

Photogrammetric Pioneers

Robinson Aerial Surveys, Inc.

W. D. HALL

WHO WOULD HAVE BELIEVED that a hobby in photography would lead to the establishment of three separate and unique companies?

As a Civil Engineer working for the New York State Park Commission, C. S. Robinson utilized his hobby in photography to record on film the many bridges and dams that he had designed for the Commission. In 1931 he took to the air, taking oblique photographs of farms and cities.

During 1936, Robinson and his wife, Dorothy, formed the C. S. Robinson Aerial Surveys at Ithaca, New York and expanded the oblique photographic operation. By 1937, Robinson had a contract to take vertical photographs of Broome County, New York and compile a mosaic. Mr. Robinson had purchased an Aldis Sight in England which he used to direct the pilot on the flight line, in addition to being the photographer. The Sight made it possible not only to view the ground directly below the airplane, but through a prism to see a few miles down the flight line. In 1938, R.A.S. was awarded a contract by the U.S. Department of Agriculture to photograph 16,000 square miles in New York State. Looking for a better aerial camera, Mr. Robinson went to the Fairchild Camera Corp. and was shown the 8¼-inch K-3B camera. This met with his approval and he purchased four, that day, complete with intervalometers and extra film magazines. This was the largest single order to be placed by a private company.

In an attempt to eliminate vibration and the effect on the negative images, Robinson developed a camera mount that solved the problem. The mount had primary and secondary sponge-rubber units that absorbed the vibration before it reached the camera. Improved designs of the camera mount were accepted by the U.S. Army in 1939. By 1942 all branches of the armed forces were ordering the mount for their special requirements, resulting in the establishment of Robinson Aviation, Inc., located in New York City. Mounts were designed, not only for aerial cameras, but also for radio and other aircraft equipment, including the aircraft engines. Due to the numbers of camera mounts to be manufactured, the work was subcontracted to the Aeroflex Corporation.

With the Survey Company located in Ithaca, New York and the Mount business in New York City, Mr. Robinson saw the need for airline service between the two cities. He started Robinson Airlines, later named Mohawk Airlines, after the Indian tribe that

had roamed New York State. Just prior to a merger with Allegheny Airlines, Mohawk had a fleet of nearly 30 airplanes, and over 500 employees and routes throughout the Northeast. Allegheny Airlines is now USAir.

In 1946, Robinson purchased Standard Aerial Surveys of Newark, New Jersey. The equipment and personnel from Ithaca were moved to Newark and the Company was then known as Robinson-Standard Aerial Surveys, Inc. W. D. Hall was named General Manager. Shortly after moving to Newark, C. E. Donado was hired as Chief Engineer in charge of mosaics and topographic mapping. Charles Dean was made laboratory manager. Harry Tubis, who managed Standard Aerial Surveys, was made Vice President of the combined companies.

To accommodate the expanded operation, arrangements were made with the flight organization of Aerial Survey Crews, Inc. headed by Carl Dixon and Walter J. McFadden. This combination flew about 100,000 square miles of 1:20,000 photography each year, for several years.

The next expansion for the Company was in topographic mapping. A field survey operation was established which utilized the Tellurometer system. A separate facility was obtained in Newark for the stereoplotting division, which grew from one Kelsh plotter to four, one 3-projector Balplex, one 6-projector Balplex and one 3-projector Dell Foster unit by 1959. It was at this time that R.A.S. became a division of the Aeroflex Corporation. During 1960, R.A.S. moved to Newton, New Jersey to be near the new airport being built by the Aeroflex Corporation at Andover, New Jersey.

John Kleinjan was made Chief Pilot. He perfected a one-man automatic camera operation, using an RC-10 camera mounted in a T-26 Aeroflex camera mount, with a Sony TV camera shooting through the camera sight. A TV monitor mounted next to the pilot showed the exact position on the flight line. Controls for turning the camera and exposure interval were also within easy reach of the pilot.

Many changes took place in 1962, the first being the purchase of R.A.S. by W. D. Hall, upon the retirement of Mr. Robinson. The second was a decision not to bid on any flight projects for the Federal Government, so that our flight crews could concentrate on sizeable projects for large corporations, on building our film library, and on large-scale photography for our clients requiring 1- and 2-foot contour maps. An automated aerial camera system was

invaluable in the precise spotting of each photo to cover the ground targets previously placed on the 1:1800- and 1:2400-scale projects.

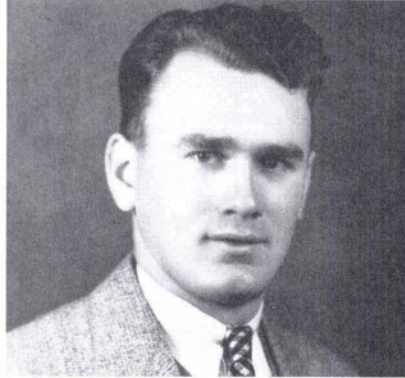
With continued growth, in 1973, H. David Hall was elected President of R.A.S. Shortly thereafter, Eugene Marley joined the staff and established an Orthophoto department. The policy established in the beginning to provide our clients with the highest quality product and prompt service continued, as we put a Stereometrograph into production, followed by a PG-2.

In December 1982, W. D. Hall sold the Company to Mr. and Mrs. Peter Chiasson of Manchester, Massachusetts. Mr. Gary Scocco, who was sales manager for R.A.S., is now General Manager.

As the saying goes, "a picture is worth a thousand words," but in this case, the picture that Mr. Robinson saw resulted in jobs for approximately 1500 individuals in the three companies, over the past 48 years.



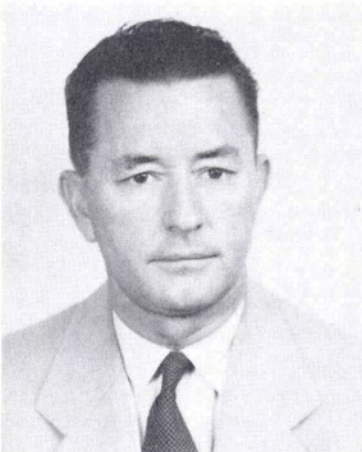
Raymond R. Mays at his first topographic mapping job, with the Portland (Or.) Corp of Engineers: along Snake and Columbia Rivers, Washington and Oregon, 1934-35.



A. C. McCutchen, in 1934.



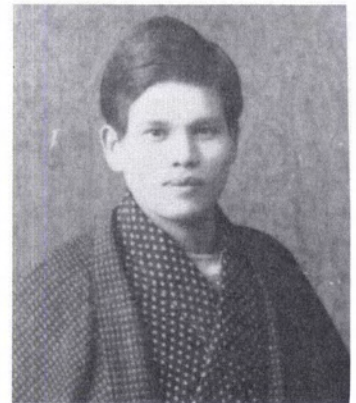
R. L. Moore as a Captain, C.E. 1933.



James E. Newman ("Buddy") in 1934.



Jack W. Nimmemann, one of the 12 who met at O. S. Reading's home in 1934 to organize the Society. This photo, taken in 1934, was during field operations for USFS in Vermont (Aerial Surveys, of course!)



Motomitsu Nishio as a student, 18 years old, wearing HAORI and HAKAMA, the traditional Japanese clothes for men.



Charles N. Oros. "Our wedding photograph, November 29, 1933. We celebrated our 50th Anniversary last November."



Isidro Orozco shown here as he appeared on his identification card for the Departamento Agrario in Mexico, in 1934.