

Type I Progress Report July 1 - August 31, 1972

- a. Mapping of the Major Structures of the African Rift System Proposal number 320
- b. Dr. Paul Mohr OT-306
- c. Dr. Mohr is waiting for delivery of the first ERTS-1 imagery of the region he is investigating
- d. Apollo 9 coverage of the African rift system has been examined. Although this coverage was scanty, a series of photographs traversing the eastern side of the Afar depression, taken at approximately 100 km spacing, has proved of great interest for stereoscopic investigation. (Note: The Afar depression is a plate-tectonic triple junction where the Red Sea, Gulf of Ader and African rift systems meet). The photographs reveal that crustal extension in eastern Afar has taken the form of east-facing ratchet faults, as well as horst-graber. These two distinct styles of surface crustal extension are now being investigated at SAO using stress models. The Apollo 9 photographs also reveal the need for some important revisions to recently published geological maps of northern Afar, but not detracting from the generally accepted concept that the Afar region is new crust generated during the drift of Arabia from Africa.

U2 photography of Arizona has been examined in order to anticipate the quality of ERTS-1 imagery. Arizona was considered to resemble parts of eastern Africa in its physiography, climatology and vegetation, and thus geological structures should be evident (or the contrary) in similar degree. Unfortunately, the quality of the U2 photography was not always good, and this fact together with the smaller areal coverage of the individual photos has precluded a useful comparison. Nevertheless, the study confirms that spectral band 2 (red) is generally most suitable for structural studies.

e. N.A.

f. N.A.

g.

h. Revised Standing Order Form submitted on 17 August 1972 to ERTS User Services and Technical Monitor maintaining the same area of coverage but changing from RBW to MSS data system. This change was prompted by the deactivation of the RBW system.

i. N.A.

j. N.A.

The funds remaining in the contract are adequate to complete the contract tasks. It is anticipated that during the next reporting period Dr. Mohr will begin receiving ERTS data and continue the investigation effort discussed in d. above.

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