

**INTEGRATION OF ARCHAEOLOGICAL, MORPHOLOGICAL,
GEOPHYSICAL AND GEOLOGICAL DATA
IN ACTIVE FAULT STUDIES**



Active Fault: a fault reactivated at least once in the last 10 000 years

Main aim of the active fault studies: minimize the earthquake damage

To achieve this aim;

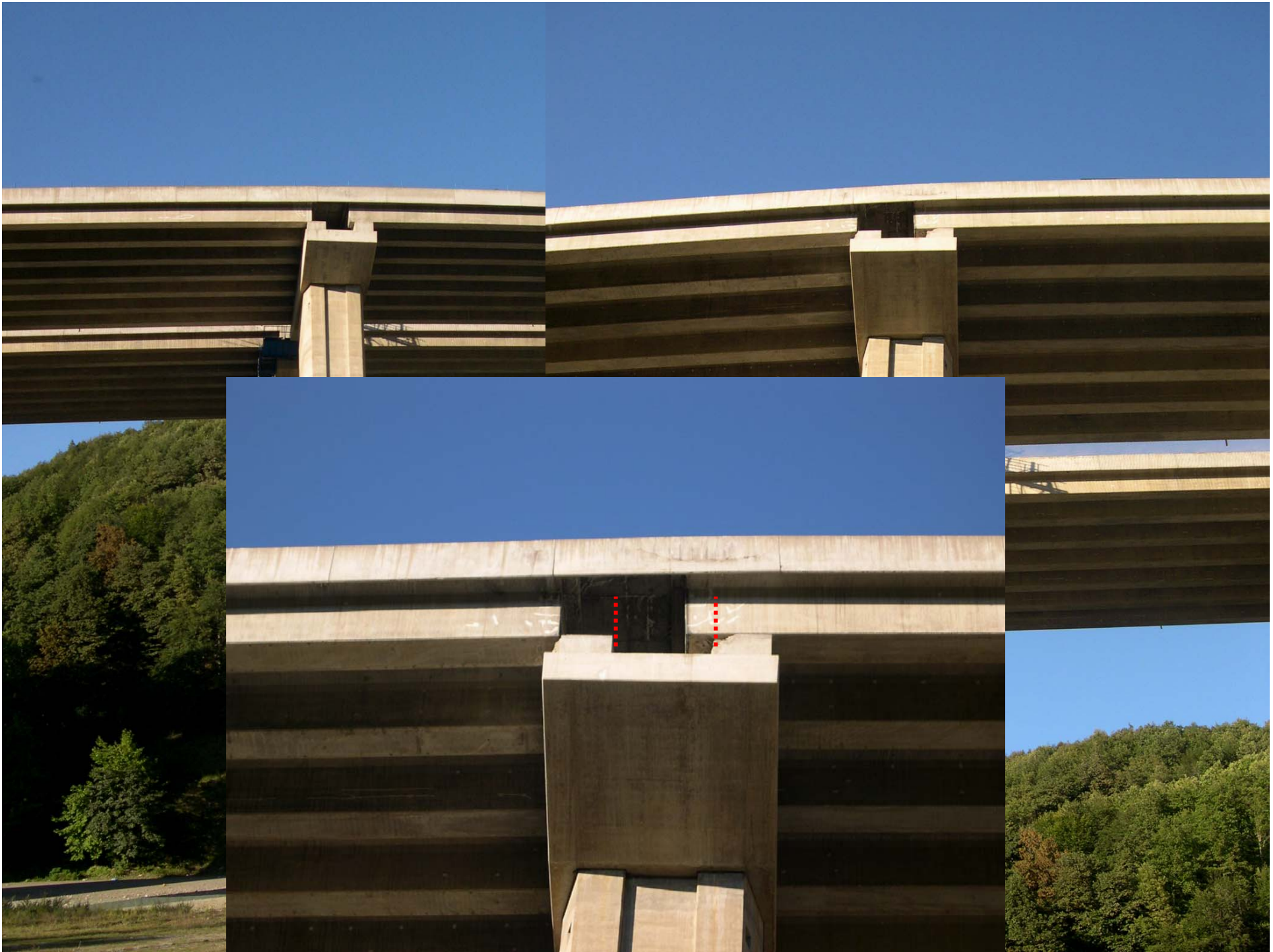
- exact location of the fault trace
- length of the fault zone
- width of the deformation zone
- slip rate
- re-occurrence of large earthquakes
- date of last large earthquake on the fault

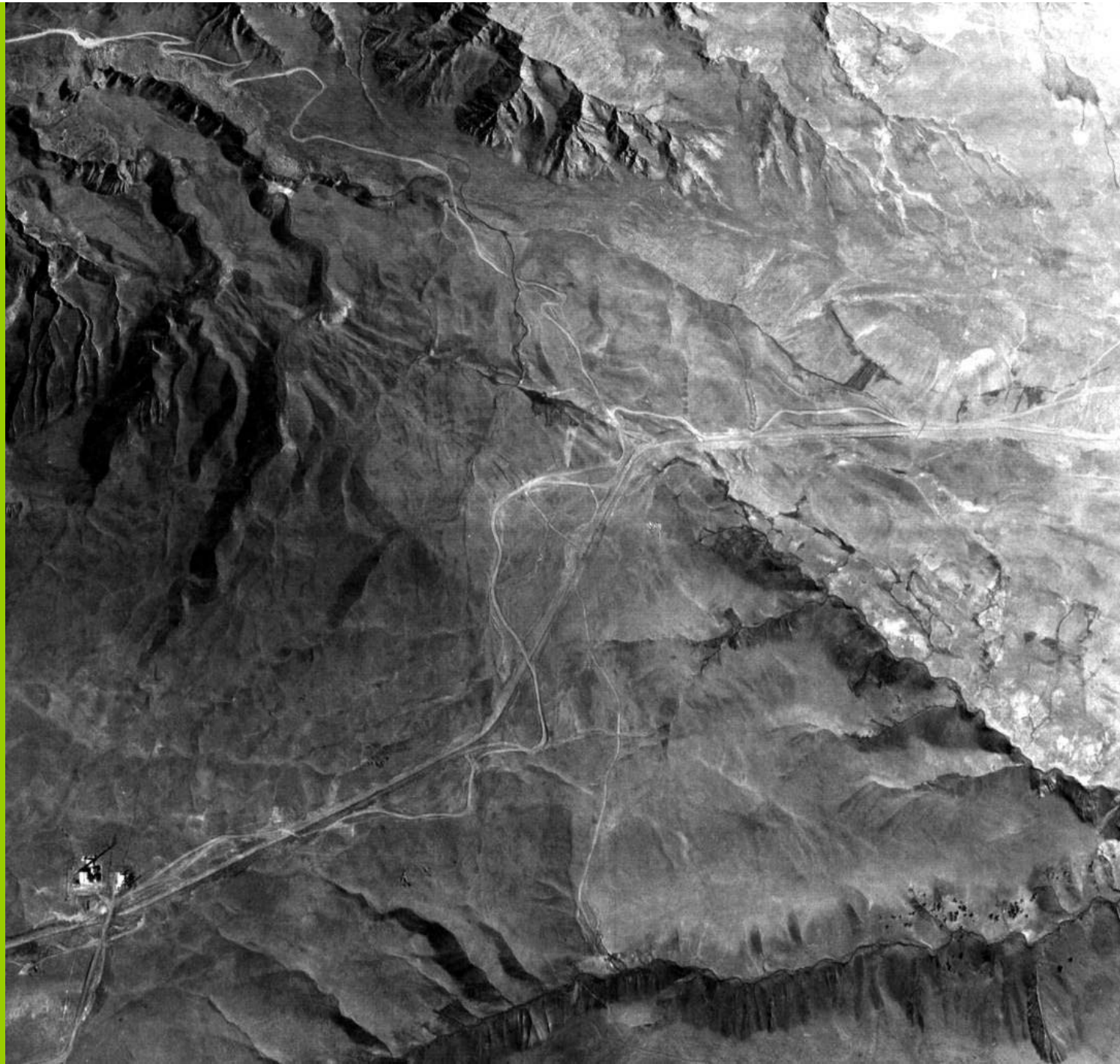












EXACT LOCATION OF THE FAULT TRACE IS VERY IMPORTANT









are limited

**GEOLOGICAL
MORPHOLOGICAL**

GEOPHYSICAL

can be obtained by
using necessary
equipments

ARCHAEOLOGICAL

if there is potential, it can
be used

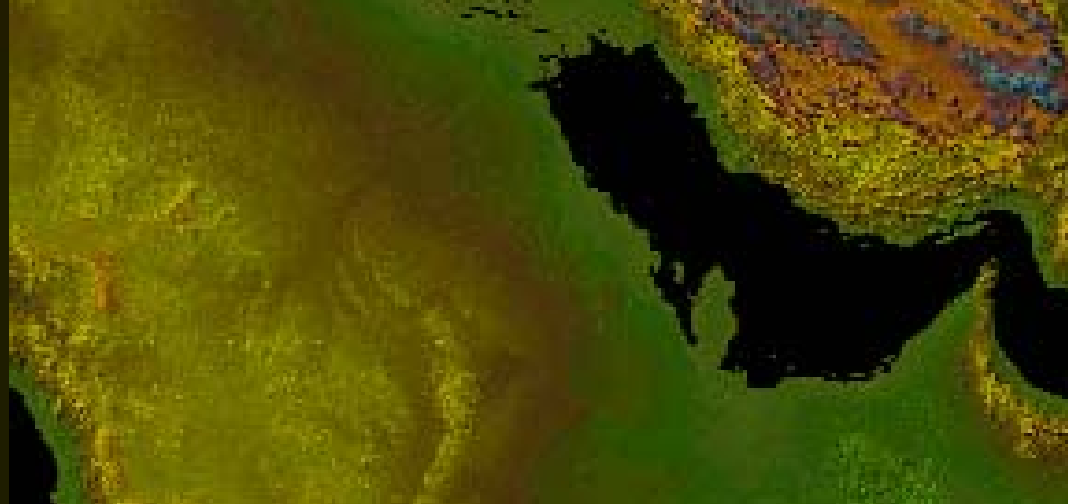
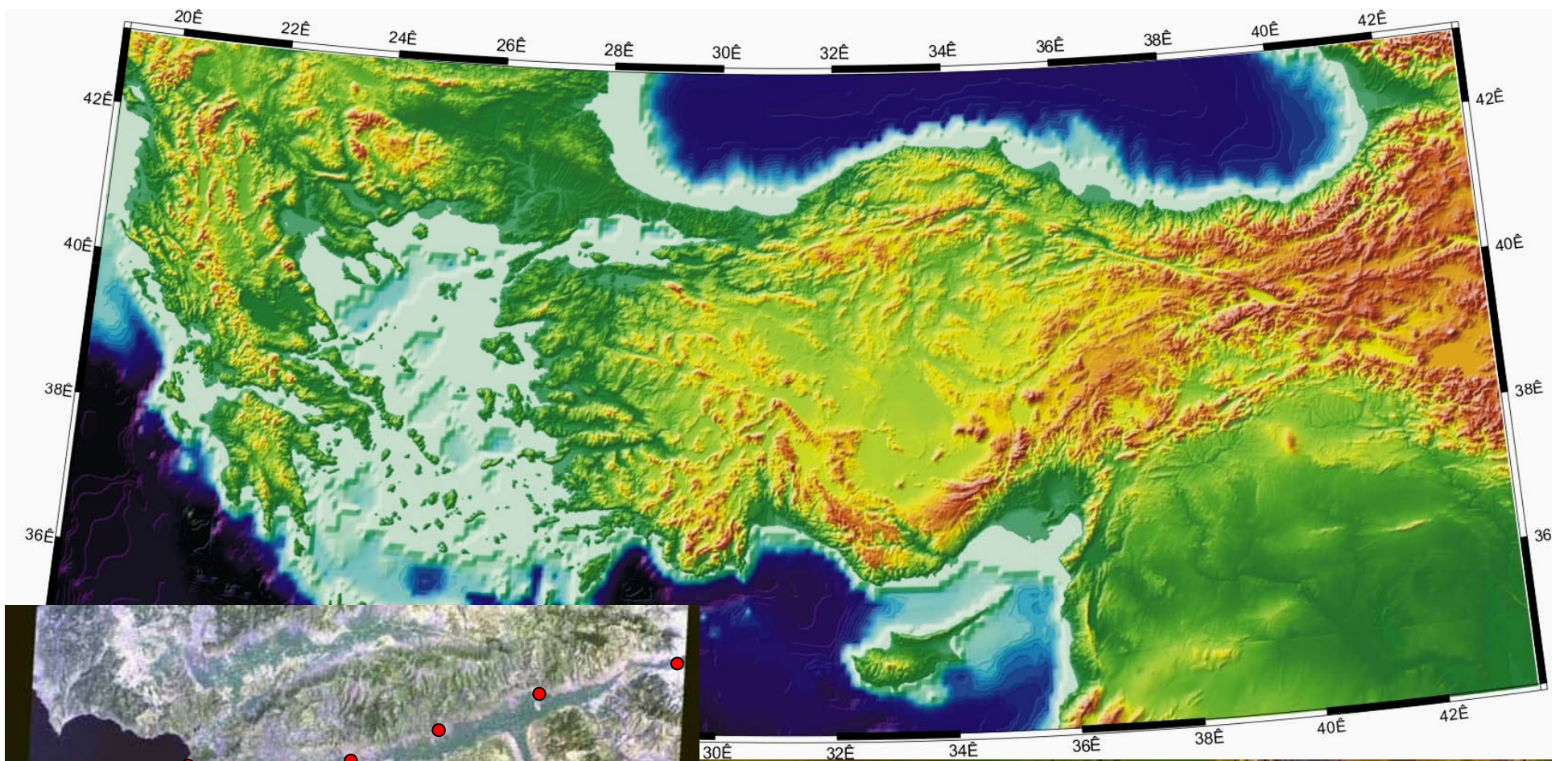
**ALTHOUGH ACTIVE FAULTS ARE DANGEROUS, PEOPLE PREFER TO
BE CLOSE TO ACTIVE FAULTS SINCE HISTORICAL TIMES**

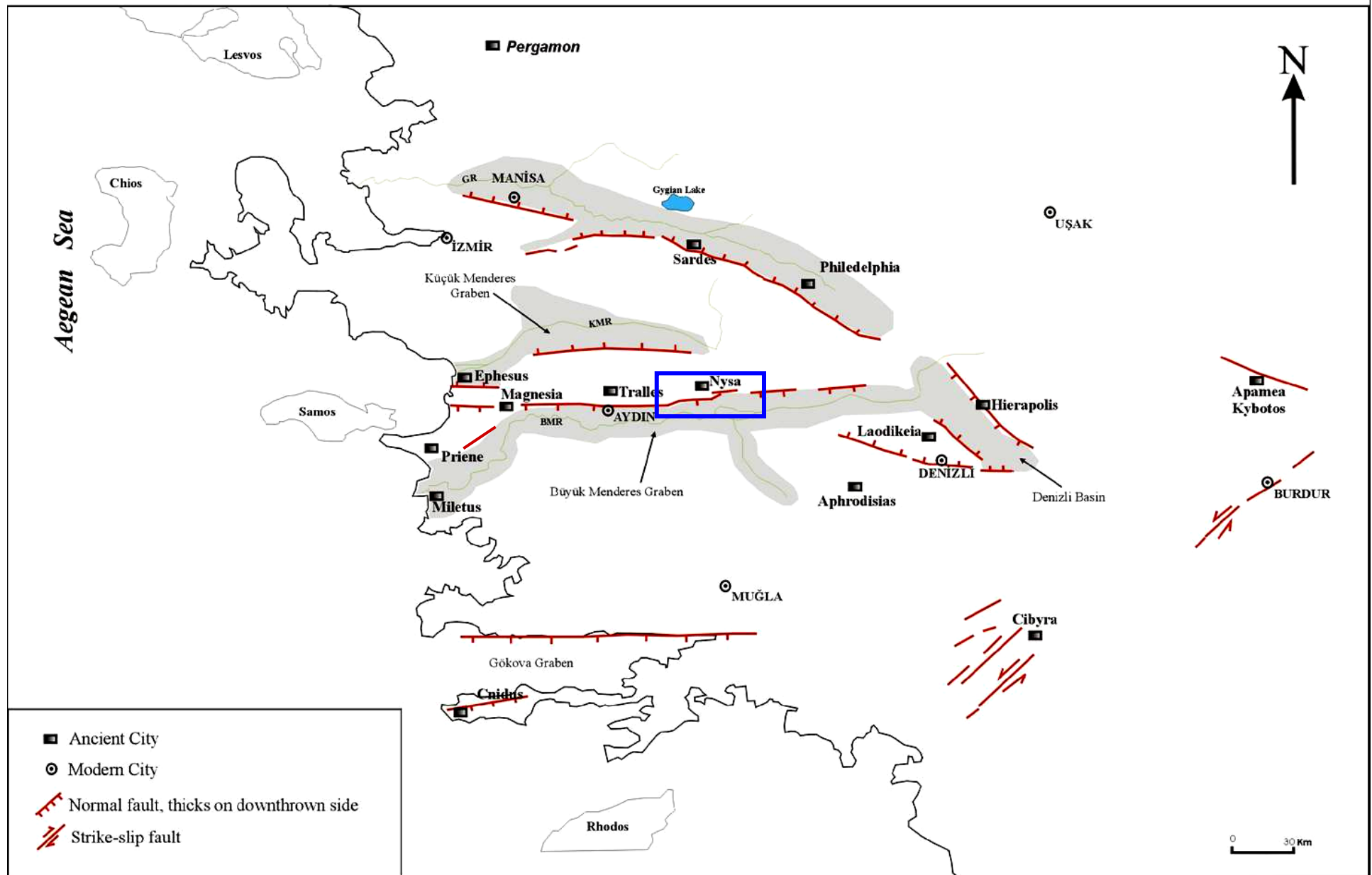




Paleolitik Çağ dünyası







Das Gebiet von NYSA

Erklärungen:

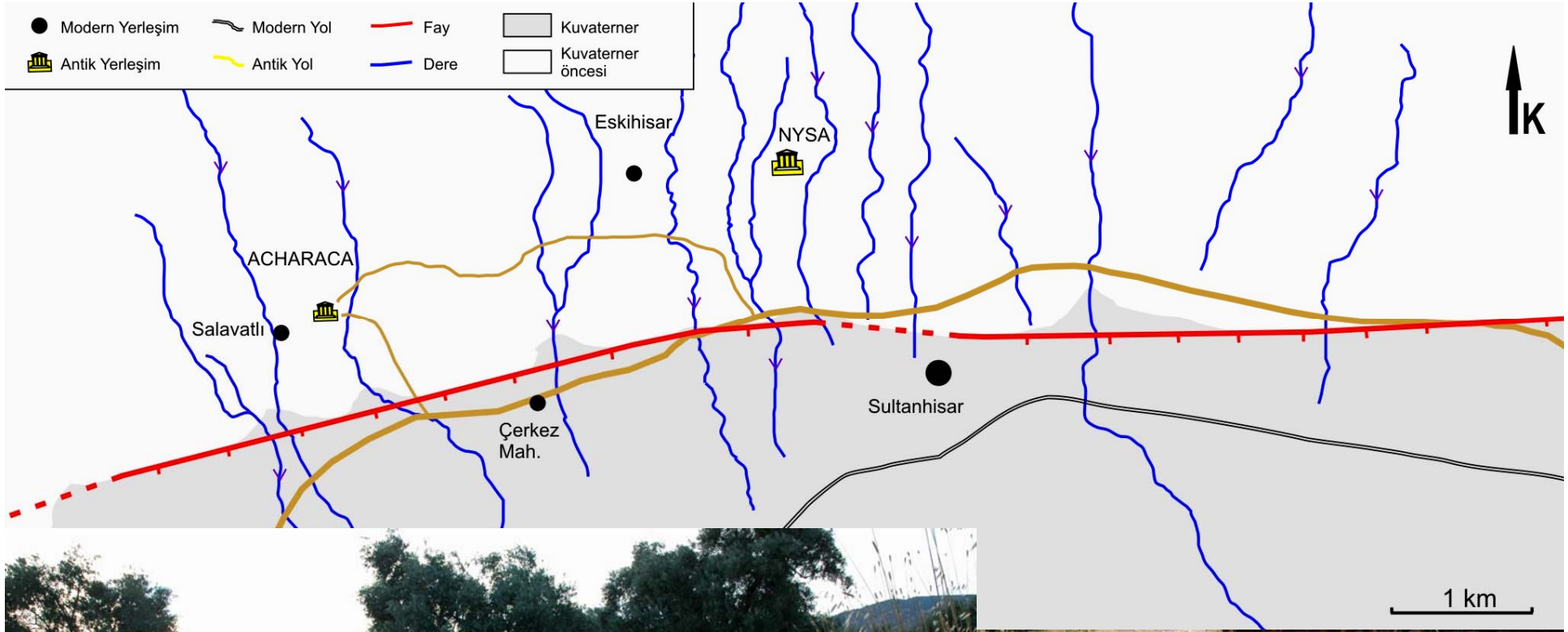
- Die antiken Städte NYSA-ACHARAKA-AROMA bilden ein durch den Malgetch-su, den Höhenzug von Iuali, die Steilwand der Messogis und den Maeandros geschlossenes Gebiet. Dieses ist durchschnitten durch die vom Gebirge herabstürzenden, bis 130 m tief eingerissenen Bäche. Auf den zwischen ihnen stehenden Erdstreifen entstanden die ersten Ansiedlungen ATHYMBRA, ATHYMBRADA, HYDRELA, von denen 2 später zur Einheitsstadt NYSA zusammengefaßt wurden.
- Die Hauptquelle antiken Schrifttums für NYSA ist Strabo XIV p. 649 f.
- Das Gebiet von Nysa ist unübersichtlich und schwer zu durchforschen wegen der zu a) genannten Schluchten, der mannshoch geschichteten Steinwälle mit Dornenaufzucht, welche die Felder trennen, und der bis hoch ins Gebirge reichenden Ölbaum-Pflanzungen. Auch die Ebene ist bis an den Maeandros mit Gartenkultur und Feigenbäumen bedeckt. Die Gebirgspitze sind kahl mit Ausnahme weniger bewaldeter Kuppen.
- Die Bäche sind im Frühjahr voll schäumenden Wassers, im Sommer und Herbst sind die eigentlichen Betten trocken, dagegen am Malgetch-su Kanäle für Bewässerungszwecke und Mühlenbetrieb im Gange, welche das Wasser des Flusses in höherer Lage abfangen. Die zahlreichen antiken Wasserleitungen sind sämtlich zerstört.
- Ausschnitt I = Plan von NYSA 1:7500. Ausschnitt II = Plan von ACHARAKA 1:10 000.
- Rot = Antike Bauten und Namen.
- Höhen — Meter über Bahnhof Smyrna.

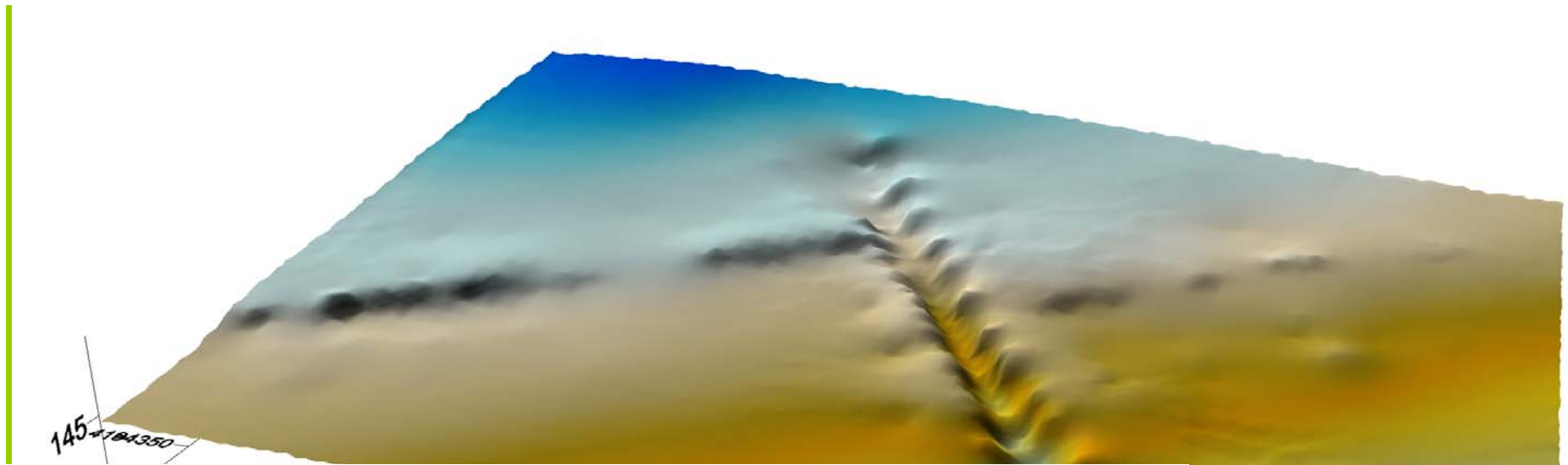


Aufgenommen im Oktober 1909
von
Walther v. Diest
Geogr. u. D.

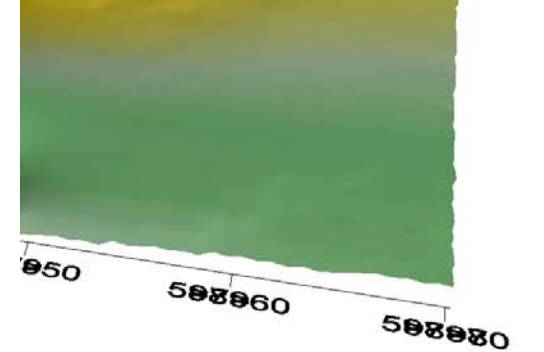
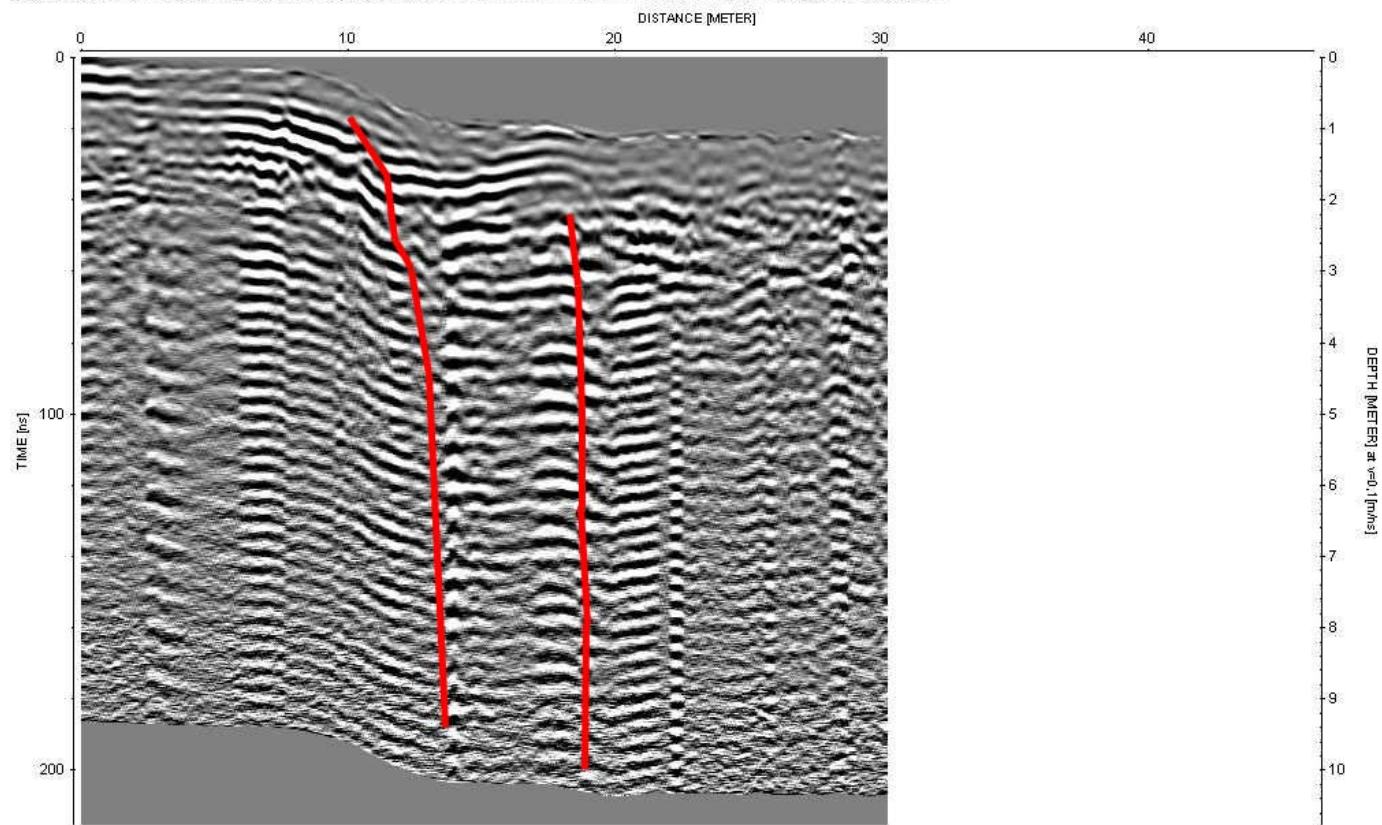
Maßstab 1:34.900.

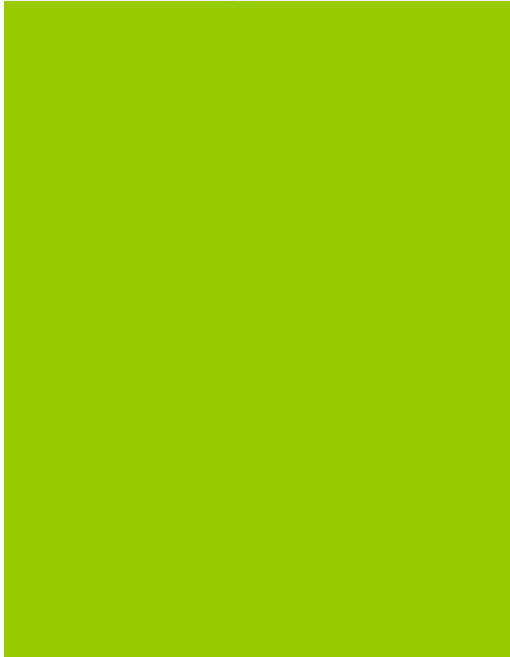
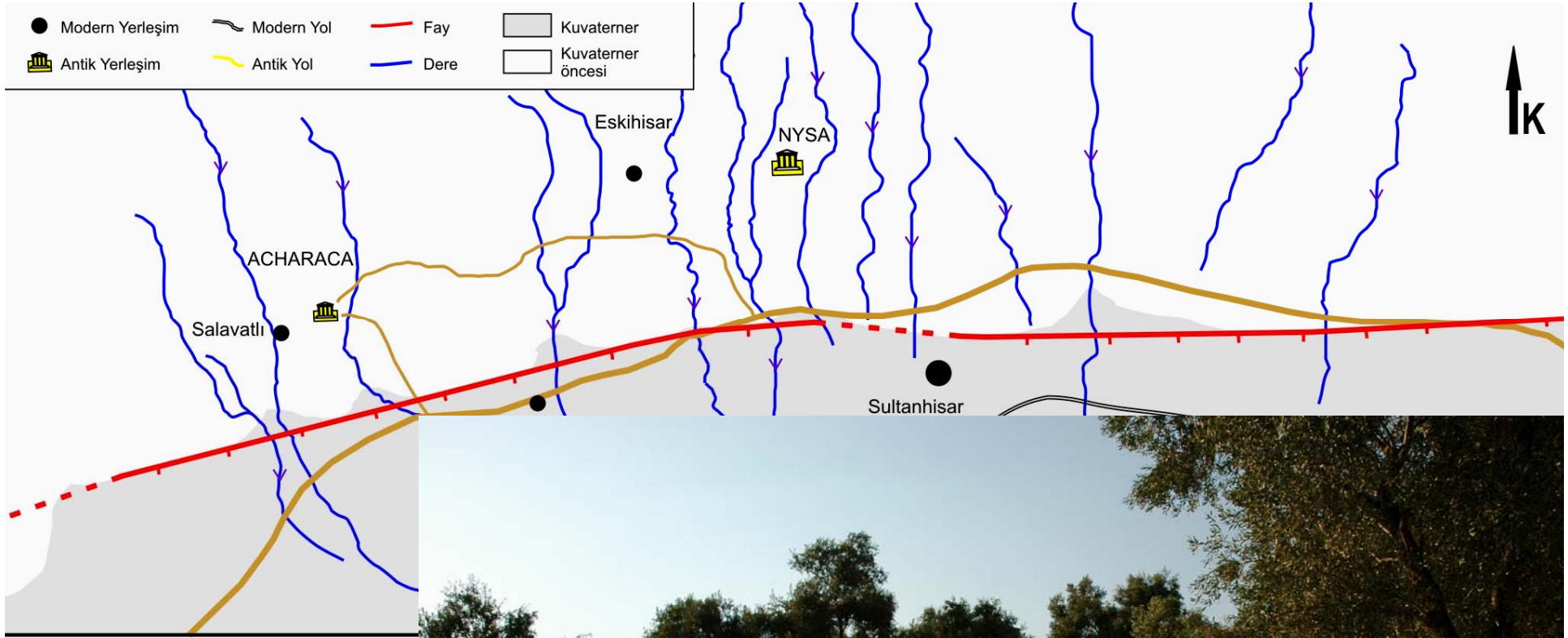
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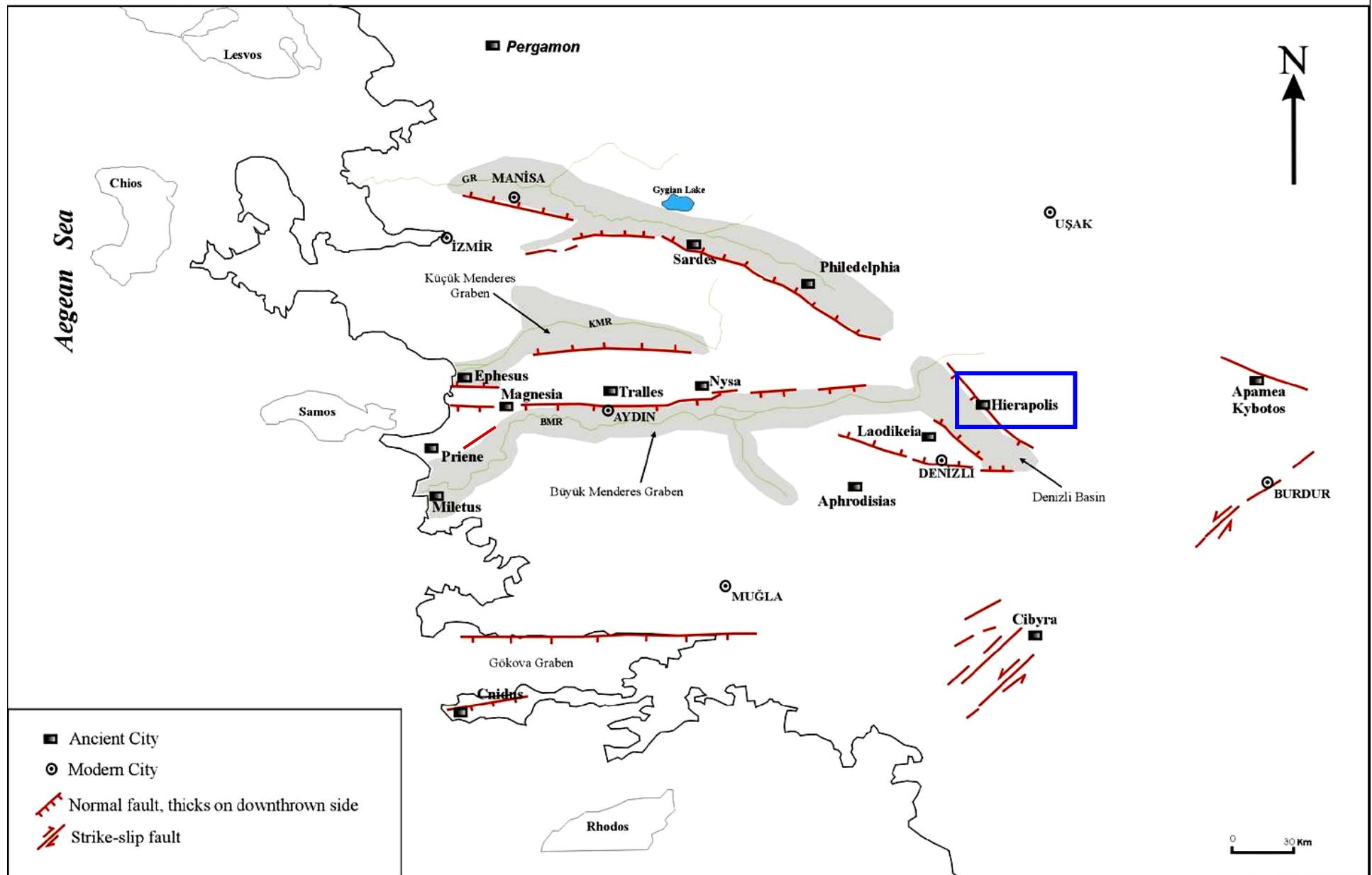




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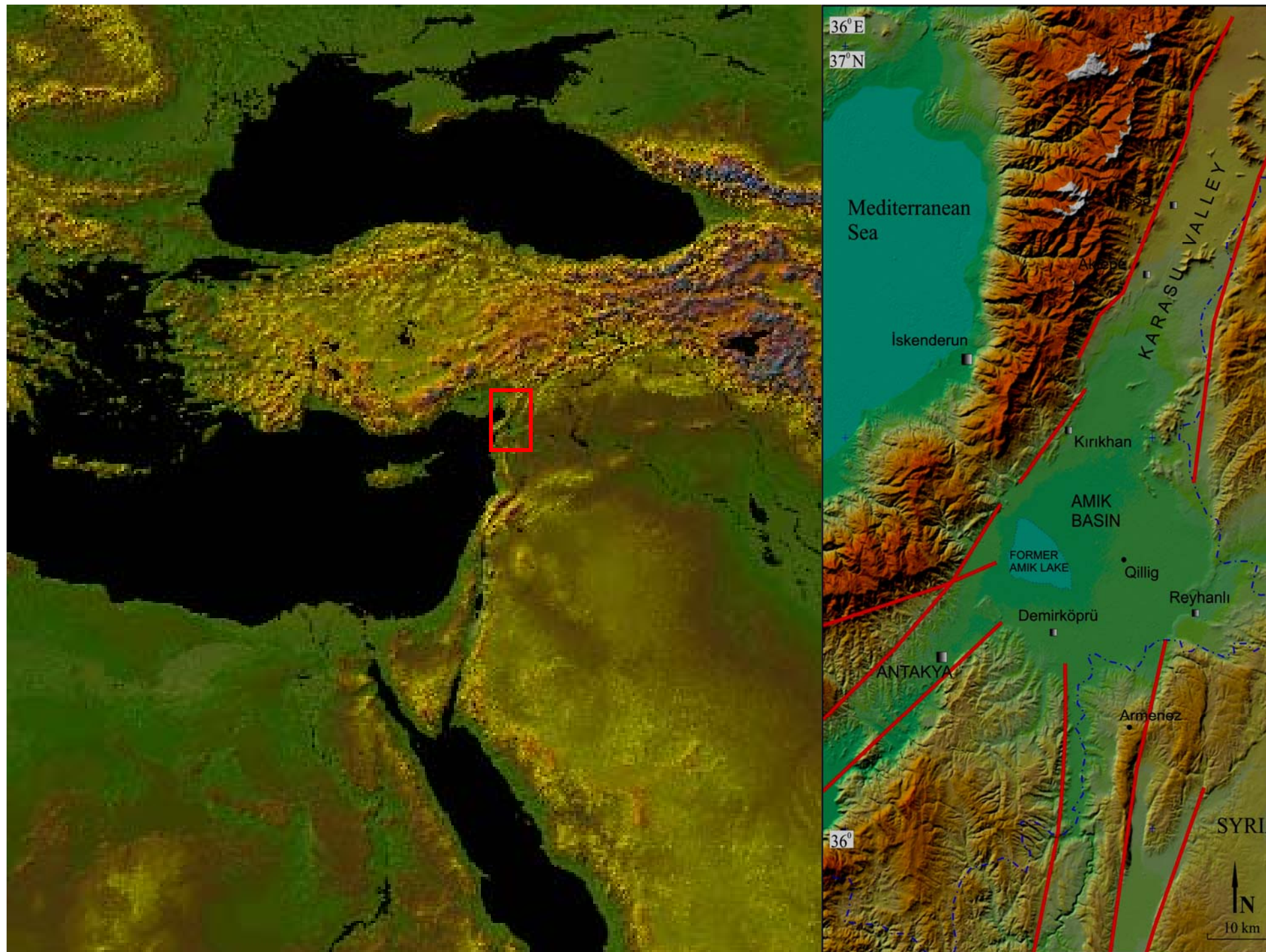














B.C.

570

148

579

66 (or 65)

587

713

A.D.

835

37

859

115 (260 000)

972

334

1053 (10 000)

341

1212

457 (or 458)

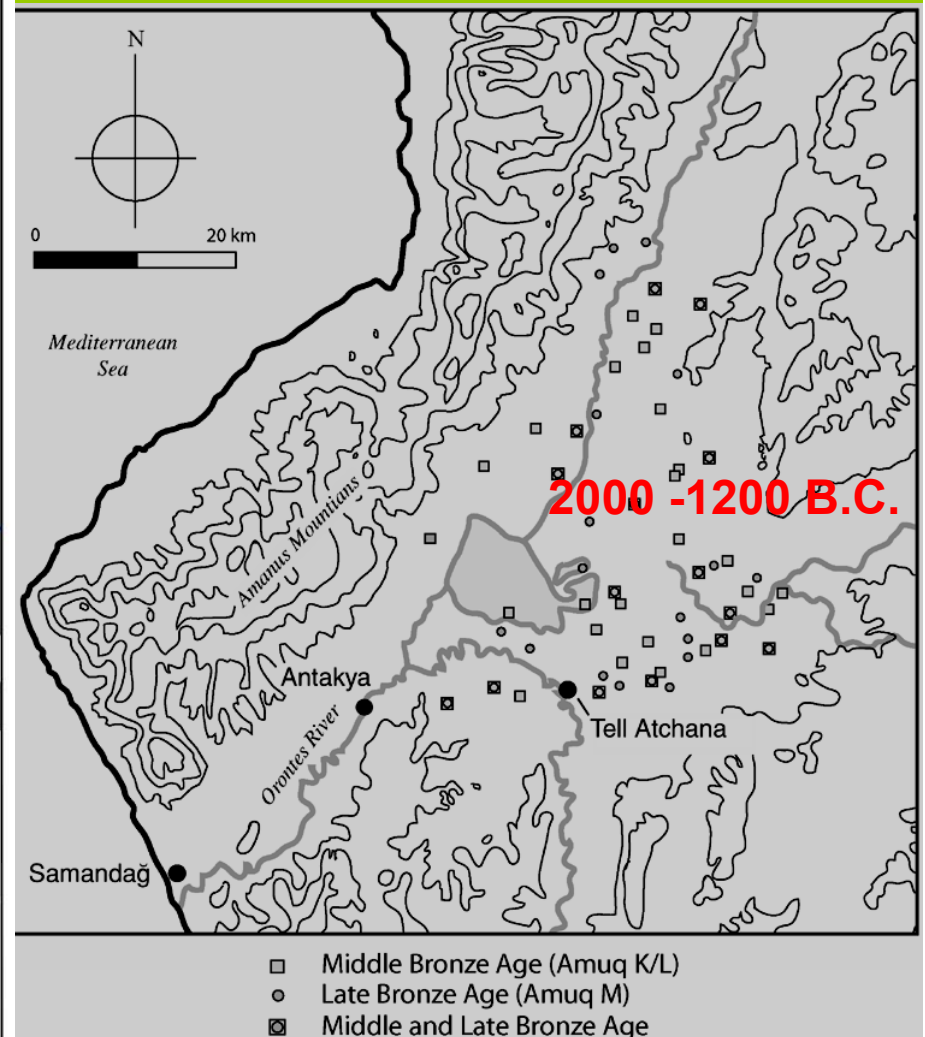
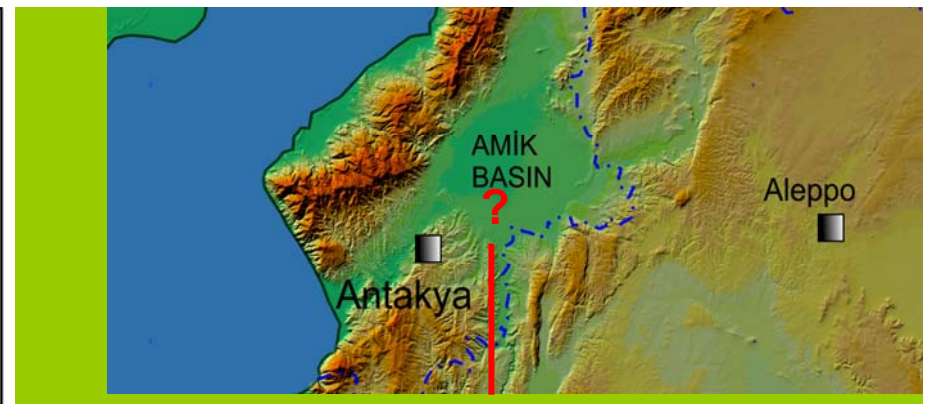
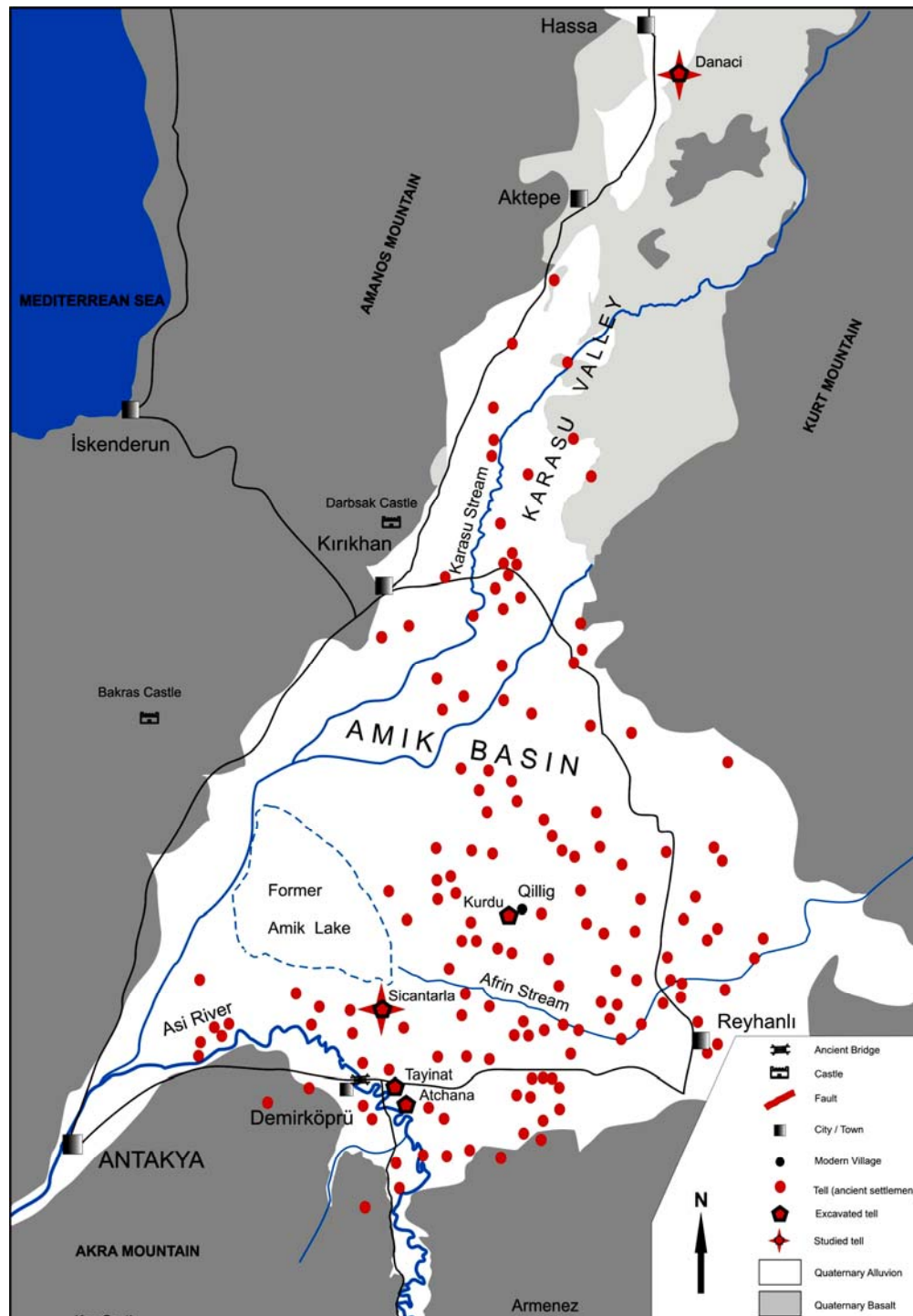
1408 (>20 000)

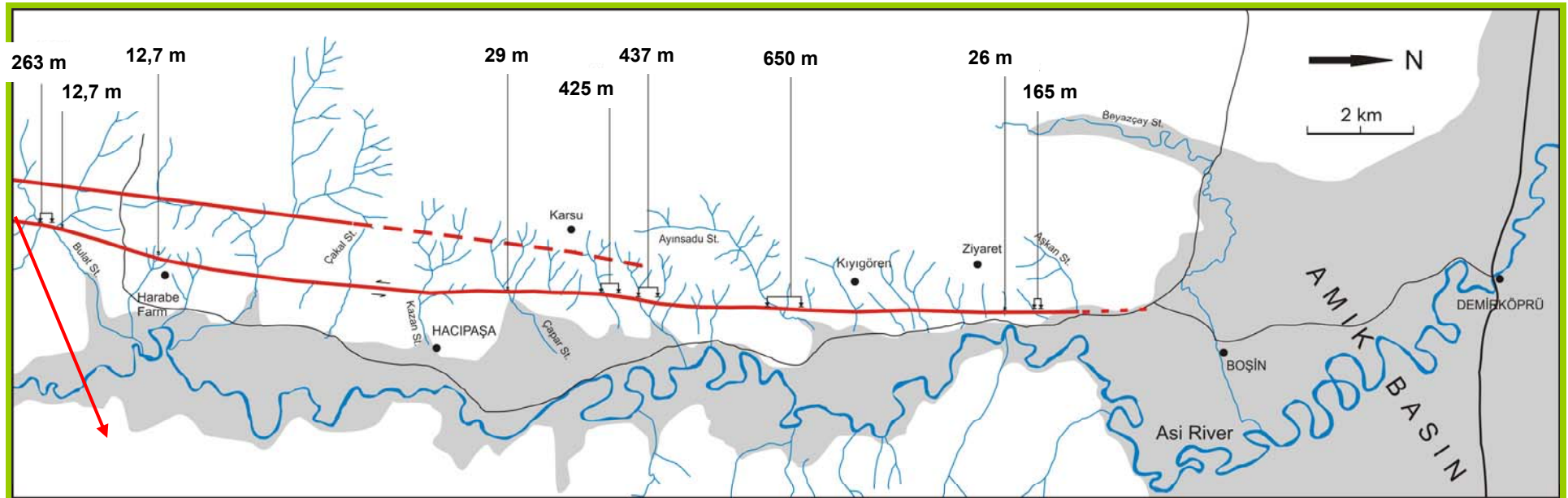
526 (200 000)

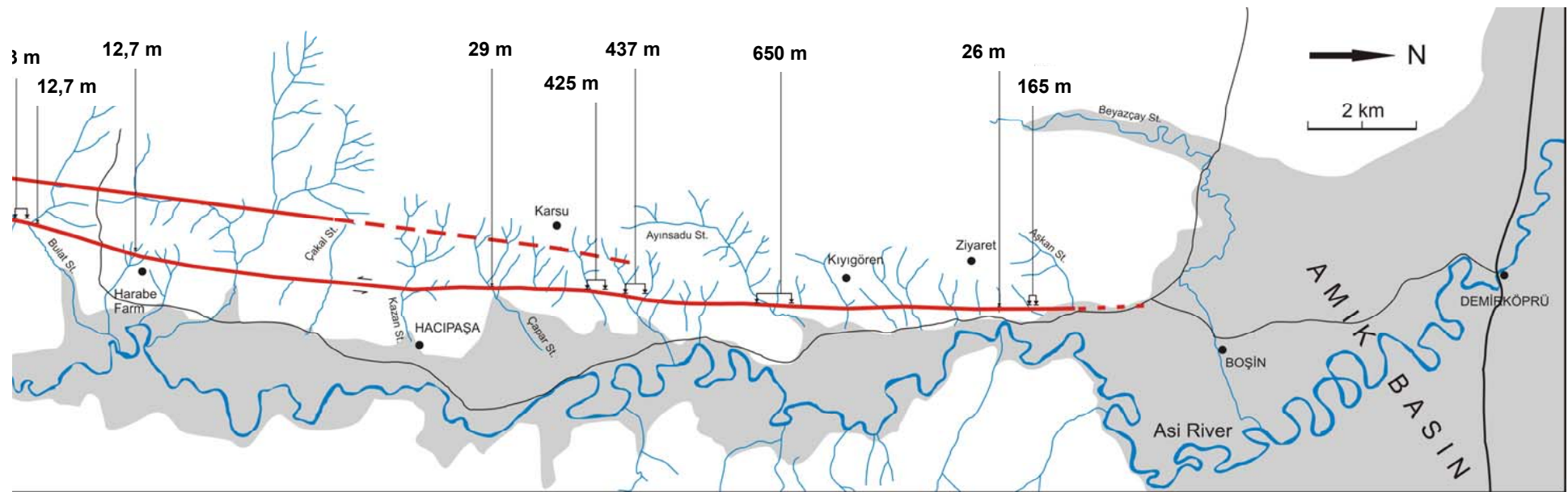
1822 (20 000)

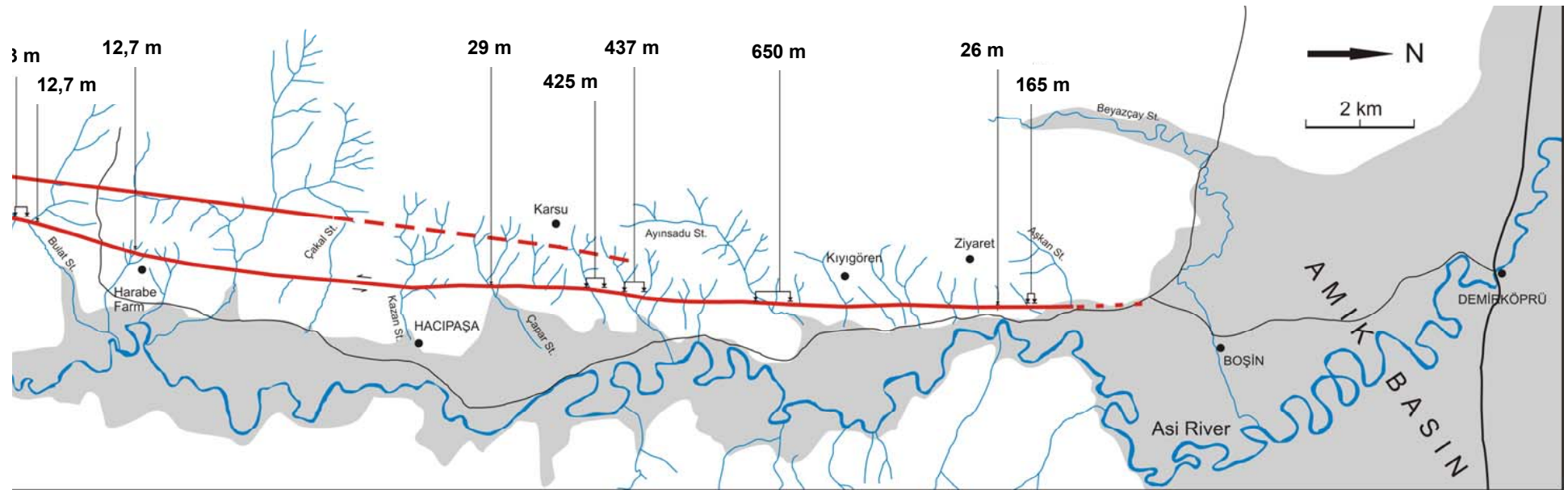
532

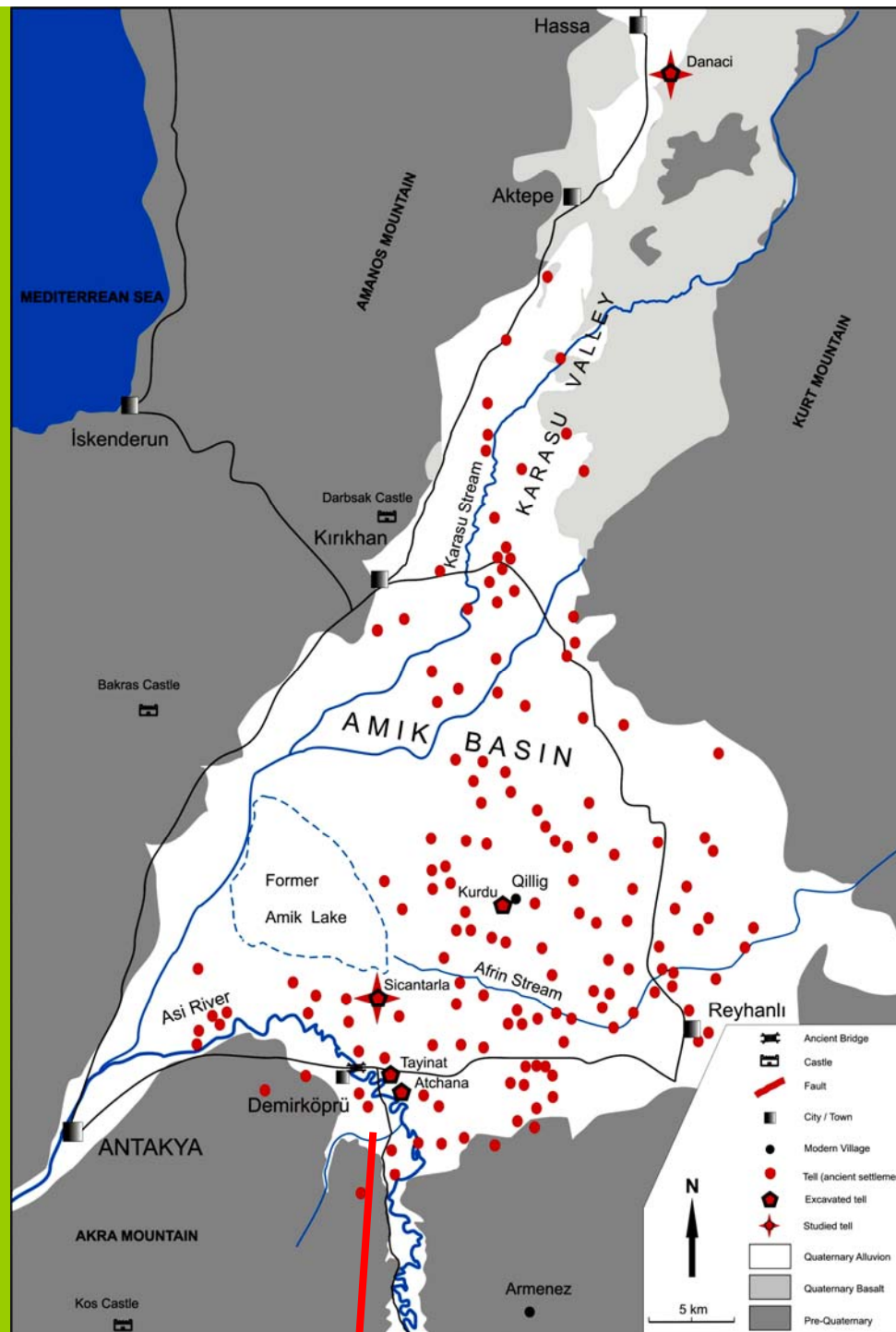
1872 (5 000)





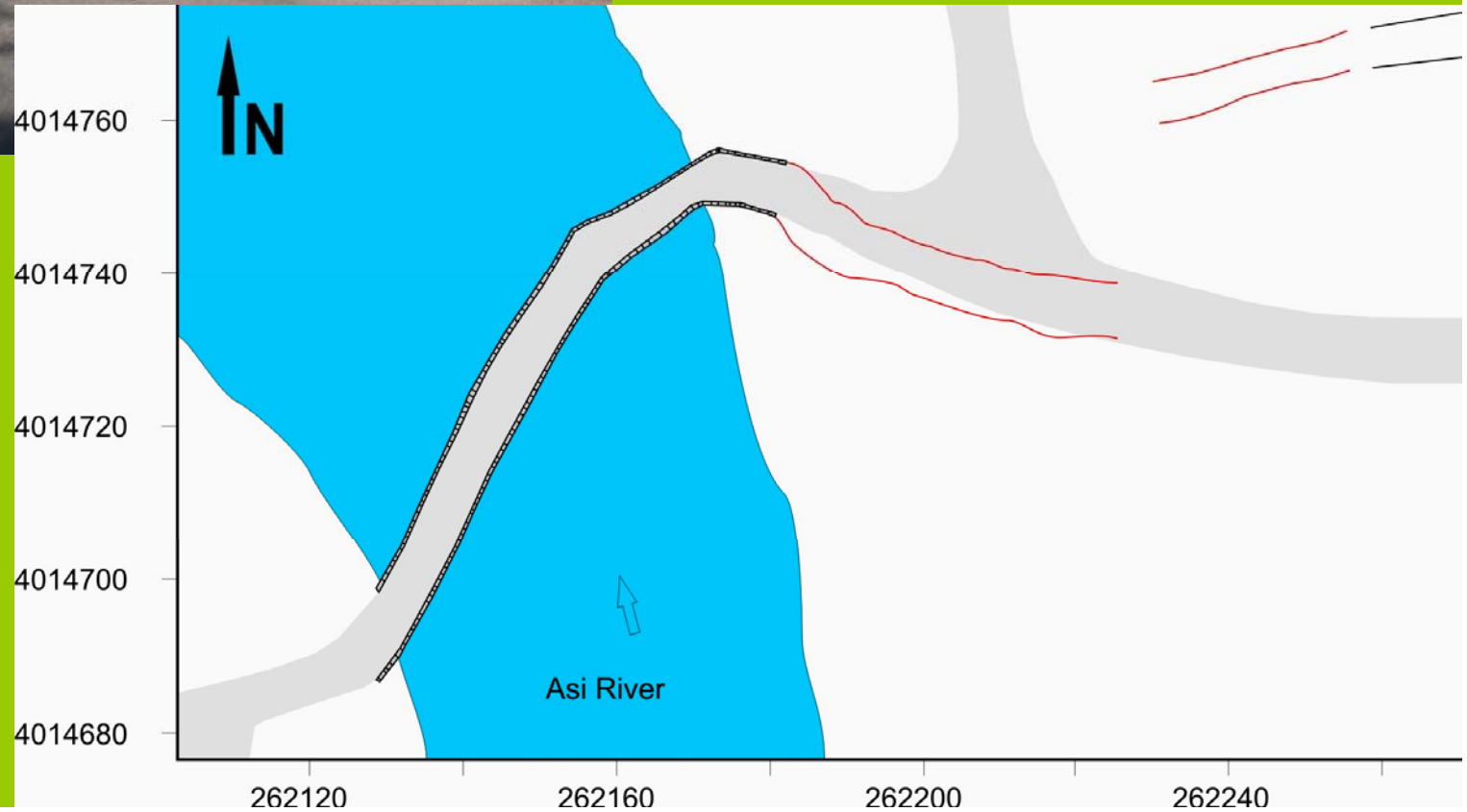


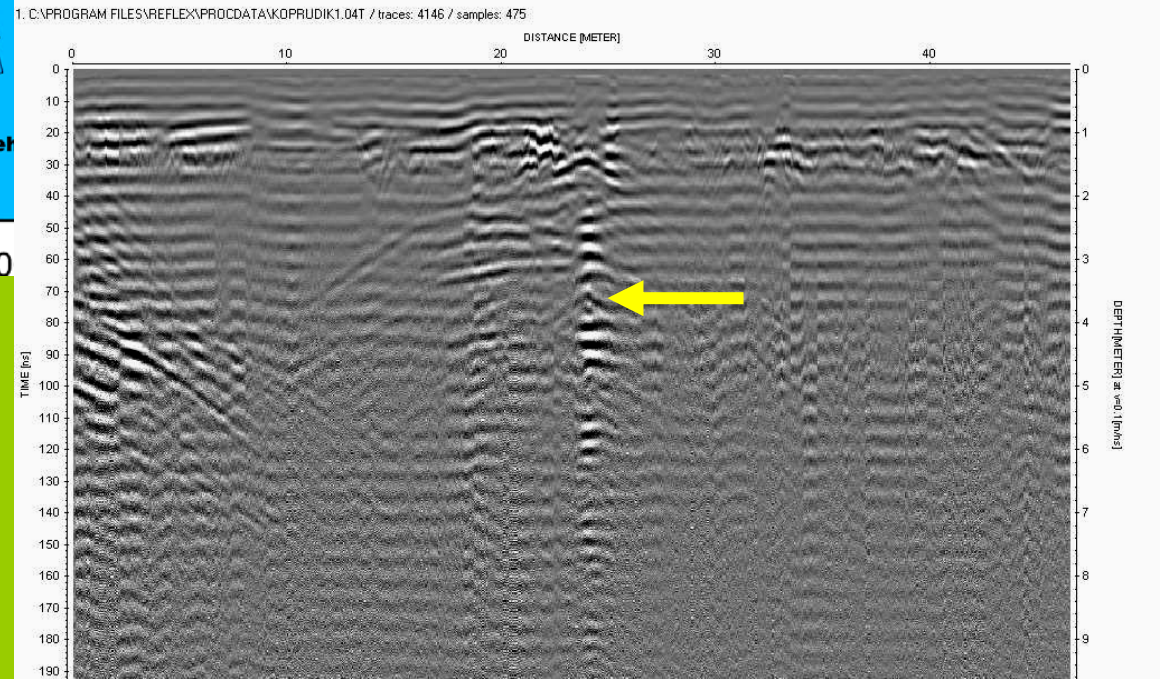
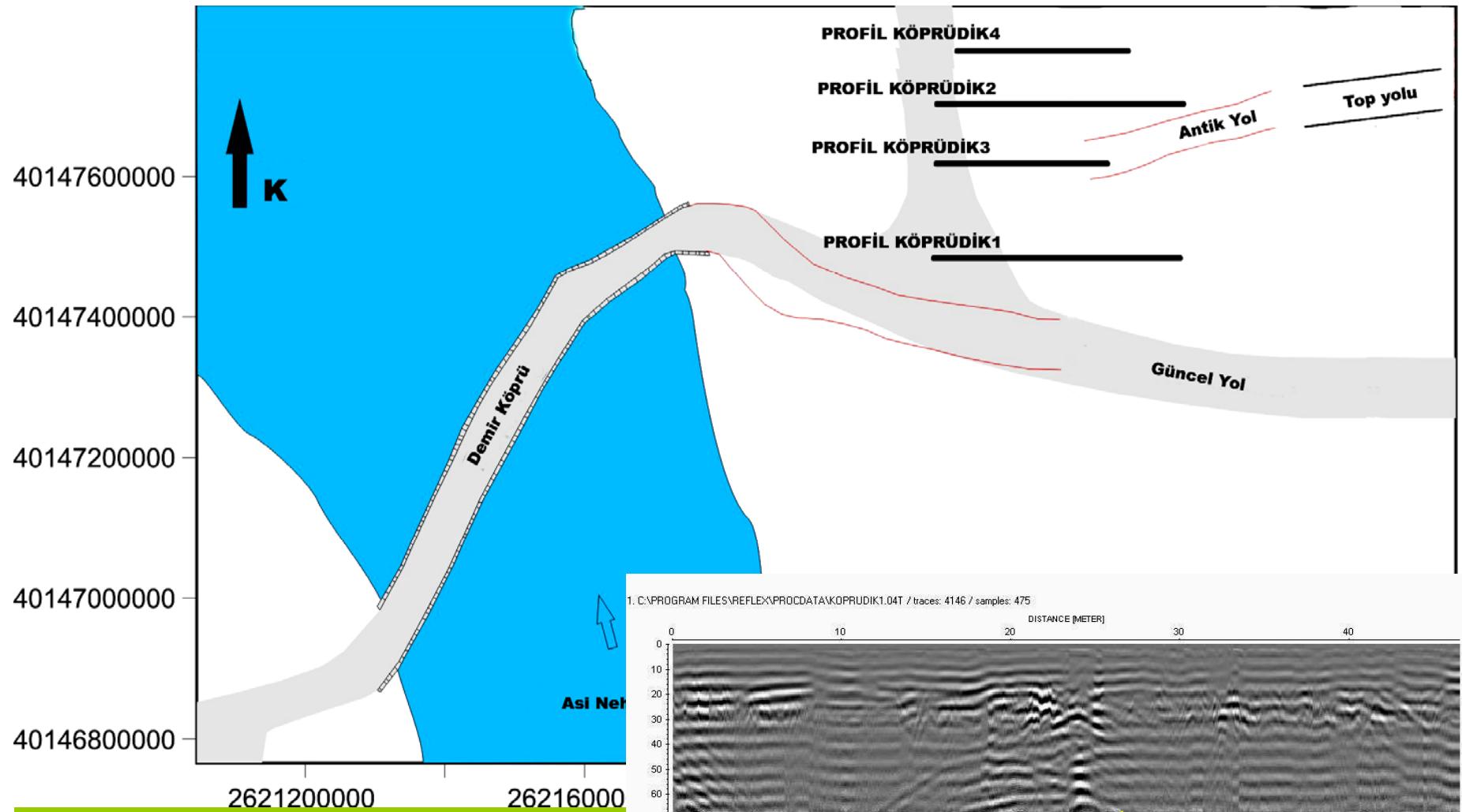


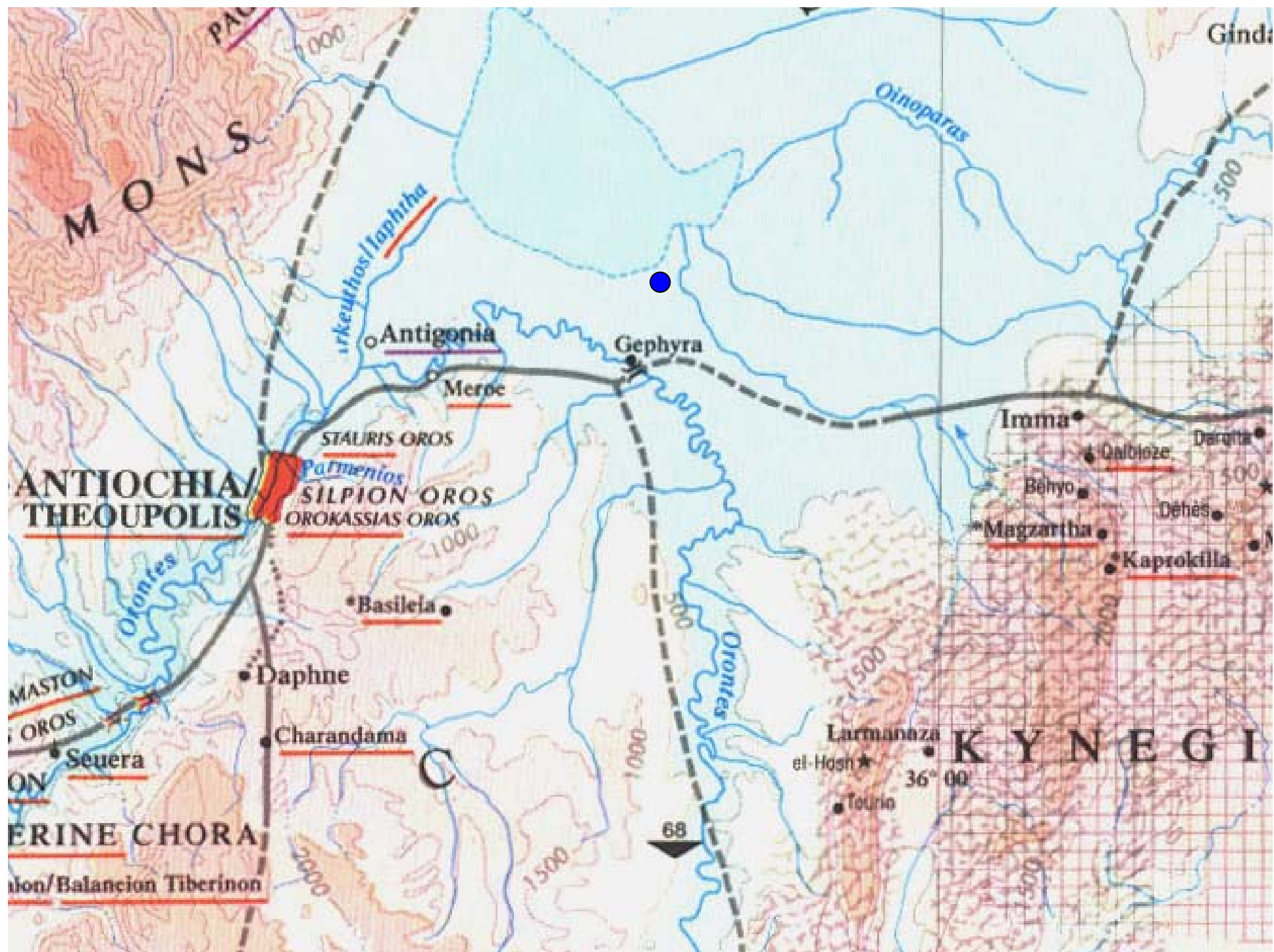




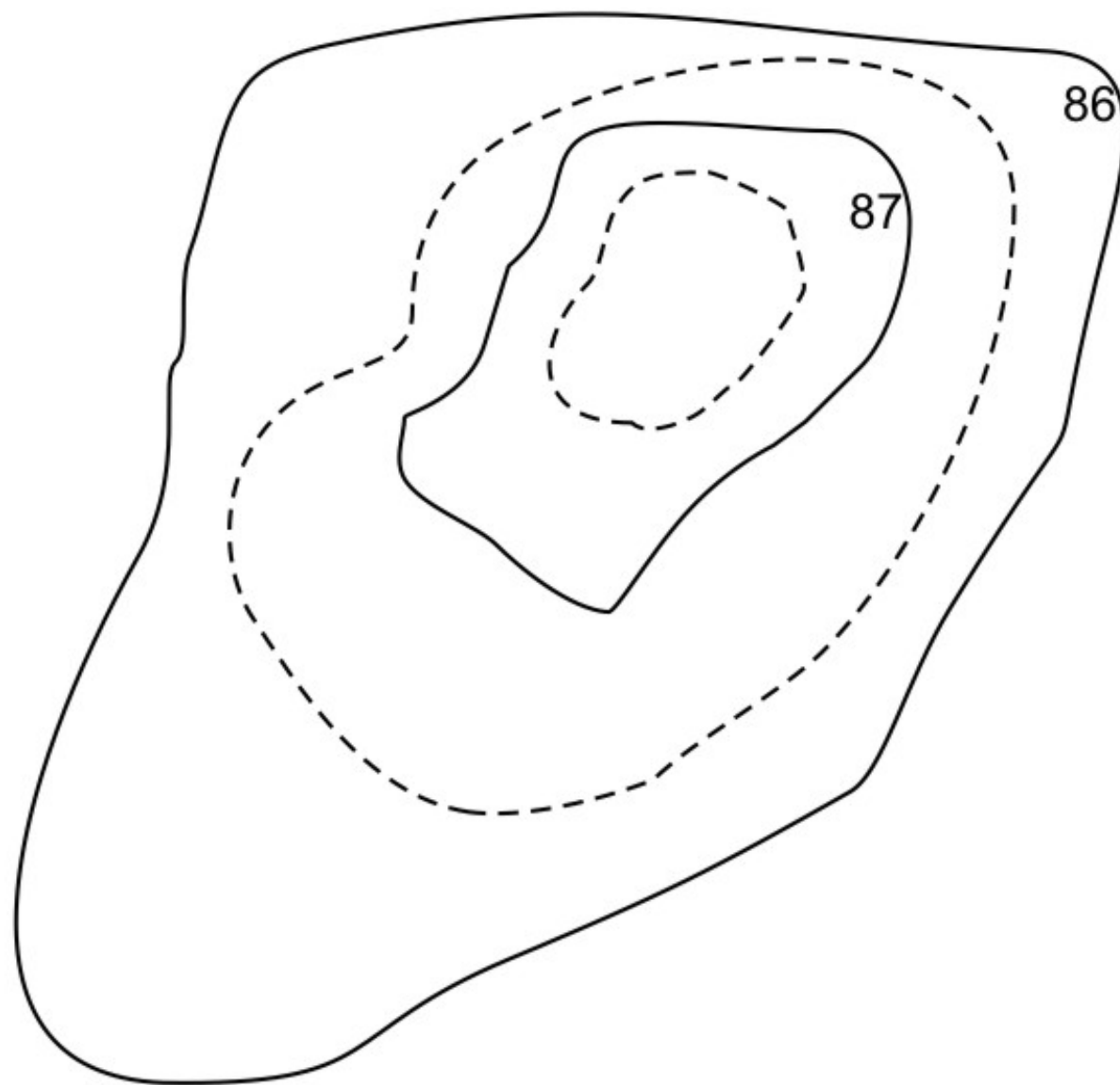






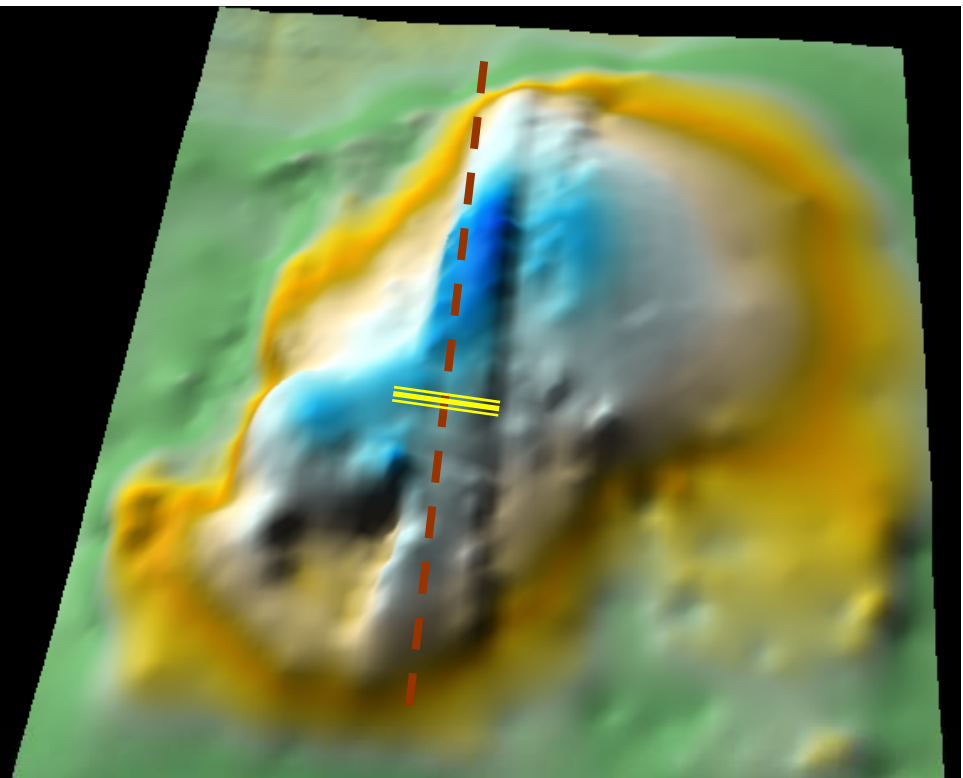
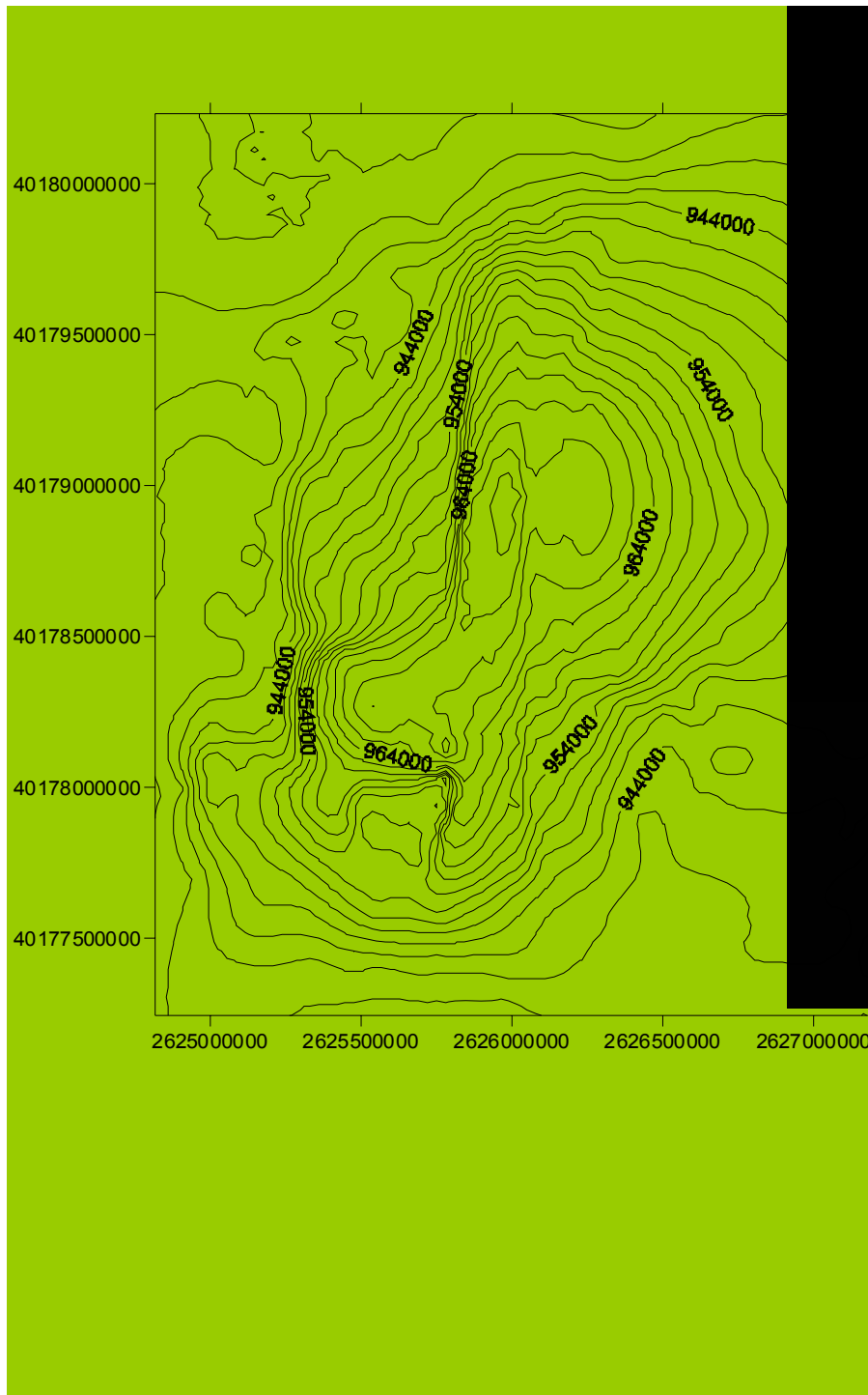




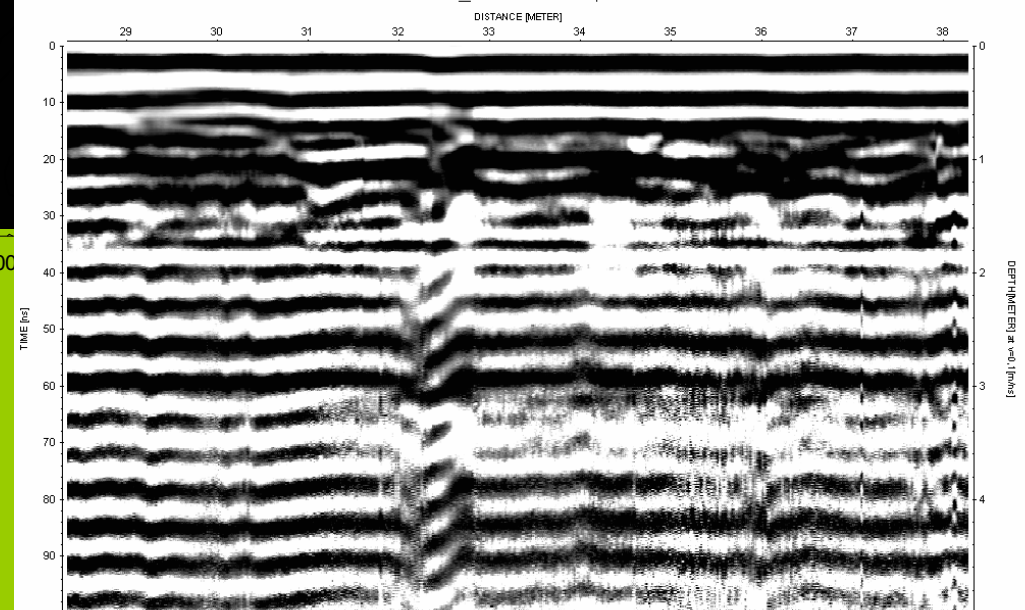


K
↑

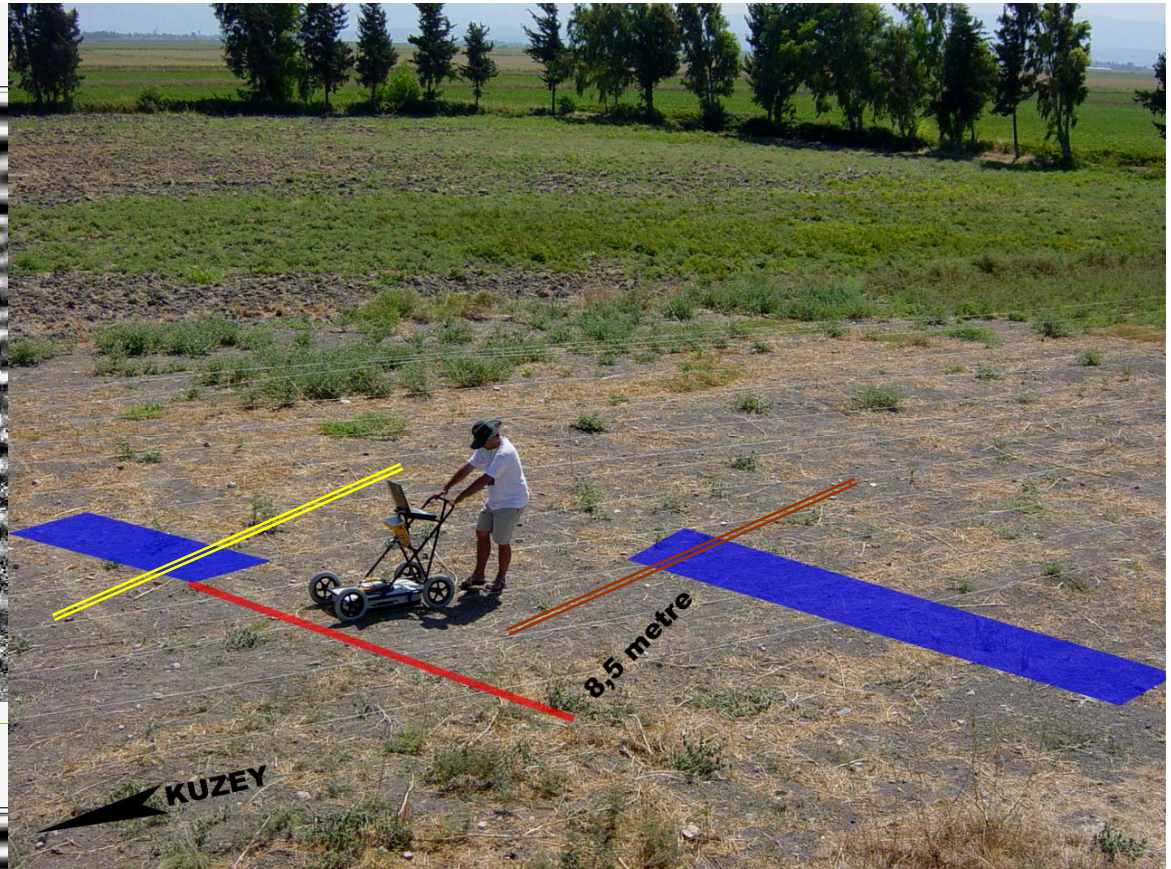
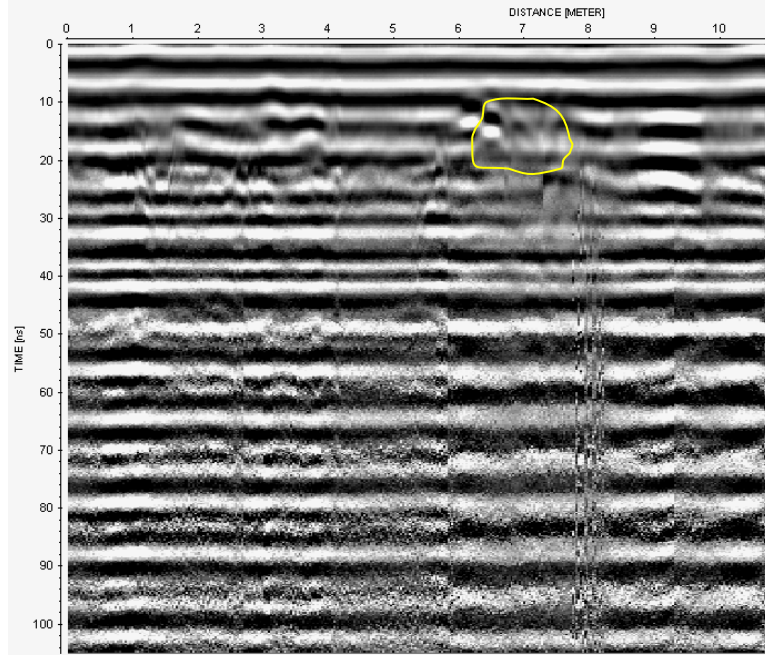
100 m



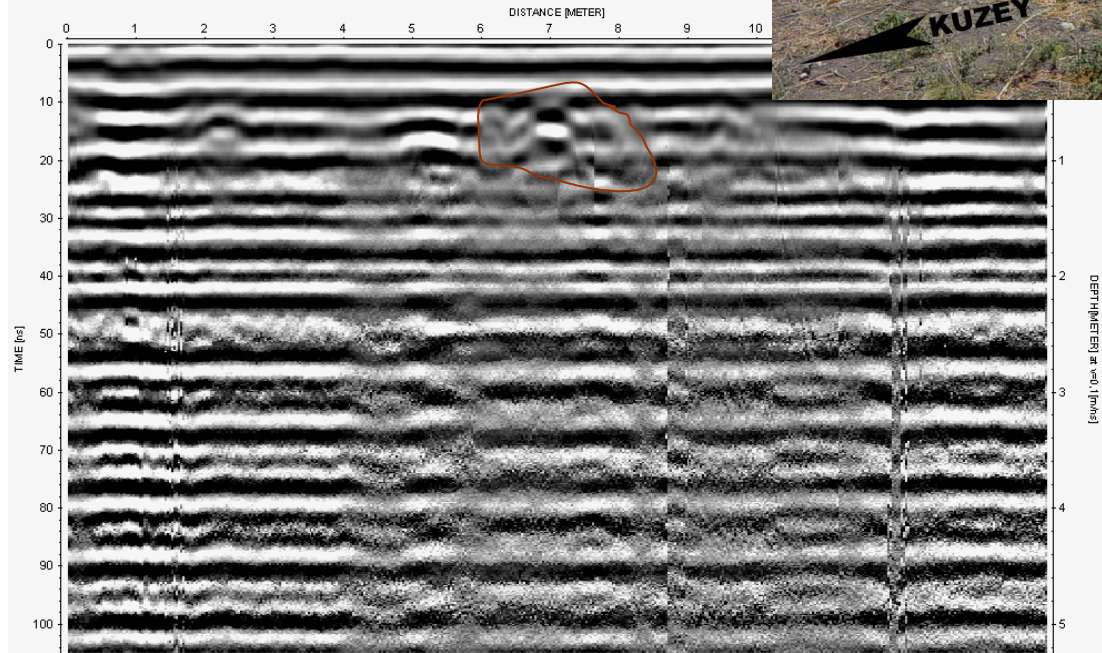
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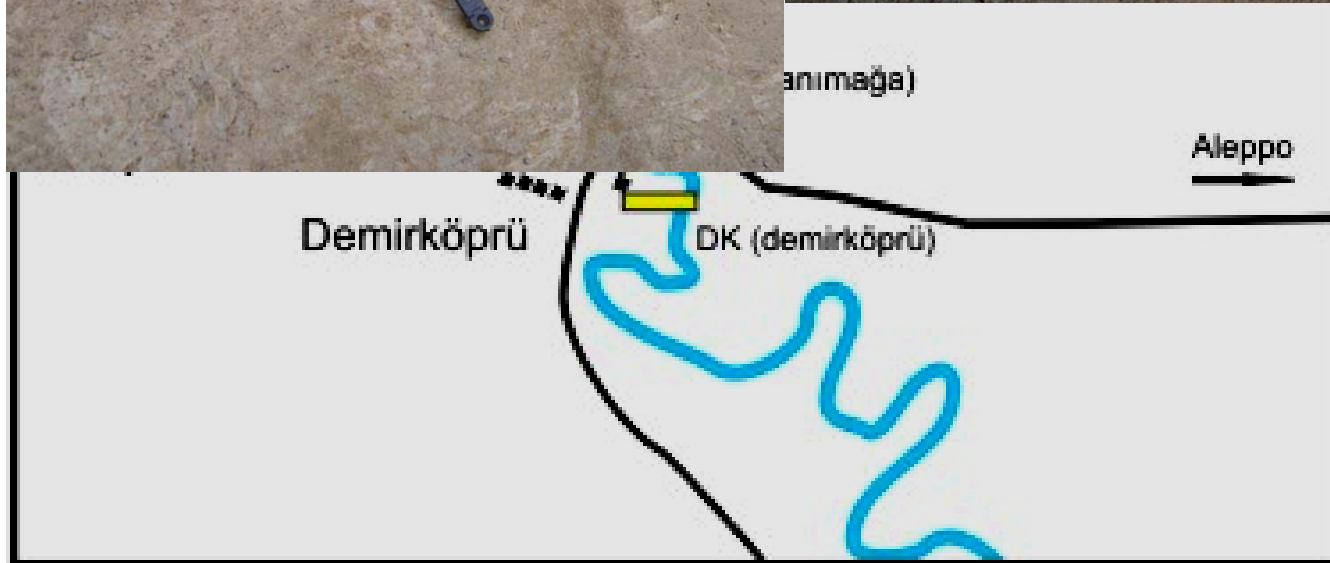
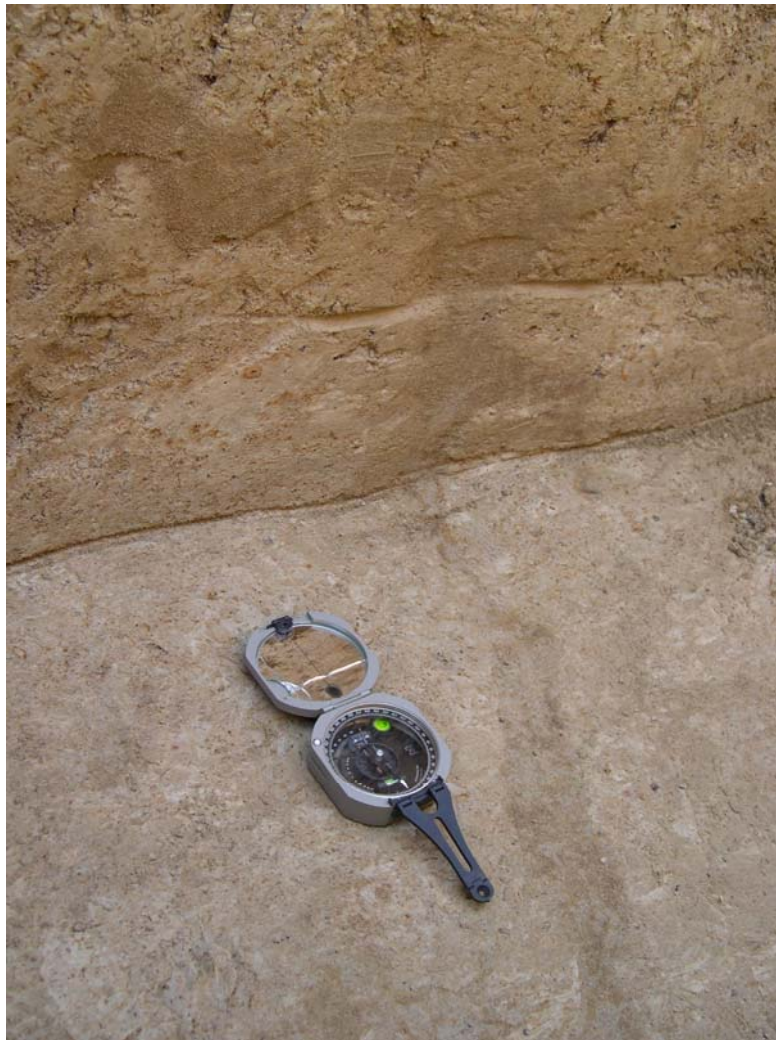


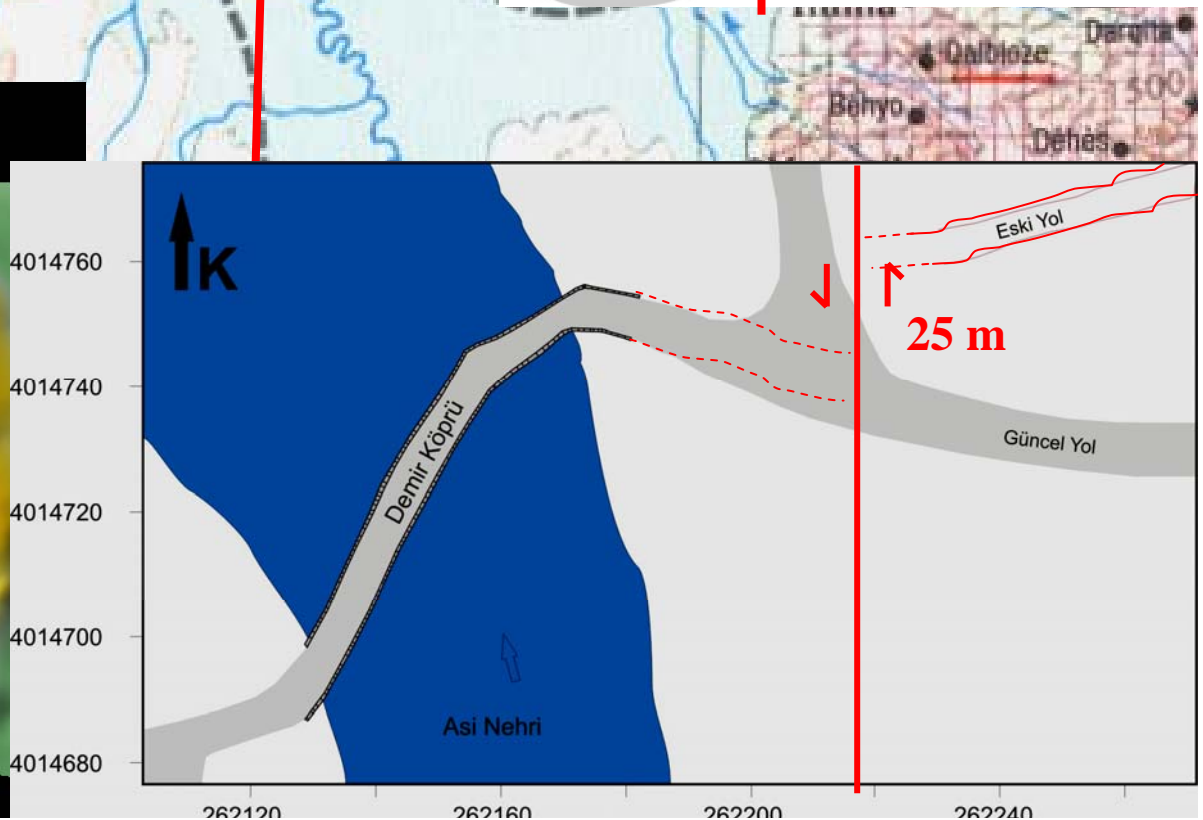
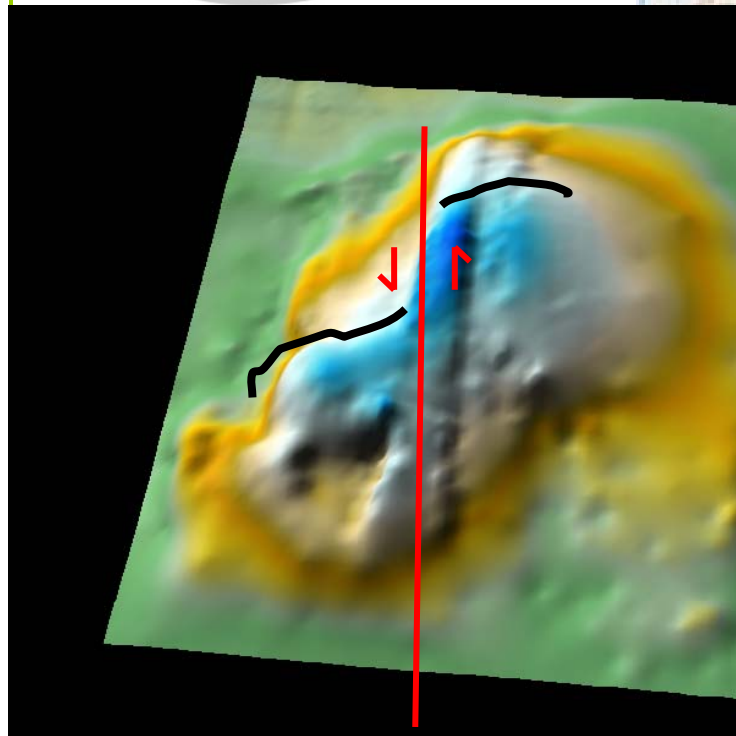
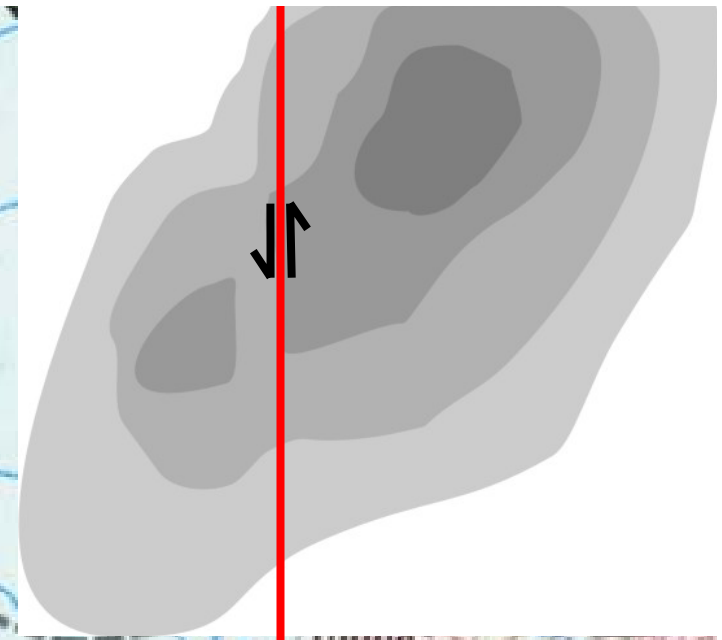
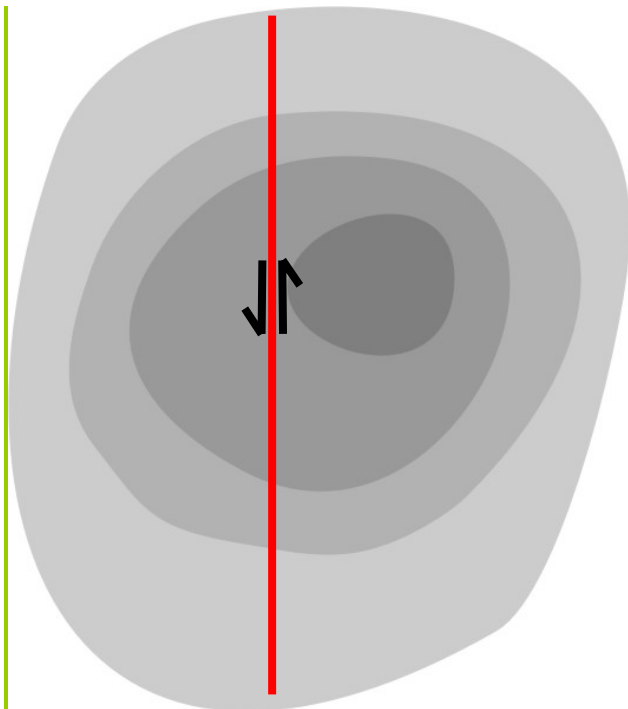
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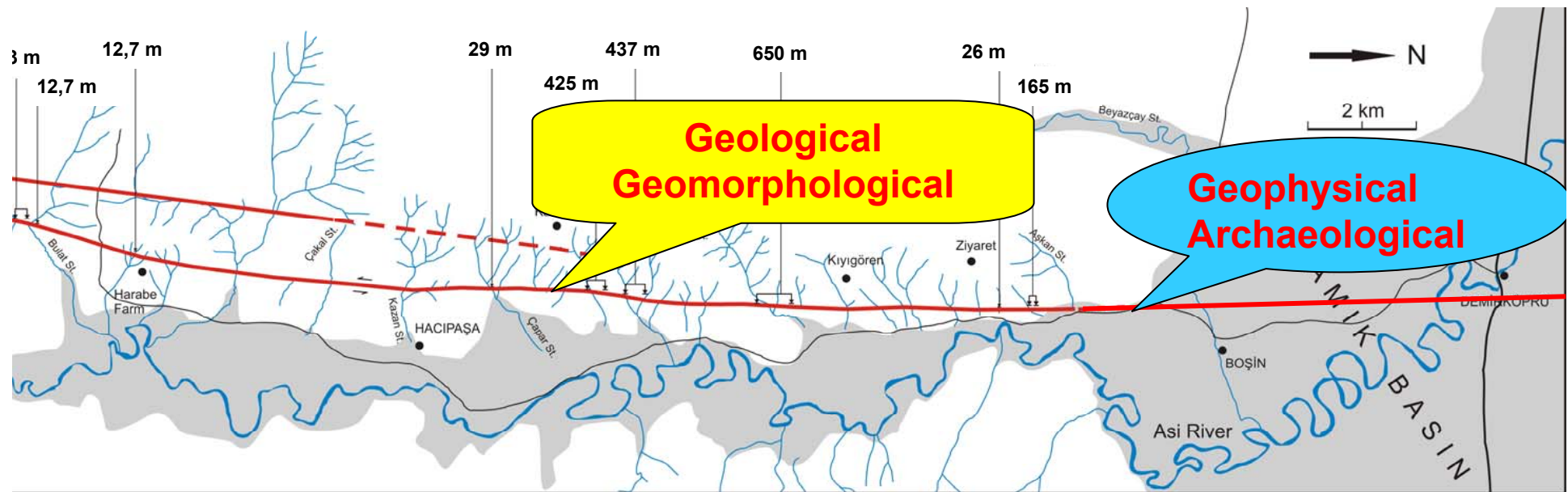


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CONCLUSION

Geological and morphological evidences are limited to locate fault traces because either they are removed by man-made activity and erosion or they are covered by rapid sedimentation

Archaeological data provides valuable information and integration of geological, morphological, geophysical and archaeological data enables us to locate the fault trace precisely

Archaeological data also provides reliable information about the slip rate

