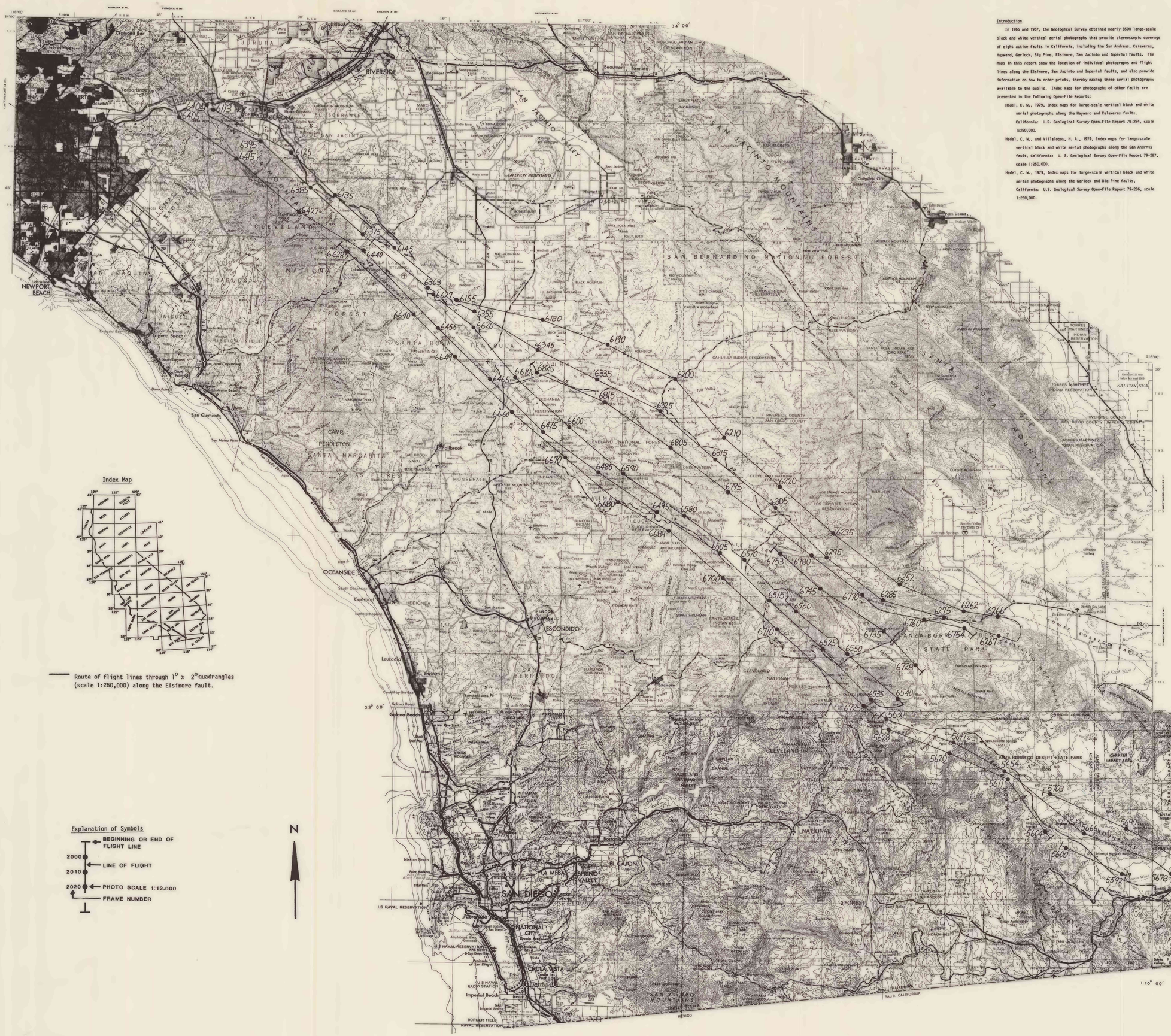

Index Map

Route of flight lines through 1° x 2° quadrangles (scale 1:250,000) along the Elsinore fault.

Explanation of Symbols

- BEGINNING OR END OF FLIGHT LINE
- 2000 — LINE OF FLIGHT
- 2010 — LINE OF FLIGHT
- 2020 — PHOTO SCALE 1:12,000
- FRAME NUMBER

N

Introduction

In 1966 and 1967, the Geological Survey obtained nearly 8500 large-scale black and white vertical aerial photographs that provide stereoscopic coverage of eight active faults in California, including the San Andreas, Calaveras, Hayward, Garlock, Big Pine, Elsinore, San Jacinto and Imperial faults. The maps in this report show the location of individual photograps and flight lines along the Elsinore, San Jacinto and Imperial faults, and also provide information on how to order prints, thereby making these aerial photographs available to the public. Index maps for photographs of other faults are presented in the following Open-File Reports:

Hedel, C. W., 1979, Index maps for large-scale vertical black and white aerial photographs along the Hayward and Calaveras faults. California: U.S. Geological Survey Open-File Report 79-284, scale 1:250,000.

Hedel, C. W., and Villalobos, H. A., 1979, Index maps for large-scale vertical black and white aerial photographs along the San Andreas fault, California: U. S. Geological Survey Open-File Report 79-287, scale 1:250,000.

Hedel, C. W., 1979, Index maps for large-scale vertical black and white aerial photographs along the Garlock and Big Pine faults. California: U.S. Geological Survey Open-File Report 79-286, scale 1:250,000.

Description of flight lines and photographs

As planned, three parallel and overlapping flight lines were to be flown along the entire lengths of the Elsinore, San Jacinto and Imperial faults, with one line directly over the most continuous trace of each fault, and the other two lines on either side of it. However, this arrangement was not always achieved and in places lines do not overlap, the middle line is not directly over the main fault trace, or lines cross each other. At some locations along the San Jacinto fault, the photography misses the fault altogether. More than three flight lines were flown at locations where many discontinuous fault traces occur in a wide zone.

Aerial photographs of the Elsinore, San Jacinto and Imperial faults were taken in 1967 (Table 1). Most photographs are sharp, cloudless and generally of good quality, but may have a high sun angle, which can limit their utility for observing fault features (see Slemmons, 1969, and Clark, 1971).

TABLE 1. -- DATES OF AERIAL PHOTOGRAPHY FOR THE ELSINORE (frames 5604-5703 and 6113-6753), SAN JACINTO (frames 5031-5570 and 5730-6110) AND IMPERIAL (frames 6831-7028) FAULTS.

Frame Numbers	Date Flown
5031-5570	6/6/67
5604-5703	6/6/67
5730-6237	6/27/67
6238-6753	6/28/67
6831-7028	6/28/67

Most photographs are of nominal 1:12,000 scale with a limited number at nominal 1:6,000 scale. These scales may vary in mountainous terrain. Photographs at 1:12,000 and 1:6,000 scale provide 7.5 km^2 and 1.9 km^2 of ground coverage, respectively.

Photographs were taken on standard 10" (254 mm) aerial photography film, yielding images 9" (230 mm) square.

Methods

For this report, photo centers and frame numbers were transferred from pre-existing photo-index maps (scales 1:24,000 and 1,62,500) to USGS 1° x 2° topographic base maps (scale 1:250,000), relying heavily upon the accuracy of the earlier indexes. Frequent checks showed that photo centers had been accurately located on the earlier indexes. In most cases at least every tenth photo center was plotted onto 1° x 2° quadrangles and connected by a line on which intervening photo centers are located. In areas where flight lines cross or become clustered, connecting lines differ from the actual line of flight to aid in clarity of presentation.

Ordering aerial photographs

Aerial photographs are available as 10" x10" (254 mm x 254 mm) contact prints and enlargements up to 40" x 40" (1.02 m x 1.02 m). Current price lists and ordering procedures can be obtained by writing to:

United States Geological Survey
Geologic Division - Mail Stop 19
345 Middlefield Road
Menlo Park, California 94025

Although these aerial photographs are not available for public inspection prior to purchase, the following report on the San Jacinto fault was prepared, in part, using this photography and it may serve as an example of scale and variety of fault features observable on the photographs:

Sharp, R. V., 1972, Map showing recently active breaks along the San Jacinto fault between the San Bernardino area and Borrego Valley, California: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-675, scale 1:24,000.

References

Clark, M. M., 1971, Solar position diagrams--solar altitude, azimuth, and time at different latitudes: U.S. Geological Survey Professional Paper 750-D, p. D145-D148.

Slemmons, D. B., 1969, New methods of studying seismicity and surface faulting: EUS (American Geophysical Union Transactions), v. 50, p. 197-198.

INDEX MAPS FOR LARGE-SCALE VERTICAL BLACK AND WHITE AERIAL PHOTOGRAPHS ALONG THE ELSINORE, SAN JACINTO, AND IMPERIAL FAULTS, CALIFORNIA
(ELSINORE FAULT SHEET)

By
Charles W. Hedel
1979

BASE MAPS ON THIS SHEET FROM SANTA ANA (1969), SAN DIEGO (1970), AND EL CENTRO (1969) U.S. GEOLOGICAL SURVEY 1° X 2° QUADRANGLES (SCALE 1:250,000).