

Approved For Release 2000/08/22 : CIA-RDP78B04747A000100030007-1



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

December 19, 1962

**\*DOI Waiver In ERU File\***

Dear Art:

A group of maps on which our infrared test area is outlined is attached. The location of cave entrances within the test area are shown with X's on three (3) of the five (5) quadrangles. The location of caves in the remaining quadrangles will be furnished in the near future. The northwest-southeast part of the area was flown at an altitude of 6000 feet above sea level; the part of the area extending southwest from Luray was flown at 3000 feet above sea level, and one additional line was flown down the center of the area at 1000 feet above terrain. Images were produced at 3 to 5 micron wavelengths and 8 to 14 micron wavelengths; two sets of images were produced, one set just before sunset and one set at dawn. Temperature and other meteorological conditions were monitored continuously during the days of flying at approximately 30 selected stations within the area. Further meteorological investigation will be undertaken after the images are received. Prior to flight, measurements were made of the reflection-absorption characteristics selected areas and rock units using the Corps of Engineers' "portable" spectrophotometer. An attempt to obtain color photographs was frustrated by a malfunctioning photographer. Complete laboratory studies of rock samples from the area are now underway.

It would be helpful to us if the Navy were to conduct some of their test flying in this area and supply us with copies of their imagery. We would be very happy to make all of our background data available and will make copies of our imagery available as soon as it is received. Further, we hope that it will be possible for one of your staff to join us at the University of Michigan to participate in our experiments with the magnetic tape records produced in connection with the infrared imagery.

Sincerely yours,

William A. Fischer  
Branch of Theoretical Geophysics