

N O T I C E

THIS DOCUMENT HAS BEEN REPRODUCED FROM
MICROFICHE. ALTHOUGH IT IS RECOGNIZED THAT
CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED
IN THE INTEREST OF MAKING AVAILABLE AS MUCH
INFORMATION AS POSSIBLE



CONSIGLIO NAZIONALE DELLE RICERCHE

ISTITUTO PER LA GEOFISICA DELLA LITOSFERA

80-10299

015-160000

4/7/1980

20131 MILANO

Posta - I. G. I. - Via Bassano, 15

Tel. 02/299408 - 2363633 - 230360

Telex 311819 MUAQR I

"Made available under NASA sponsorship
in the interest of scientific and technical dis-
semination. The Government assumes no liability
for any use made hereof."

Heat capacity Mapping Mission (HCMM) Program

Investigation HCMM - 050

STUDY OF GEOLOGICAL STRUCTURE OF SICILY AND OTHER ITALIAN AREAS

P.I. Roberto CASSINIS
Istituto per la Geofisica della Litosfera
Consiglio Nazionale delle Ricerche
Milano (Italy)

Third progress report - June 1980

prepared by:

Roberto Cassinis,	P.I.
Giovanni Lechi,	Co-investigator
Eugenio Zilioli,	Geology
Alberto Marini,	Geology

(80-10299) STUDY OF GEOLOGICAL STRUCTURE
OF SICILY AND OTHER ITALIAN AREAS Progress
report (Consiglio Nazionale delle Ricerche,
Milan) 6 p HC A02/MF A01 CSCL 08B

N80-30866

Unclas

63/43 00299

RECEIVED
JUN 10 1980
MILANO
HCMM 050
TYPE II

I. Foreword

We refer to our second progress report (January 1980) and, in particular, to the first map of A.T.I. obtained in the area along the Gulf of Orosei (Eastern Sardinia).

While waiting for other CCF's that could allow the determination of A.T.I. in the same and in other areas, a ground survey has been accomplished along the profiles of fig. 1 (fig. 4 of the 2nd report). The ground truth has been collected in order to try to explain the A.T.I. and thermal anomalies observed.

In fig. 1 the points where the relevant observations have been made and samples collected for further laboratory examination are marked with arrows and progressive numbers.

II. Ground truth collected along the profiles of fig. 1 (numbers correspond to arrows)

- 1) The outcropping formation is a very acid pegmatitic granite. The topography is flat and the vegetation is almost missing. Very thin soil cover, almost non-existent. Alteration sands present in part of the area.
- 2) A morphological change (from flat areas to hills or typical plateaux) corresponds to the contact between granites and basalts.
- 3) The pattern illustrated in sketch n. 1 could be the reason for the increase of the A.T.I.
- 4) The situation is illustrated in detail by the sketch n. 2. The anomaly can be originated by the strong contrast between the bare exposure of granite and the dolomites covered by high vegetation.

5) The observed area is located on a high plateau covered by an uniforme blanket of mediterranean vegetation. A small swamp area of 300 x 200 m could influence the A.I.I. The graniti facies is aplitic; therefore the alteration sands are much finer than at point 1 (see sketch n. 3).

6) The situation is here very clear. The vegetation reaches the highest density of Sardinia. A deep valley cut in limestones and covered by tall tress runs in NE-SW direction.

III. The collection of ground truth is continuing along other profiles.

R. Cassinis, P.I.



Figure 1 caption:

Profiles (see for position fig. 2 of the second progress report).
The arrows represent the ground truth collection points illustrated in paragraph II).

Encl.: 3 pages of figs.

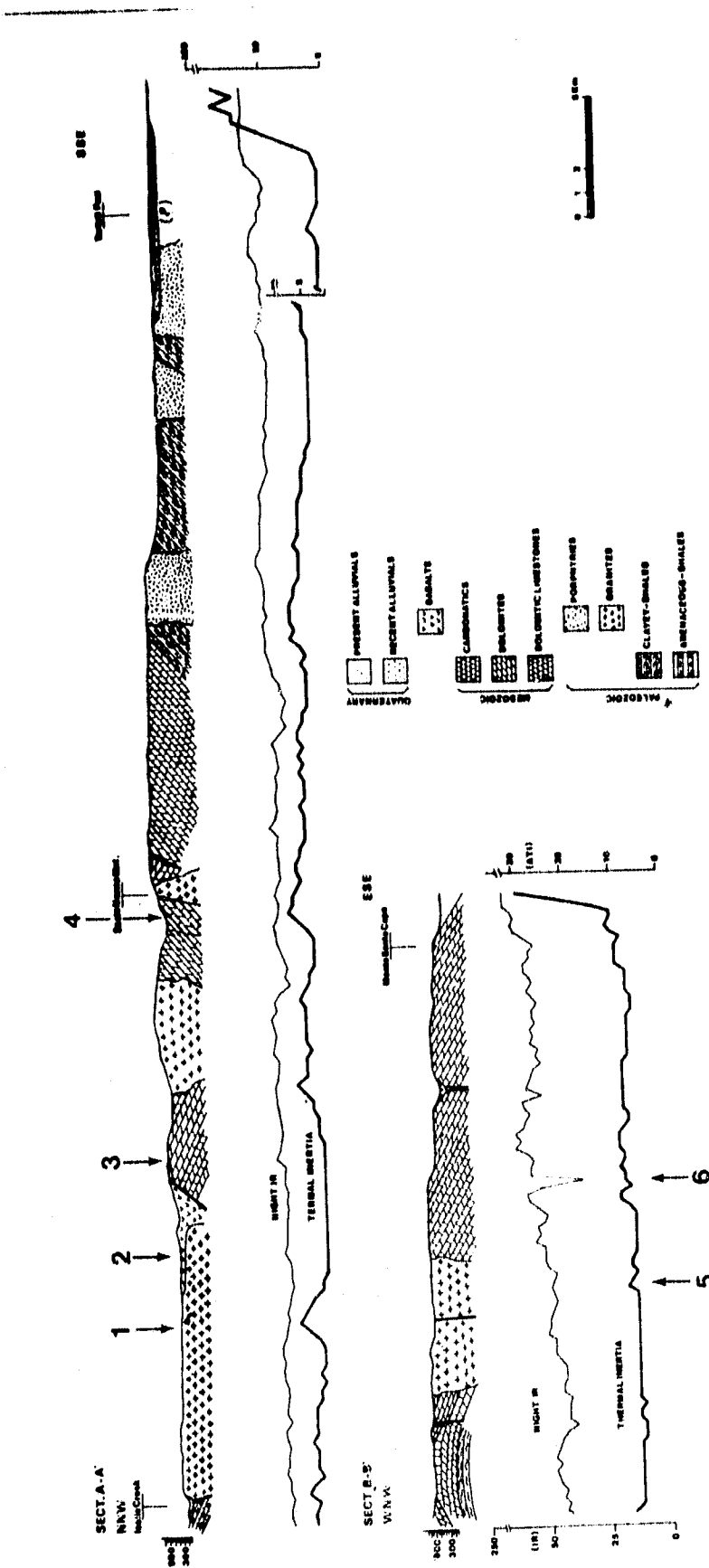


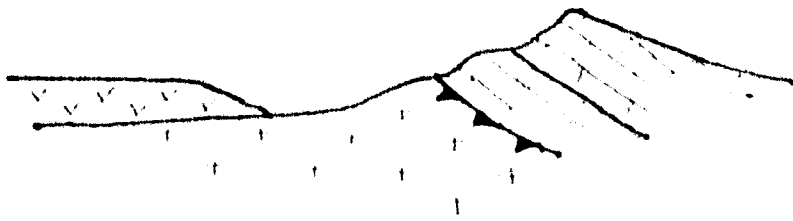
FIGURE 1 - The arrows indicate the ground observations as explained in the text.

ORIGINAL PAGE IS
OF POOR QUALITY

ORIGINAL PAGE IS
OF POOR QUALITY

WSW

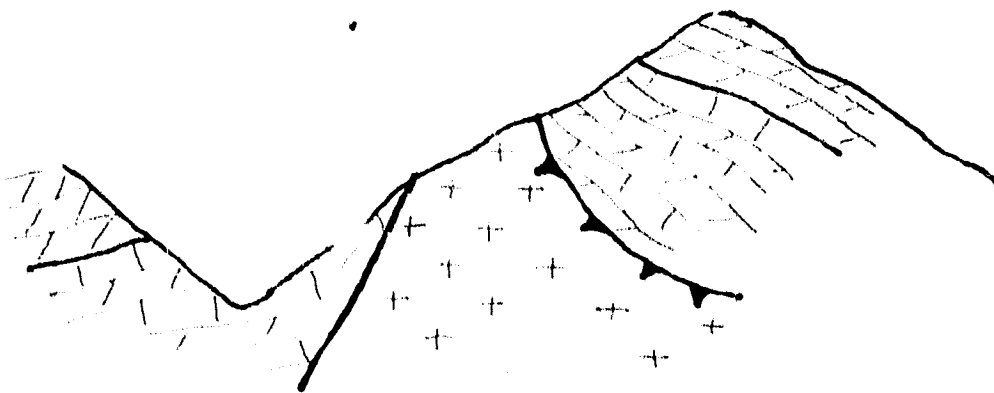
ENE



Geological sketch n.1

W

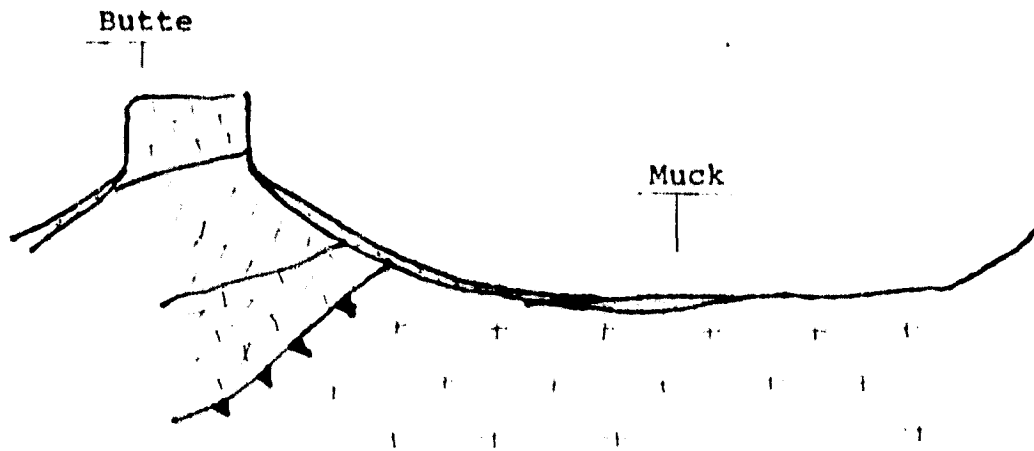
E



Geological sketch n.2


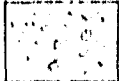

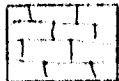
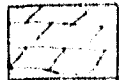
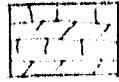



NW

SE



Geological sketch n.3

LEGENDA

-  Present clayey deposits by surficial running waters (Muck)
-  Scree deposits (Talus)
-  Neogenic basalts
- Mesozoic
 -  Carbonates
 -  Dolomites
 -  Dolomitic limestones
-  Hercynian granites
-  Overthrust
-  Main fault