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no. 93-568

U.S. GEOLOGICAL SURVEY
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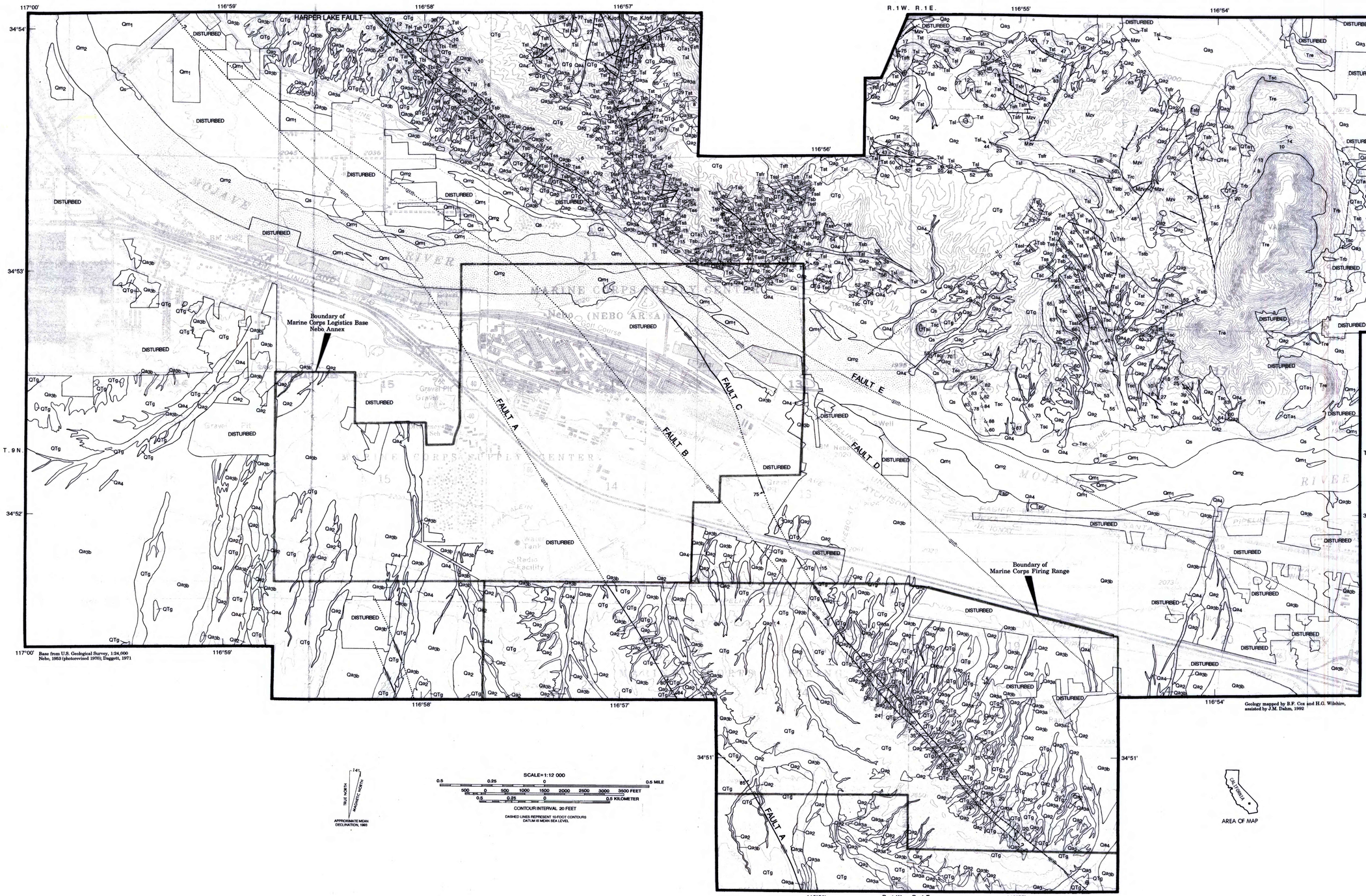
OPEN-FILE REPORT 93-568
Plate 1
(Explanatory pamphlet accompanies map)

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

GEOLOGIC MAP OF THE AREA AROUND THE NEBO ANNEX, MARINE CORPS LOGISTICS BASE, BARSTOW, CALIFORNIA

By
Brett F. Cox and Howard G. Wilshire
1993



Base from U.S. Geological Survey, 1:24,000
Nebo, 1953 (photorevised 1970); Daggett, 1971

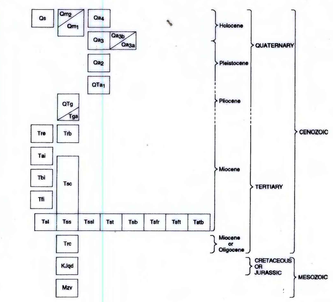
Geology mapped by B.F. Cox and H.G. Wilshire, assisted by J.M. Dahm, 1992

SCALE = 1:12 000
0.5 0 0.25 0.5 MILE
500 0 500 1000 1500 2000 2500 3000 3500 FEET
0.5 0 0.25 0.5 KILOMETER
CONTOUR INTERVAL 20 FEET
DASHED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1993
TRUE NORTH
MAGNETIC NORTH

AREA OF MAP

CORRELATION OF MAP UNITS



LIST OF MAP UNITS

[See accompanying pamphlet for detailed unit descriptions]

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- Qs — Sand dunes (Holocene)
- Alluvium of Mojave River (Holocene)–Divided into:
  - Qmy — Unit 2–Alluvial deposits with little or no plant cover
  - Qmy — Unit 1–Alluvial deposits with moderate plant cover
- Alluvial-fan deposits (Holocene to Pliocene)–Divided into:
  - Qa4 — Unit 4 (Holocene)–Alluvium of active channels
  - Qa3 — Unit 3 (Holocene and Pleistocene)–Undissected to slightly dissected alluvial deposits subject to occasional flooding. Locally divided into:
    - Qa3b — Subunit 3b–Deposits without conspicuous soil development or desert varnish
    - Qa3a — Subunit 3a–Deposits with weakly to moderately developed soils and desert varnish
  - Qa2 — Unit 2 (Pleistocene)–Moderately dissected alluvial deposits of inactive fan surfaces, with tight pavement of moderately to well varnished clasts
  - QTa1 — Unit 1 (Pleistocene and Pliocene?)–Strongly dissected alluvial deposits; soils and pavements largely eroded
- QTg — Gravel and conglomerate (Pleistocene? to Miocene?)–Profoundly dissected gravel and conglomerate of old alluvial fans. Locally divided into:
  - Tga — Andesitic gravel and monolithologic breccia (Pliocene? or Miocene?)–Gravel, conglomerate, and breccia with clasts of porphyritic andesite
- Trc — Rhyodacite of Elephant Mountain (Miocene)
- Trb — Rhyodacitic breccia and sandstone (Miocene)
- Ta — Intrusive andesite (Miocene)
- Tb — Intrusive basalt (Miocene)
- Tf — Intrusive felsite (Miocene)
- Sedimentary and volcanic rocks (Miocene)–Divided into:
  - Tsc — Conglomerate and sandstone
  - Tsl — Limestone
  - Tss — Sandstone
  - Tssl — Sandstone and limestone
  - Tst — Tuff
  - Tsb — Sedimentary breccia
  - Tsfr — Red felsite
  - Tsft — Tan felsite
  - Tstb — Tuff breccia and felsite flows
- Trc — Red conglomerate and sandstone (Miocene or Oligocene)
- KJqd — Quartz diorite (Cretaceous or Jurassic)
- Mzv — Metavolcanic rocks (Mesozoic)

CONTACT– Dashed where approximately located. Arrow indicates dip.

FAULT–Dashed where approximately located; dotted where concealed by alluvium or human disturbance; queried where doubtful. Single arrow indicates dip. Paired arrows indicate sense of lateral slip on strike-slip faults. U, upthrown side; D, downthrown side.

MYLONITIC SHEAR ZONE–Arrow indicates dip of mylonitic foliation

STRIKE AND DIP OF BEDS

- Inclined
- Vertical
- Overturned
- Horizontal

STRIKE AND DIP OF TECTONIC CLEAVAGE

STRIKE AND DIP OF FOLIATION

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.