

# OPERATIONS

## Installation of Seismic Networks at Great Sitkin and Kanaga Volcanoes, Andreanof Islands, Alaska

Between June 28 and July 25, 1999 AVO deployed a 14 station (16 component) seismic network in the Andreanof Islands to monitor Great Sitkin (fig.33) and Kanaga (fig. 34) Volcanoes. The base of operations for this deployment was the Adak Naval station on Adak Island. Logistical support was provided by the U.S. Fish and Wildlife Service (housing, vehicles, transportation), and the



1999 Adak Field Notes

**ADAG:**  
 Location: 51N58.812 176W36.104  
 Elevation: 938 ft  
 Installation Date: July 7, 1999  
 Enclosure Type: Plaschem Hut  
 Geophone: L-4, 5500 ohms, 1 Hz, 958.3 gm, sn. 2239  
 VCO: 98-271  
 VCO Freq. 680 hz  
 Gain: 66 db  
 Background: 50- 100 mv  
 Summing Amp: CVO Summing Amp  
 Transmitter: Monitron, sn. 2807, 419.99375 mhz  
 Receivers: KINC (Montiron sn.2798, 409.88125 mhz  
 Solar Panels: 2 MSX 40  
 Power Regulation: 2 sunsaver 6, diode matrix  
 Batteries (Gell): 5 Johnson GC12V100B  
 Batteries (Air): 4 2AS10-2 1 AS10-2  
 Antennas: 2 maxrad 4065

Site Description:

Station is located on SW flank of Mount Adagdak at an elevation of about 1000 feet. Site is in grassy area surrounded by large boulders and landing a helicopter is easy. Site may be reached on foot by driving to old Loran Station and hiking. KINC drop out @ 38 dB.

U.S. Navy (airfield operations). Maritime Helicopters and pilot Bill Springer provided helicopter support. Tim Plucinski, Ellen Wilson, Dave Schneider, Seth Moran, Andy Lockhart, and John Power made up the seismic crew (fig. 3). Tom Miller and Chris Waythomas joined the effort for hazard assessment and geologic mapping, and Jeff Freymueller and Doerte Mann conducted complementary geodetic surveys

The network consists of five stations located on Great Sitkin Island with an additional station on neighboring Igitkin Island that serves as a repeater (shown in fig. 4). The highest station on Great Sitkin (GSTD) is a three-component instrument. Six stations were placed on Kanaga. Stations were placed on Adak and Kagalaska Islands to provide additional coverage and to serve as a repeater site in the case of station ADAG. Repeater sites (REP1 and REP2) were also established at the old "White Alice Site" above Adak. Signals arrive at the U.S. Fish and Wildlife Service offices in Adak, where they are transmitted to Anchorage via dedicated telephone link.

Field notes with detailed stations descriptions and technical specifications are below. Since installation we have experienced several unfortunate technical problems. To resolve a radio interference problem, Tim Plucinski traveled to Adak to change transmitter frequencies at REP1 and REP2 to VHF. Station KIRH on Kanaga apparently has a sensitivity problem and sees only large events. Also, the signal from station KIMD has been lost, eliminating stations KICM and KIKV as well. Unfortunately repairs to these sites will have to wait until the summer of 2000 when helicopter support will again be available at Adak.

*John Power*

Figure 33: Adak airport and Great Sitkin Volcano across Sitkin Sound. Housing for Adak Naval Base is seen on the right.

**ETKA:**  
 Location: 51N51.712 176W24.351  
 Elevation: 950 ft  
 Installation Date: July 11, 1999  
 Enclosure Type: Econo2000  
 Geophone: L-4, 5500 ohms, 1 hz, 956.5 gm  
 VCO: AVO 98-255  
 VCO Freq. 3060 hz  
 Gain: 66 db  
 Summing Amp: none  
 Transmitter: Monitron 412.075 mhz  
 Receivers: none  
 Solar Panels: 1 MSX 40, 1 MSX 20  
 Power Regulation: 2 sunsaver 6, diode matrix  
 Batteries (Gell): 4 Johnson GC12V100B  
 Batteries (Air): 4 2AS10-2 1 AS10-2  
 Antennas: 1 CA5400

Site Description:

Station is on ridge to west of amphitheater bowl on NW corner of Kagalaska Island. Seismometer located 8 to 10 m S of Econo.