

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, Hayward, Calaveras, Garlock, Big Pine, Elsinore, San Jacinto, and Imperial faults. The maps in this report show the location of individual photographs and flight lines along the Garlock and Big Pine 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 Elsinore, San Jacinto, and Imperial faults, California: U.S. Geological Survey Open-File Report 79-285, scale 1:250,000.

Description of flight lines and photographs

As planned, three parallel and overlapping flight lines were to be flown along the Garlock and Big Pine 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 or the middle line is not directly over the main fault trace. Also, no coverage is provided for the extreme eastern portion of the Garlock fault. Aerial photographs of the Garlock and Big Pine faults were taken in 1966 and 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 Stemons, 1969, and Clark, 1971).

TABLE 1. - DATES OF AERIAL PHOTOGRAPHS FOR THE GARLOCK (frames 1345-1628 and 7029-7156, and 7459-7512) AND BIG PINE (frames 7238-7458) FAULTS

Frame Numbers	Date Flown
1345-1628	6/22/66
7029-7156	8/23/67
7238-7512	8/24/67

All photographs of the Garlock and Big Pine faults are of nominal 1:12,000 scale, although this may vary in mountainous terrain. Photographs at 1:12,000 scale provide 7.5 km² of ground coverage.

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

Method

For this report, photo centers and frame numbers were transferred from pre-existing photo index maps (scales 1:25,000 and 1:62,500) to USGS 1" x 2" topographic base maps (scale 1:250,000), relying heavily upon the

accuracy of the earlier index. 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 10' x 25' 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" x 10" (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:

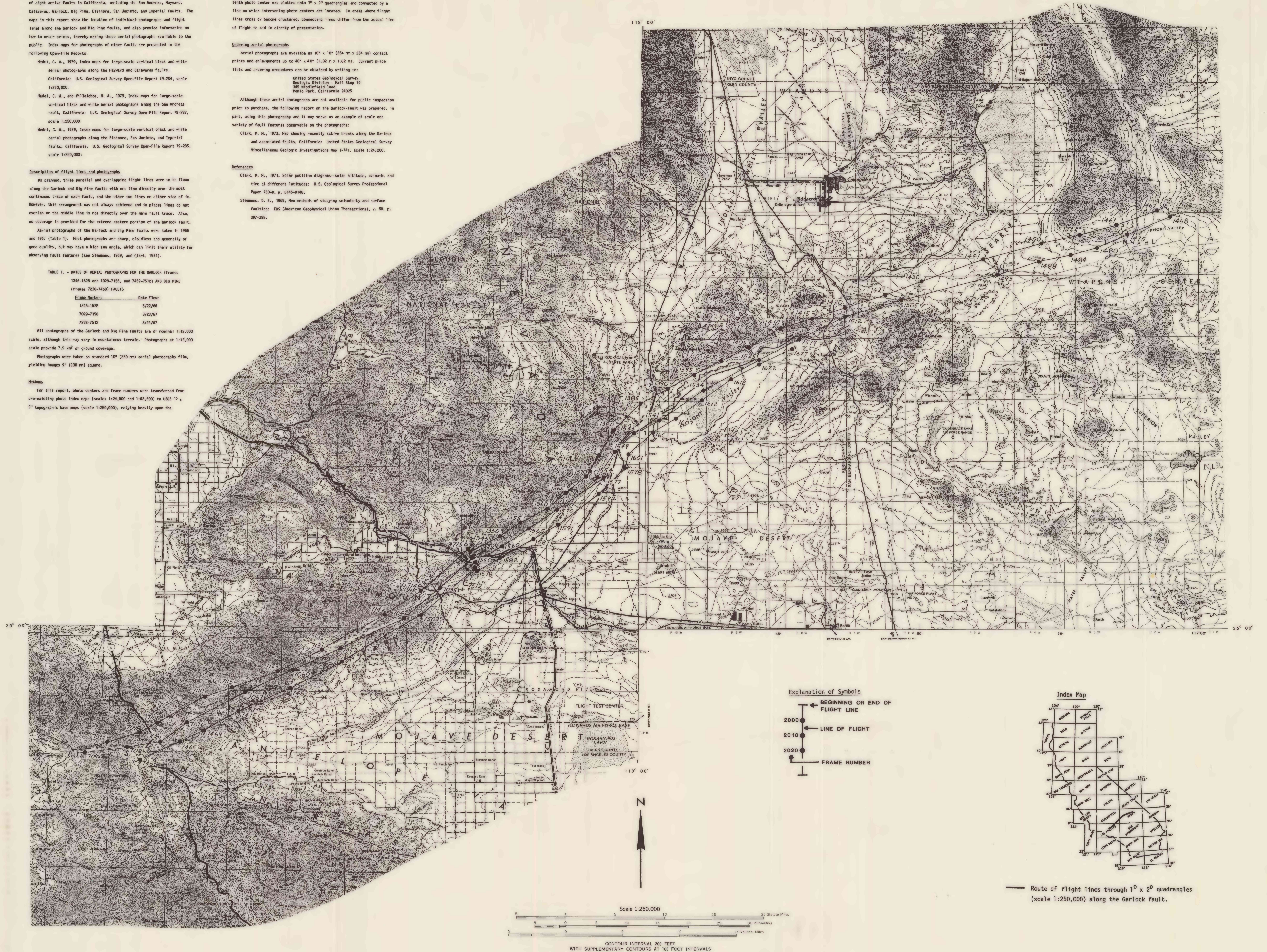
United States Geological Survey
Geologic Division - Mail Stop 19
385 Westfield Road
Menlo Park, California 94025

Although these aerial photographs are not available for public inspection prior to purchase, the following report on the Garlock-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:

Clark, H. N., 1973, Map showing recently active breaks along the Garlock and associated faults, California: United States Geological Survey Miscellaneous Geologic Investigations Map I-741, scale 1:24,000.

References

- Clark, H. N., 1971, Solar position diagrams—solar altitude, azimuth, and time at different latitudes: U.S. Geological Survey Professional Paper 750-D, p. D145-D148.
- Stemons, D. B., 1969, New methods of studying seismicity and surface faulting: EOS (American Geophysical Union Transactions), v. 50, p. 397-398.



INDEX MAPS FOR LARGE-SCALE VERTICAL BLACK AND WHITE AERIAL PHOTOGRAPHS ALONG THE GARLOCK AND BIG PINE FAULTS, CALIFORNIA
(GARLOCK FAULT SHEET)

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1979

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.