man destined for fame, not only in Long Beach but around the aviation world—Milo Burcham. One day while working in the Continental hangar, Russ Gerow—just for fun and to see if anyone was paying attention next door—belted out in mock-operatic style: "O Solo Mio!" Without missing a beat, flying instructor Burcham belted out from the neighboring hangar: "I would if you had the *time!*"

"Not Your Everyday Prankster"

In the early days at Long Beach Airport, Milo Burcham earned a reputation as a practical joker; not the cruel kind, but clever and creative. He lived several miles north of the field in the small town of Clearwater near Downey, and flew to and from his job at O'Donnell's. In doing so he discovered that a particular corner of Long Beach Municipal Airport often remained clear during the frequent coastal fogs that blanketed the field during certain times of year. When other pilots were grounded by fog so thick they almost couldn't see their hands extended at arm's length, Milo would come taxiing up, cut the switch right in front of his own hangar and saunter away like nothing happened. This happened several times, and the guys on the line started thinking that maybe Burcham had some kind of supernatural powers. Curiosity finally got the better of Russ Gerow, who finally asked Milo how he did it. Burcham laughed and mentioned the fog-free corner, and how he used compass, tachometer and clock to "dead reckon" his course—a perfect example of Milo's knack for precision-flying, even on the ground!

“Master of the Calculated Risk”

In 1933, Lt. Tito Falconi of the Royal Italian Air Service set an upside-down flight endurance record of about an hour. Intrigued by the promotional possibilities of the stunt, Long Beach’s Milo Burcham figured he could do better. In preparing for the challenge, he constructed an unusual test fixture to evaluate the effects on the human physiology of remaining inverted for extended periods. On the front porch of his house he rigged a set up in which would be strapped to a chair and then hoisted upside down by a block and tackle. Milo would then read aloud extended passages from a book familiar to his father-in-law, who would discern if Milo’s inverted condition caused any reading impairment. Burcham’s discovery that his senses soon adjusted opened the door to a series of friendly record-grabbing duels with Falconi that led to Burcham’s ultimate capture of the world’s upside-down endurance record of 4 hours, 5 minutes 22 seconds. Milo’s record flight on December 12, 1933—flown back and forth between Long Beach and San Diego—was finally bested by airshow pilot Joann Osterud in July 1991, a testament to the careful, scientific precision with which every seemingly “crazy” stunt that Burcham’s reputation as an international daredevil was built upon.

“A Pretty Good Suggestion After All”

Late September 1933 found Russ Gerow working for Douglas Aircraft in Kansas City. Milo Burcham had just purchased the Boeing 100 (NC-872H) from Pratt & Whitney in Hartford, Connecticut and was flying back home to Long Beach. On the way, Burcham stopped at Kansas City Airport to meet Russ for lunch, accompanied by Benny Howard. Burcham discussed his plan to recapture Falconi’s upside-down endurance record with the powerful Boeing, a civilian version of the military’s P-12A / F4B-1. Russ suggested that Milo invert the engine, since it was held on by only four bolts, so that the engine would be “right side up” for most of the flight. As fate would have it, this meeting turned out to be the last time that Gerow and Burcham ever saw each other, so Russ never knew if the suggestion was followed or not. 45 years later, retired Lockheed P-3 test pilot Jay Beasley mentioned to Russ’s son that Milo had indeed flipped the engine—a casual suggestion that helped one of the top pilots of aviation’s “Golden Age” set a flying record that stood for more than 50 years.

“Up the Creek”

The unusually wet winter of 1931-32 saw massive flooding in the L.A. basin, leading to the formation of a flood channel district that spent millions of dollars to control the rampaging water on its way south to Long Beach harbor. Flying home one day to Clearwater, a small town near Downey, Burcham departed Long Beach Airport then swung north flying low up the churning Los Angeles River. Russ Gerow, in the front cockpit, noted how violent the flood was and, just as he was thinking how nasty it would be to ditch in this stuff, Burcham’s engine quit cold! Instantly the ship zoomed up and away from the river and made a perfect dead-stick landing right next to—Milo’s house, as it turned out.

“We Were So Naïve Back Then”

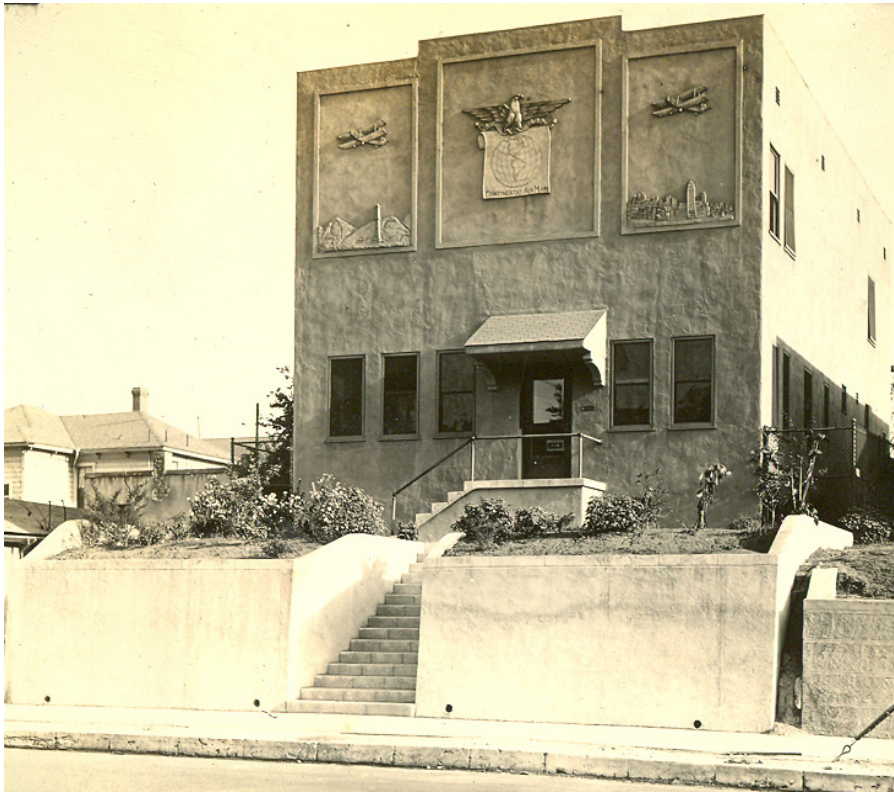
The following was related in 1983 by Milo’s widow, the late Peggy Burcham Anderson, at her home in Burbank. By the mid-1930s, Milo Burcham was a marquee act at the National Air Races and was invited to tour Europe for part of the 1935 air show season. At the time, his red-and-blue Boeing 100 was arguably the hottest civilian ship in the U.S. While preparing to hoist the plane aboard ship at a New York dock, a truck backed into the “Blue Flash” and severely damaged the plane’s tail section. Devastated, Burcham was ready to call it quits but Peggy would not hear of it. The plane was hoisted aboard, repaired and a very successful tour ensued through England, France and Germany. While in France, the Burchams were hosted by famed aerobatic ace, Michel and Mme. Detroyat. Trapped one afternoon with Mme. Detroyat in an obviously uncomfortable social situation, Peggy recalled every detail almost 50 years later: “She offered me a glass of wine, and I told her I didn’t drink. Then she offered me a cigarette and I said I didn’t smoke. She finally offered me lunch and said, ‘You do *eat*, don’t you?’” Almost wistfully, Peggy said, “We were *so* naïve back then.”

A Gallery of Images from the Russell T. Gerow Collection...

Interpreted by Michael W. Gerow



In evidence are the handsome lines of the 1917 Thomas-Morse S4C fighter trainer that Russ Gerow refurbished in his spare time as an auto and truck mechanic at the Ford Garage in Taft. Dick Kerr, co-owner of Continental Air Map and a fellow "Tommy" pilot, hired Russ as mechanic for Continental partly on the basis of this project. Powered by a Rhone 9C rotary engine of 80 hp, one wonders how the ship might have performed adapted to the beefier 160 hp Gnome Monosoupape. Note oil derricks and storage tanks in background. Photographer unknown, Taft, c. 1925-26. Russell T. Gerow Collection

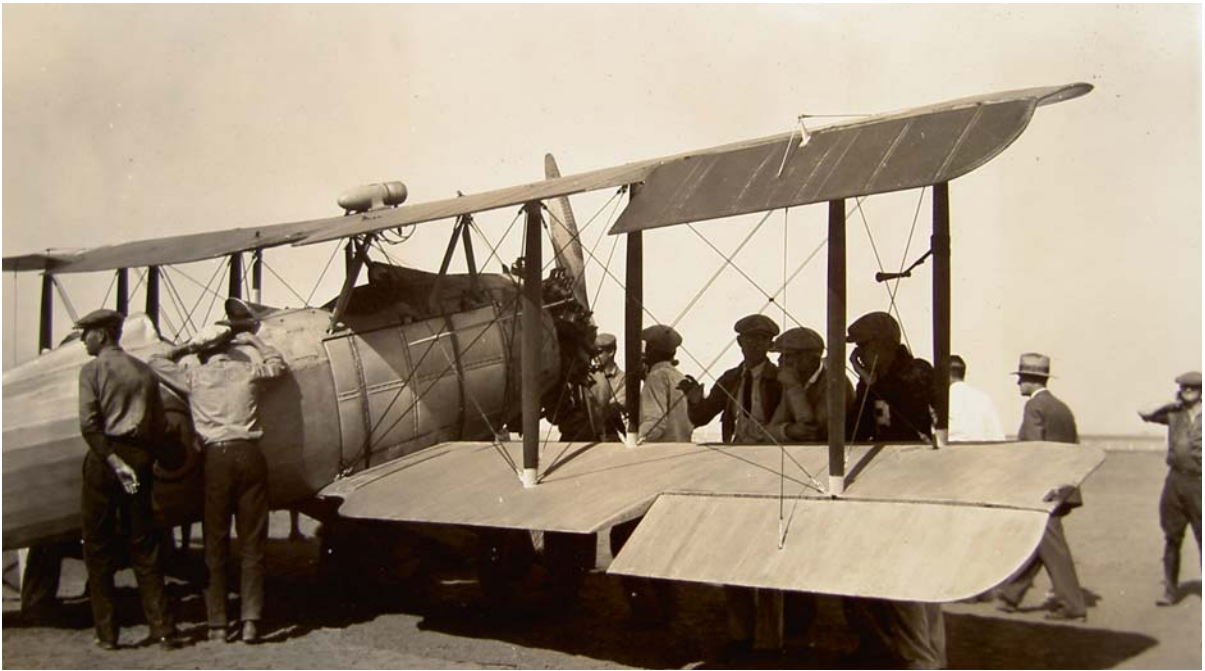


Interesting bas reliefs of aerial survey themes decorate the façade of Continental Air Map's front office at 114 South Beaudry St. According to Russ Gerow, this downtown L.A. neighborhood, Temple-Beaudry, had always been rough. In July 1947 Walter English's custodian killed a teenage gang member who attacked him, the custodian claimed, while burgling this property in broad daylight, about 3/4 mi NW of L.A. City Hall. None of the structures in this photo still exist. Russ Gerow photo, c. early 1930s. Russell T. Gerow Collection



Two views of Long Beach Municipal Airport, looking north. Naval Reserve Aviation Base-Long Beach is on the south end of field, shown in greater detail below with USNR on hangar roof. Set farther back from the flight line is the equivalent US Army Reserve facility just past jog in Lakewood Blvd at upper right. Continental's hangar is about five or six from the far end of hangars on lower east end of field. The two dust trails in the center of the upper photo were created by the wheels of a biplane taxiing back to the flight line. Interestingly, taxiing aircraft in both photos are almost identically positioned on the field, but a close examination reveals the aircraft in the lower photo is a low-wing monoplane! By the end of the 1930s, the city's unrelenting pressure to reclaim NRAB for commercial use had permanently soured relations with the Navy, which pulled up stakes and moved to Los Alamitos. In a well-aimed parting shot, the Navy, instead, turned its facility over to the Army! 700 wooden derricks of the Signal Hill oil field are just outside the bottom and right margins of upper photo, taken by Russ Gerow c. 1930. Russell T. Gerow Collection.





One of two Vought UO-1C observation aircraft on loan to VN-13RD11 by NAS San Diego. The squadron nomenclature breaks down as: V = fixed-wing aircraft; N = training squadron; 13 = squadron number; R = USNR component; D11 = Eleventh Naval District. The occasion of the crowd around the plane may well have been an NRAB open house celebrating the arrival of these aircraft, allowing the squadron to finally begin flight operations. Notice man at extreme left cupping a lit cigarette. Russ Gerow photo c. 1928 Long Beach Airport. Russell T. Gerow Collection



USNR Curtiss N2C-1 "Fledglings" of VN-13RD11 preparing to launch on a photo reconnaissance mission. Ponderous ring-mounted camera allowed observer to shoot verticals and obliques. Details of who these men are in this and the following photos have been lost with time. NRAB Long Beach, 1928. Russell T. Gerow Collection



Powered by the same engine as the "Spirit of St. Louis," the reliable Wright J-5 "Whirlwind" produced 220 hp at 2,000 rpm, giving the Fledgling a top speed of 109 mph.



Curtiss N2C "Fledgling" of VN-13RD11, based at Naval Reserve Aviation Base-Long Beach, somewhere over coastal Southern California. Photo by Lt. Richard C. Kerr, USNR, 1928. Russell T. Gerow Collection



Earl S. Daugherty, namesake of Long Beach Daugherty Field, with the Ryan M-1 demonstrator. A Lt (jg) in the USNR, Daugherty was instrumental in the formation of the Naval Reserve Aviation Base on the Municipal Airport field. He was killed December 8, 1928, along with passengers W.E. Monfort, city editor of the Long Beach Press-Telegram, and Elmer Starr, manager of the Pacific Engraving Co., when the wing of Daugherty's new Laird LCB collapsed during a barrel roll. Russ Gerow photo, Long Beach flight line, 1928. R.T. Gerow Collection



Long Beach aircraft designer Donald Smith running up his speedy home-built "Elf." According to Russ Gerow, this little ship was good for 140 mph, powered by a 27 hp four-cylinder Henderson motorcycle engine. Note slight forward stick has lifted the tail a few inches off the ground. The pictorial "Daily Magazine" page of the August 13, 1928 *Oakland Tribune* ran an AP publicity photo of Donald Smith and "Elf" alongside Charles Rocheville and his Albatross B1 as "The David and Goliath of Planes at Long Beach Airport." Russ Gerow photo, Long Beach flight line, 1928. R.T. Gerow Collection



1929: year of the non-enduring flight-endurance record. Ryan Brougham R1766 "Fort Worth" flown by Robinson and Kelly to a May 1929 world's endurance record of 172 hours 32 mins. Note fuel filler pipe above plane's name and welded steel tube gantry beneath engine that allowed servicing the engine in flight. Beating "Question Mark's" January 1929 record of six days by more than 24 hours, Robinson and Kelly's record was itself broken almost immediately by a succession of endurance flights over Cleveland, Culver City and St. Louis. The latter record of 420 hours 21 mins, set by Jackson and O'Brine's "St. Louis Robin" on July 30, 1929, stood for almost six years. On July 1, 1935, a Curtiss Robin flown by the Key brothers of Meridian, Mississippi landed after 27 days aloft—demonstrating not only their own incredible stamina but the unquestionable reliability of modern aircraft engines. Russ Gerow photo, Long Beach, c.1929. R.T. Gerow Collection



On its 10th and final day over Culver City, the 300 hp Wright J6-powered Buhl CA-3D Sport Airedan "Angeleno" wings its way to a new world's flight endurance record of 246 hrs 43 mins. Broken 11 days later, their brief triumph made national headlines and won endurance fliers Loren W. Mendell and R. B. "Pete" Reinhart a brand new Airedan from the Buhl Company, \$1000 each from the Wright Engine Company, Vaudeville contracts and a gala banquet at the Biltmore Hotel in Los Angeles attended by military brass, news media and even Will Rogers. Reinhart wisely sold his half of the new plane to Mendell who, after winning the Oakland-to-Cleveland Air Derby in 1929, fell on hard times, ultimately losing the Buhl for smuggling Japanese aliens into the U.S. from Mexico. Mendell's 10 months in L.A. County Jail were spent planning future endurance flights, none of which succeeded. Mendell made the papers again on January 18, 1935 when he and his young female passenger died in a flying accident in the mountains above Los Angeles. Photo taken from rear cockpit of Continental's DH-4B, a few hours before Angeleno's record flight ended on July 12, 1929. R.T. Gerow Collection



The second EMSCO aircraft (X-832H) was the first of the B-3 series, seen here readying for a test flight at Long Beach. In lower photo, note glare reflecting off immaculate finish for which EMSCO aircraft were famous. Russ Gerow's note on this picture reads: "Jack Reid's 'Death Ship.' This ship lifted over 6,000 lbs gas and oil with a single 300 h.p. engine. Flown by Reid and Bronte at Long Beach Airport. Reid was killed in ship at Cleveland. Emsco aircraft designed by Chas. Rocheville." Reid, an EMSCO employee and old Navy friend of Rocheville, set a new world's solo endurance record with this aircraft on Aug. 21, 1929, but fell asleep and crashed 38 hours 40 minutes into the flight. In a snafu emblematic of EMSCO's chronic hard luck, Reid was actually airborne hours earlier waiting for the delayed official timing of the flight to begin. Photo Russ Gerow, Long Beach Airport, 1929. Russell T. Gerow Collection





EMSCO B-2 "Challenger" designed by Charles F. Rocheville. This photo, taken by Russ Gerow, possibly captures the roll out of this aircraft. Balding man on left is probably Thomas D. "Jack" Reid. A close look at the rudder reveals the number 849E which was subsequently registered X849E on May 17, 1929. The first official EMSCO aircraft, 849E was powered by three 170 hp Curtiss "Challenger" engines, hence the aircraft's name. It was advertised as being able to take off with a full load with any two engines operating. In January 1930, the aircraft was converted to a twin-engine configuration using 300 hp Wright J-6s and redesignated EMSCO B-5 "Whirlwind." After a 7,000-mile promotional junket to EMSCO's various holdings around the country, NC849E was flown in August 1933 to its new owner in Guatemala City, where its ultimate fate remains a mystery. R.T. Gerow Collection.



A significant aircraft in Naval aviation history, the 1917 Lewis & Vought VE-7 "Bluebird," despite its curiously non-belligerent *nom de guerre*, was the Navy's first frontline fighter. Serving in a number of roles, it was also the first US Navy aircraft to take off from the first US Navy aircraft carrier, USS Langley (CV-1) on October 17, 1922. Powered by a 185 hp Wright-Hispano Suiza E-2, the 106 mph VE-7 remained in service until 1928, when Langley's last three examples, including the above, were retired. Notice "Langley Stripe" between exhaust pipe and bottom wing. Designed by Chauncey M. Vought, the SPAD-like features of the VE-7 are obvious, but the Sopwith Camel-style vertical stabilizer is hidden in this view! Note experimental "fiddle bridge" arrestor hooks attached to landing gear to guide the landing aircraft along the ship's deck, so named because the arrangement suggested the stringing of a violin. This VE-7 was among the earliest Naval aircraft capable of shipboard landing. In 1922, the company became Chance Vought, originator of the famous Corsair biplane family of the 1920s and the even more famous F4U series, arguably the finest piston-engine shipboard fighter of WWII and the Korean War. Russ Gerow Photo, Long Beach, 1928. R.T. Gerow Collection



Above and following, four views of VF-2 "Fighting Two" aircraft based at NAS San Diego. Lack of arrestor gear indicates these are earlier land-based planes. The Boeing FB-1 (above), the Navy version of the Army PW-9, was powered by a 435 hp Curtiss D-12 "Conqueror" engine. With a top speed of speed of 159 mph, the FB-1 was slightly faster than the F6C-2 (below) powered by the same engine. Note VF-2 emblem beneath exhaust stacks. Markings designate number 5 aircraft of Fighting Squadron 2, prior to its *nom de guerre* as "The Fighting Chiefs." There appears to be a crowd on field, perhaps in conjunction with a Navy Day or other event now forgotten. As carrier aviation's first squadron, VF-2's 87-to-1 kill ratio during 1943-44 earned it the sobriquet, "hottest fighter squadron in the Pacific." Russ Gerow photo, Long Beach, c. 1928. R.T. Gerow Collection





This Aircraft (BuAer A-6974) was built as a Curtiss F6C-1 Hawk but was converted to a C-2 prior to delivery to the Navy. Based at NAS San Diego at North Island, this aircraft bears the VF-2 squadron leader's red fuselage band and the number 1 designation. This may well be the same aircraft in which Lt Cmdr F. D. Wagner achieved total surprise in a mock dive-bombing attack during fleet during exercises off San Pedro on October 22, 1926, as reported in the news:

"In a display of tactics developed by VF Squadron 2, Lieutenant Commander F. D. Wagner led the F6C-2 Curtiss fighters in a simulated attack on the heavy ships of the Pacific Fleet as they sortied from San Pedro. Coming down in almost vertical dives from 12,000 feet at the exact time of which the fleet had been forewarned, the squadron achieved complete surprise and so impressed fleet and ship commanders with the effectiveness of their spectacular approach that there was unanimous agreement that such an attack would succeed over any defense. This was the first fleet demonstration of dive-bombing and although the tactic had been worked out by the demonstrating squadron in an independently initiated project, the obvious nature of the solution to the problem of effective bomb delivery was evident in that the same tactic was similarly and simultaneously being developed by VF Squadron 5 on the east coast." The aircraft in the left background, 2-F-5, is a Boeing FB-1 also assigned to VF-2. Russ Gerow Photo, Long Beach, c. 1928. R.T. Gerow Collection





March Field-based Boeing P-12s of the U.S. Army's famed 95th "Kicking Mule" Aero Squadron (17th Pursuit Group) with 50-gallon auxiliary belly tanks. Powered by the 450 hp P&W "Wasp," top speed was 190 mph, cruise 167 mph. The nimble, high-performance P-12 / F4B series was a major leap forward compared to earlier designs. Milo Burcham, whose Boeing 100 was a civilianized version of this aircraft, is said to be the first airshow pilot capable of performing sustained "knife-edge" flight due to the tremendous power and performance of this aircraft. Navy tests revealed the stream-lined cylinder fairings on the early F4B-1 / P-12 aircraft actually impeded cooling and when removed resulted in a 5 mph speed increase! Perhaps ironically, Burcham's Boeing 100 survived the years and was restored to flying condition as a P-12 of the 95th, sporting the numeral 3 on its side panel. Russ Gerow photo, Long Beach, 1929. R.T. Gerow Collection





Two views of Keystone LB-7 (28-391) of the Army's 11th Bombardment Squadron based at Rockwell Field, San Diego. Powered by two 525 hp Pratt & Whitney R-1690-3 Hornet radials, top speed was 114 mph. A total of 16 LB-7s were delivered to the Army Air Corps, but they rapidly became obsolete and were removed from service by 1934. According to www.dmairfield.com, 28-391 was delivered to the Army on March 4, 1929. Re-designated a ZLB-7, this aircraft served three years with the 40th School Squadron at Kelly Field, El Paso, Texas, before its removal from the Army inventory on August 7, 1934. Russ Gerow photo, Long Beach Airport, 1929. R.T. Gerow Collection





The Army's fastest plane during its brief existence, Y1C-17 is shown gassing up at Long Beach Airport shortly after its 2:00PM arrival from Rockwell Field, San Diego, where its brief flight test regimen was conducted. Powered by a 500 hp P&W R-1340-17 "Wasp," Y1C-17 was a specially modified Lockheed Vega ostensibly built to capture Capt. Frank Hawk's existing cross-country speed record, a claim promoted by the press but consistently denied by Y1C-17's pilot, Capt. Ira C. Eaker of later WWII fame. Some 12 hours after this picture was taken, the heavily laden aircraft—loaded with 486 gallons of fuel—experienced two aborted take-offs, both times veering dangerously close to the line of civilian hangars. On its third try, the craft finally became airborne at 2:13 AM on March 10, 1931. Riding the bumper of a tail wind, Y1C-17 averaged almost 236 mph but crashed later that morning in eastern KY due to fuel line problems. Curiously, U.S.N.R. on the adjacent building reveals this scene to be the Naval Reserve Aviation Base, not the U.S. Army facility about 3/4 mile off the nose of the ship on the far northeastern corner of the field.



Detail of previous picture showing special long-range gas tanks visible through windows of passenger compartment. Y1C-17 was completely destroyed with only 33 hours on its airframe.



Y1C-17's natural metal finish was complemented by yellow flight surfaces, red and white rudder stripes and white wheel pants. These photos were snapped by Continental Air Map mechanic and photographer, Russ Gerow, on the afternoon of March 9, 1931. R.T. Gerow Collection



Detail of above photo. Capt. Eaker, back to camera, in discussion, with Army ground crewman in bed of truck listening in. Note man at left operating a bicycle-action fuel pumper. Sign on side of truck reads "Red Crown the Gasoline of Quality." Small crates behind fuel pumper read "Stanavo," the commercial aviation-grade gasoline and lubrication line introduced by Standard Oil of California (Socal) in 1929. In 1984 Socal became Chevron, since merged into ChevronTexaco.



Ford XJR-1 Tri-motor (A-7526) powered by three 200 hp Wright J-4 engines. In 1928-29, according to www.dmairfield.com, this airplane flew semi-annual shuttles between its home field at Anacostia, Washington, DC and San Diego, CA, headquarters of the 11th Naval District. This photo, taken by Russ Gerow at Naval Reserve Aviation Base-Long Beach during this time period, shows A-7526 undergoing what appears to be routine maintenance. NRAB-LB was the terminus for military and government brass visiting the Battle Fleet anchored off San Pedro. The last time this aircraft landed for its customary fuel stop at Tucson was on June 19, 1929. A-7526 was flown on that occasion by famed Naval aviator D.W. "Tommy" Tomlinson carrying the Assistant Secretary of the Navy as his only passenger. R.T. Gerow Collection





Russ Gerow snapped this portrait of the handsome Earl Populair 1-A (X138W), 90 hp American Cirrus III, on the Long Beach flight line circa 1930-32. One of only three planes built by Earl Aviation Corp, Ltd. of Los Angeles, 138W was completed in the company's factory at 902 Thompson Ave., Glendale, Calif. on May 15, 1930. Its design inspired by the WWI British SE-5 fighter, 138W operated under an X for Experimental license until 1933, when its first owner replaced the Cirrus with a 125 hp Warner Scarab radial. Playboy Chaffee Earl, the firm's chairman, blew through his inheritance in grand style and was last heard of joining the Army in 1941, divorced and broke. His legacy, however, lives on. Treated kindly by the years, 138W passed through the hands of five owners (one of them twice) and is currently registered with the FAA in Sonoma, Calif. The above gentleman is possibly USNR Lt. Paul T. Adams, who flew the EMSCO B-5 (NC-849E) to Guatemala in 1933. A similar pose of Russ Gerow with this aircraft, along with other views of X138W, suggest that Russ may have had some special involvement with this ship, the details of which have been lost with time. Russell T. Gerow Collection



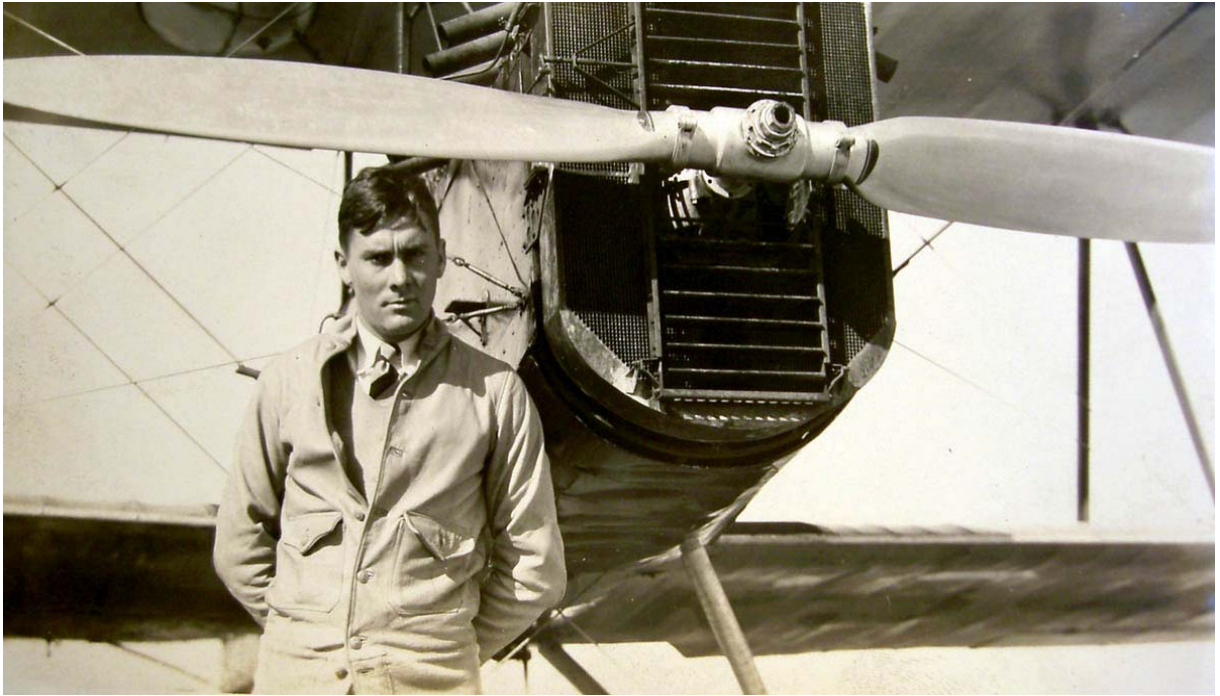
Naval Reserve Curtiss O2C-1 "Helldivers" of VN13-RD11 inbound to NRAB-Long Beach. Catalina Island is seen 26 miles offshore. Note San Pedro breakwater at extreme right, Pike amusement park at lower right, Rainbow Pier and Municipal Auditorium, bottom center, and wedge-shaped Villa Riviera at extreme lower left. Amidst Battle Fleet anchored off San Pedro is the Navy's first carrier, USS Langley (CV-1), seen as the long flat ship above tail of far right plane in picture. Three Continental Air Map pilots—Kerr, Hoblit and Scott—were USNR lieutenants affiliated with NRAB-LB. Other USNR pilots at Long Beach were actor Lt. Cmdr Wallace Beery, EMSCO chief pilot Walter L. "Si" Seiler, and noted aircraft designer Charles F. Rocheville. Yet another, E. McFarlan Moore, was Admiral Moffett's son-in-law and General Manager of Wilmington-Catalina Airline, Ltd., employer of Russ Gerow and P.T.W. Scott in the summer of 1932. Photo Dick Kerr, c. 1930. Russell T. Gerow Collection



The Battle Fleet at anchor off Long Beach and San Pedro. At far right, in some order, are *USS Lexington* and *Saratoga*, CV-2 and CV-3 respectively, the Navy's second and third aircraft carriers. Aircraft from these ships, and also *Langley*, were frequent visitors at NRAB-LB. *Lexington* and *Saratoga* looked so similar from the air that their own pilots could not tell the difference. The Navy solved the problem by painting massive black funnel stripes—horizontal for *Lexington*; vertical for *Saratoga*. "Lady Lex" went down swinging at the Battle of Coral Sea in May 1942. Her sister survived many WWII campaigns only to be sunk in the 1946 atomic bomb tests at Bikini Atoll. A fighter all the way, it took two A-blasts to sink *Saratoga*, the final shot only 500 yards away. Even then, she slowly slipped under the waves as though on her own schedule. Russ Gerow photo, c. 1930, R.T. Gerow Collection



Ex-Marine Sgt. William Hampton (1899-1932), a WWI hero from San Antonio, Texas, poses with camera gear and Continental's ex-U.S. Postal Service DH-4B (R-3494) that he delivered from Concord, Calif. to Burdett Field at 94th and Western near present day Hollywood Park race track. English, Kerr and Hampton were initially co-owners of this aircraft, one of only three civilian DH-4s with special aluminum high-lift, high-altitude "Loening" wings. By mid-1931, Hampton no longer appears in the existing Dept. of Commerce records for R-3494 in the NASM files. Killed in an October 28, 1932 forced landing while ferrying a repossessed Monocoupe from Reno to Oakland, Hampton's obituary cited him as one of the first aerial mappers of California. Photo taken at Long Beach, c. 1928-29, photographer unknown, but probably Richard C. Kerr. Russell T. Gerow Collection



Tall and handsome. 25-year-old Marion L. Hoblit (1904-1975), another Navy-trained pilot, poses in front of the DH-4B. Russ's younger brother Gene, a Taft flying instructor, received aerobatic training from Hoblit during the latter's employment with Continental at Long Beach around 1930. A lifelong friend of Russ Gerow, "Hob" flew for TWA from 1931-64 and died in Reno, Nevada just one month after his 71st birthday. This photo and the one of Hampton appear to have been taken at the same time. Long Beach, c. 1928-9, by unknown photographer. Russell T. Gerow Collection



Aircraft mechanic Russ Gerow and the De Havilland DH-4B (R-3494). Photos of this aircraft with the short exhaust stacks appear to have been taken prior to Russ Gerow's renovation of the ship, as indicated by cleaner "look" and long exhaust pipes. Note generally well-worn look of aircraft. Unknown photographer, Long Beach, 1929. R.T. Gerow Collection



Russ Gerow running up his charge, the De Havilland DH-4B two-place camera ship used by Continental Air Map in its San Joaquin Valley aerial surveys of 1929. For some reason, confusion always attended the company name, which was commonly called "Mapping," although "Map" appears in all surviving correspondence from the Dept. of Commerce. In 1933, this aircraft was sold to Paramount Pictures for use as a non-flying movie prop.

As vice president and chief engineer of EMSCO, Charley Rocheville was a familiar sight around the EMSCO Test Hangar in the background. E. M. Smith Co., a successful derrick builder and drilling supplier, entered the airplane business as a sideline in the 1920s and remained at Long Beach until 1930, when it relocated a few miles away to Downey. The company ceased making aircraft in 1932 but remained a well-known oil field equipment supplier for many years. Photo taken at Long Beach, 1929, photographer unknown. Russell T. Gerow Collection



Russ Gerow runs up the 1918 DeHavilland DH-4B, powered by a 12-cylinder 420 hp Liberty L12 engine. Out of consideration for neighboring businesses, the aircraft was towed (note carriage) away from hangars to minimize disturbance while tuning engine. Note addition of exhaust pipe to carry fumes away from cockpit area, along with cleaned-up appearance, suggesting that this photo was taken after Russ Gerow's renovation of this aircraft in 1929.

Built under license by Packard, this aircraft was one of only 10 DH-4s with the special aluminum high-lift, high-altitude "Loening" wings. Geophysicist Walter A. English, one of three co-founders of Continental Air Map Co., bought this aircraft in flyaway condition from the U.S. Postal Service in Concord, California. Continental operated it out of Long Beach Municipal Airport from 1928-1933. The front cockpit was the pilot's compartment and the former rear mail bay was converted to a camera station that allowed oblique photography as well as shooting vertically through a portal in the floor. As a subcontractor to Standard Oil (Socal) and other major oil companies drilling in the San Joaquin Valley, Continental Air Map's aerial reconnaissance missions for geological mapping were typically flown between 10,000 and 20,000 feet. Photo taken at Long Beach, 1929, photographer unknown. Russell T. Gerow Collection.



Oblique view of Temblor Range with San Andreas Fault running diagonally. Dr. Andrew C. Lawson, the preeminent geologist of his day and Dick Kerr's prof at UC, gave the fault its name. On the reverse of this photo, taken in Aug. 1929, Kerr's shaky pencil note, clearly written near the end of his life, says, "Russ Gerow, mechanic & photographer for Continental Air Mapping Company took this picture from the WWI DH-IV, Liberty 12 engine, that Russ recovered." This scene is located about 50 miles west of Bakersfield in southern Kern County, Calif. Note interesting parallel striations, lateral to fault line, in mountainous terrain. Russell T. Gerow Collection



Douglas M-4 in Continental Air Map hangar at Long Beach Municipal Airport. Note Standard Oil logos for Red Crown gasoline (L) and Zerolene motor oil (R) on either side of company name. Standard Oil's "Stanavo" aviation gas and lubricant products were introduced at the 1929 Cleveland Nationals and, within a year according to company claims, captured some 80% of the aviation market. Painted out façade almost conceals shortening of "Mapping Co." to "Map Comp'y." Upper superstructure of Signal Hill oil storage tank looms in background. Russ Gerow photo, c. 1930-31. Russ Gerow photo. Russell T. Gerow Collection



Continental's Douglas M-4 (NC-1475) heading out on a job, c. 1930-31. Crew (L to R): P.T.W. Scott, pilot; Russ Gerow, camera; Dick Kerr, navigator. "Scotty" flew almost 1.5 million miles as a TWA captain from Dec 1932 until his untimely death in a DC-3 crash at St. Louis/Lambert in January 1941. Photographer's stamp on reverse of photo credits "W. Clifford Smith, Jr., Arcade Photo Service, Long Beach. Telephone 651-264." Russell T. Gerow Collection



Douglas M-4 operated by Continental from 1930-38. Reacquired by Western Air Lines in 1940, NC-1475 was housed for many years and restored at Douglas-Long Beach as a short-winged M-2 for the airline's 50th anniversary in 1976. Re-registered as C-150, it was then flown to Washington, D.C., where it remained on display for almost 30 years in the Smithsonian's National Air and Space Museum. Within the last few years it was moved to NASM's new Stephen F. Udvar Hazy facility at Washington-Dulles airport. Crew, L to R: J. D. Mountain, R. T. Gerow, R. C. Kerr. Unknown photographer, Long Beach flight line, c. 1930-32. Russell T. Gerow Collection



Russ Gerow demonstrates the Fairchild K-4 aerial camera mounted for oblique photography in the middle crew station of Continental Air Map's Douglas M-4. With a 1924 military sticker price of \$2,628.62, the 46-lb. K-3 was the first camera to solve the vexing inter-lens shutter and film-spacing-system problems that plagued earlier aerial cameras. Offering selectable shutter speeds of 1/50th, 1/100th and 1/150th/sec, its standard 7" x 9-1/8" film yielded 115 exposures per 75-foot roll of film. Introduced in 1925, the \$3,516 K-4 camera was basically a K-3 with an 8-inch lens cone and a heftier price tag. Photo taken at Long Beach, c. 1930-31, photographer unknown. Russell T. Gerow Collection



The red-on-silver Douglas M-4 flown by Continental Air Map Co. from Long Beach Municipal Airport. Crew L to R: Joe Mountain, pilot; Russ Gerow, mechanic and cameraman; Dick Kerr, navigator and back-up pilot. Notice oxygen bottles for high-altitude flight. Photo taken at Long Beach, c. 1930-31, photographer unknown. Russell T. Gerow Collection



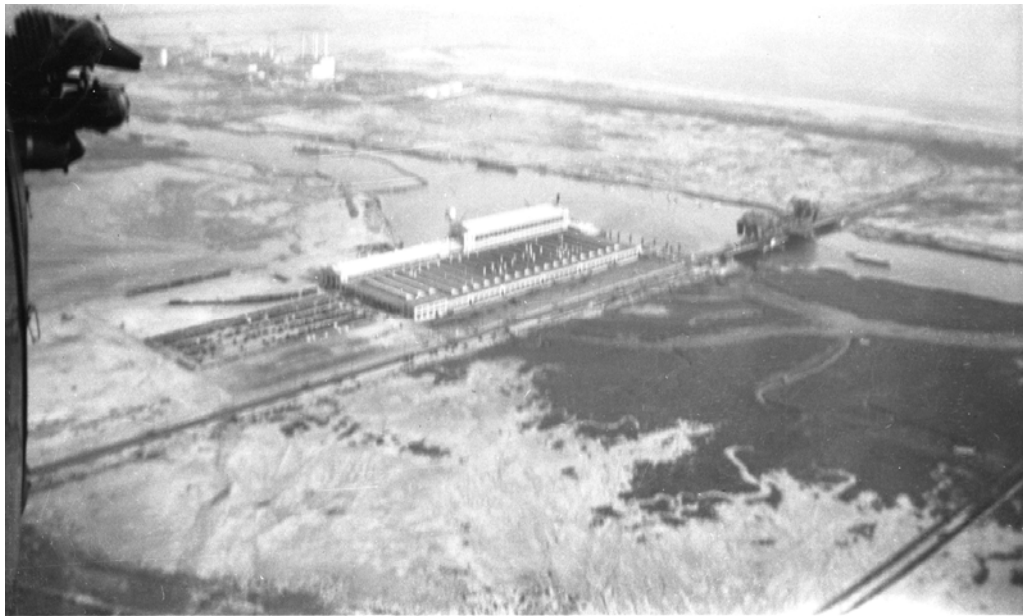
Milo G. Burcham (L) and Russ Gerow pose in front of Burcham's Brunner-Winkle Bird BK (100 hp Kinner), c. 1932. NC48K was "totaled" on October 12, 1931 at El Monte when it entered a terminal flat spin that left Burcham, chief instructor at the O'Donnell School of Aviation, and his advanced aerobatic student, Miss Vinetta Sloan, shaken but unhurt. In his spare time, Gerow completely rebuilt NC48K in exchange for room and board at the Burcham residence in Clearwater (near Downey) for the duration of the project. Having not flown since leaving Kern County four years earlier, Gerow obtained his student pilot's permit on January 26, 1932 and took instruction from Burcham in this aircraft. (Snow-covered Mt. Baldy appearing faintly above empennage suggests that this photo was probably taken in winter or early spring.)



As one of *the* greatest acrobatic pilots of his day (Russ Gerow quote), Milo Burcham and his distinctive Boeing 100 (R872H) were a marquee act at major international airshows during the mid-1930s. Owner of the inverted flight endurance record for almost 60 years, Burcham won the 1936 World Aerobatic Championship at L.A. and finished fifth in the 1937 Bendix as F.C. Hall's personal pilot, replacing the late Wiley Post. Desiring a more significant role in aviation, he joined Lockheed in 1941 and pioneered stratospheric aeroembolism tests with Dr. W. Randolph Lovelace at the Mayo Clinic. As Chief Pilot, he was less fortunate on October 20, 1944 in the flame-out crash of the third YP-80A Shooting Star (44-83025) into a gravel pit just north of Lockheed Air Terminal. At the time of his death at age 41, Milo Burcham, a master test pilot, had more stick time in P-38 Lightnings than anyone. (Long Beach flight line photo c. early 1932 by unknown photographer. Russell T. Gerow Collection)



Russ Gerow poses in Milo Burcham's Brunner-Winkle Bird BK (NC48K), 100 hp Kinner. Caption on back of picture states: "Although I flew this ship a good deal, this is a posed picture. Note rocker covers are off. Russ" Long Beach, 1932. Photographer unknown. Russell T. Gerow Collection



Heading southeast toward the port facility (note train at left end of structure) and Henry Ford railroad bridge over Cerritos Channel, with power station and coastline beyond. Russ Gerow photo taken from the front cockpit of Burcham's Brunner-Winkle Bird, c. 1932. R.T. Gerow Collection



Escorted by three USNR Curtiss O2C-1 Helldivers, *USS Akron* (ZRS-4) glides serenely over the dry Southern California landscape on her way north to NAS Sunnyvale after a tragic mishap at Camp Kearny, San Diego. On May 11, 1932, newsreel cameras recorded the incident in which four inexperienced ground crewmen manning a landing line were suddenly swept aloft with two falling to their deaths. Emblematic of obsolete technology, *Akron's* days were numbered, as were those of sister ship *USS Macon* (ZRS-5). On April 4, 1933, *Akron* went down in a storm off the New Jersey coast, the worst U.S. aviation disaster to date. 73 crew members died, including Rear Adm. William A. Moffett, the Navy's leading airship advocate. Branded a national tragedy by FDR, *Akron's* loss was preceded by that of *USS Shenandoah* (ZR-1) on September 2, 1925, followed on February 12, 1935 by *Macon* in a storm off the California coast. Caused by operator error in both cases, the death of the "sisters" hastened the end of the rigid airship era in Naval aviation. One bright spot in this otherwise dismal operational history was the Zeppelin *USS Los Angeles* (ZR-3), a German war reparation that safely flew over 172,000 nautical miles before being dismantled in 1939. (Russ Gerow photo, R.T. Gerow Collection.)



Another view of the *USS Akron* over Southern California on or about May 11, 1932. Based on her dimensions, the "U.S. NAVY" on the side of the ship measured around 15 x 110 feet. The helium-filled *Akron* carried a crew of 89 and was 785 feet long and 152.5 feet high. Powered by eight 560 hp Maybach gasoline engines, the airship's 20,000 gallons of internal fuel accommodated a useful payload of 91 tons for 10,580 nautical miles. A true aerial aircraft carrier, *Akron's* seven defensive machine guns were augmented by four Curtiss F9C-2 Sparrowhawk fighters that could be launched and recovered by means of an ingenious trapeze device that swung the planes in and out of an internal hangar bay. The forward gondola was supplemented by a rear control cabin visible near the bottom of the lower fin. Notice exhaust discoloration from the four port engines. Top speed was variously given as 72-83 mph. Russ Gerow photo, R.T. Gerow Collection.



Continental Air Map's Long Beach flight crew reunited in Saudi Arabia. In September 1933, Standard Oil of Calif. (Socal) subcontracted Continental Air Map to chart its recently acquired drilling concession in eastern Saudi Arabia. Kerr was given the responsibility of buying a camera aircraft and transporting it to the job site. To that end, a modified Fairchild 71, 420 hp P&W *Wasp*, was purchased from Fairchild's Kreider-Reisner Aircraft Division at Hagerstown, Maryland and hoisted aboard *SS Exochorda* sailing from Jersey City to Alexandria, Egypt on February 6, 1934. Navigator / geologist Kerr and his pilot, noted Long Beach aircraft designer Charles F. Rocheville, flew the Fairchild (NC13902) from Cairo to an "unauthorized" landing at Jubail, Saudi Arabia, by way of Gaza, Baghdad and Basra. After two months of flying under difficult field conditions, Rocheville left Arabia sick and injured in June 1934. He was replaced three months later by Joe Mountain (pilot) and Russ Gerow (mechanic and cameraman) who, under mission-leader Kerr's guidance, completed the bulk of the 320,000-square-mile aerial survey by June 1935. L to R: Joe Mountain, Dick Kerr, Russ Gerow. Photo taken at Socal's Jubail headquarters, winter 1934-35, by famed geologist Max Steineke. Russell T. Gerow Collection



"Something tells me we're not in Long Beach anymore." At the Amir of Jubail's house, March 1935. L to R: Dick Kerr, Russ Gerow, Bert Miller, Joe Mountain, Max Steineke. Upon arrival, the Americans were issued Arab garb by the Amir because western-style clothes were initially banned in public, a restriction that was lifted while operating the aircraft. Miller was Socal's lead geologist in Arabia at the time. His colleague Steineke is acknowledged as the one man most responsible for discovering Saudi Arabia's vast oil treasure. Tom Koch photo. Russell T. Gerow Collection



R.T. Gerow enjoying the rollout of his old charge, the Douglas M-4 (ex-NC1475), owned by Continental Air Map Co., 1930-38 and restored at Douglas-Long Beach. Held at LAX on April 17, 1976, this event celebrated the 50th anniversary of the plane's original owner, Western Air Lines, formerly Western Air Express. Restored as a short-wing M-2, the Douglas flew its last route in 1977—cross-country to the National Air and Space Museum. 11 years after this picture was taken, Delta Air Lines completed the absorption of "America's first half-century airline" and relegated Western's venerable brand to the round file of history. Don Dyer photo. Russell T. Gerow Collection



Russell T. Gerow (1897-1993). Walter Schmidt photo, Taft 1928