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

Prepared in cooperation with the Afghan Geological Survey
under the auspices of the U.S. Department of Defense
Task Force for Business and Stability Operations

OPEN-FILE REPORT 2013–1180
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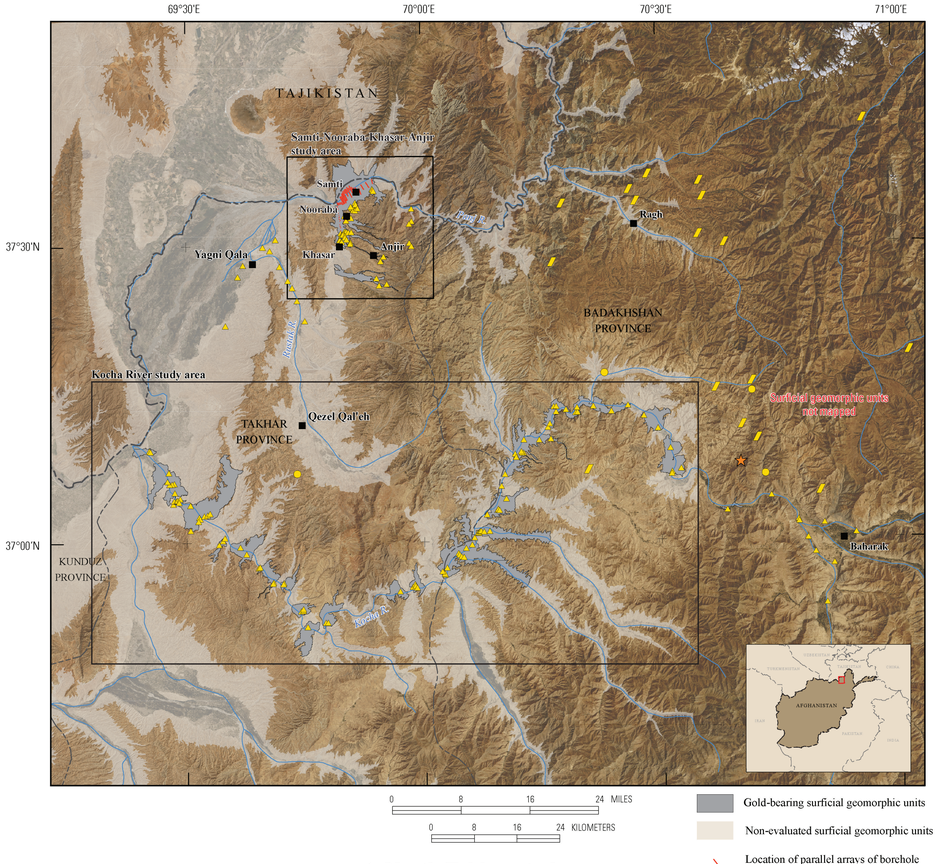
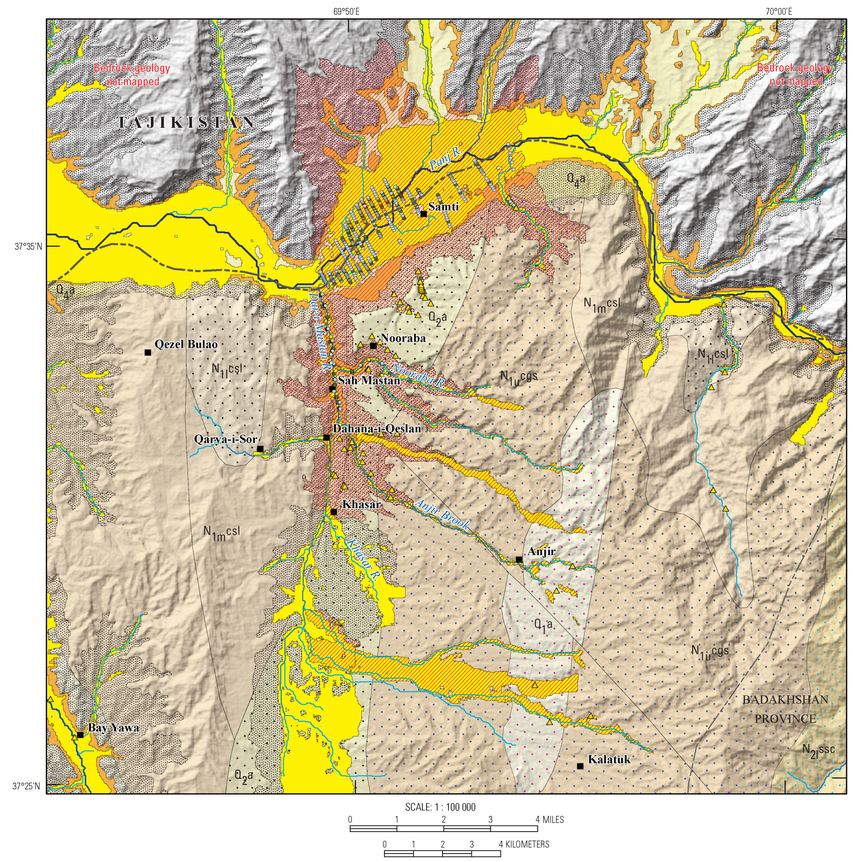
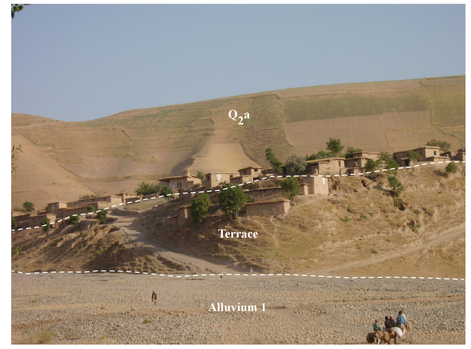
Figure 6



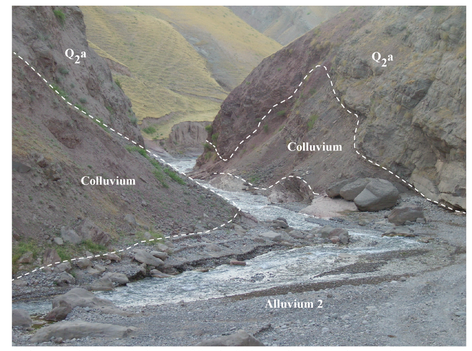
***A*. North Takhar study areas.**



***B*. Samti-Nooraba-Khasar-Anjir study area.**



D. Photograph showing the alluvium, terrace, and conglomerate and sandstone terrain features of Samti village. Creative Commons image courtesy of nabard19 on Flickr.



E. Photograph of a small tributary of the Dar-i-Mastan River in the Nooraba-Khasar-Anjir area, showing little alluvium in a narrow, steep-sided valley, typical of the region. Creative Commons image courtesy of nabard19 on Flickr.

EXPLANATION FOR FIGURES 6*A–E*

DESCRIPTION OF MAP UNITS

Layered Rocks

- Q_4a Conglomerate and sandstone (Holocene)
- $Q_{34}a$ Conglomerate and sandstone (Holocene and late Pleistocene)
- Q_3a Conglomerate and sandstone (late Pleistocene)
- Q_2a Conglomerate and sandstone (middle Pleistocene)
- Q_2loe Loess (middle Pleistocene)
- Q_1a Conglomerate and sandstone (early Pleistocene)
- $N_{2u}cgs$ Conglomerate and sandstone (late Pliocene)
- N_2ssc Sandstone and conglomerate (early Pliocene)
- $N_{1u}cgs$ Conglomerate and sandstone (late Miocene)
- $N_{1m}csl$ Clay and siltstone (middle Miocene)
- $N_{1l}csl$ Clay and siltstone (early Miocene)
- P_2csh Clay and shale (Eocene)
- KP_1ld Limestone and dolomite (Paleocene and Late Cretaceous)
- K_2ssl Sandstone and siltstone (Late Cretaceous)
- K_1ssc Sandstone and conglomerate (Early Cretaceous)
- $C_{1n}bss$ Basalt and sandstone (Early Carboniferous (Namurian))
- Ossl Sandstone and siltstone (Ordovician)
- X_1gn Gneiss (early Paleoproterozoic)

Plutonic Rocks

- T_1gr Granite (Early Triassic)
- C_1dig Diorite and granodiorite (Early Carboniferous)
- C_1gbd Gabbro and diorite (Early Carboniferous)

Geomorphic Unit Classification

- Gold-bearing alluvium 1 / Non-evaluated alluvium 1 (Quaternary)
- Gold-bearing alluvium 2 / Non-evaluated alluvium 2 (Quaternary)
- Gold-bearing terraces / Non-evaluated terraces (Quaternary)
- Gold-bearing colluvium, derived from local underlying bedrock / Non-evaluated colluvium, derived from local underlying bedrock (Quaternary and Tertiary)

EXPLANATION OF MAP SYMBOLS

Minerals (figs. 6*A–C*)

- Vein gold
- Skarn copper, gold-bearing
- Gold occurrence (unclassified)

Gold sampling from previous investigations

- Concentration sampling point

Boreholes, gold content in milligrams per cubic meter (mg/m³)

- 1–100
- 100–400
- 400–800
- 800–2,000
- 2,000–4,000

Base Layers (figs. 6*B, C*)

Strahler stream order

- 3
- 4
- 5
- 6
- 7
- 8

DATA SOURCES

Shaded relief derived from Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) 30-meter Global Digital Elevation Model (GDEM) Version 2 data.

Image base layer data derived from Landsat 7 imagery.

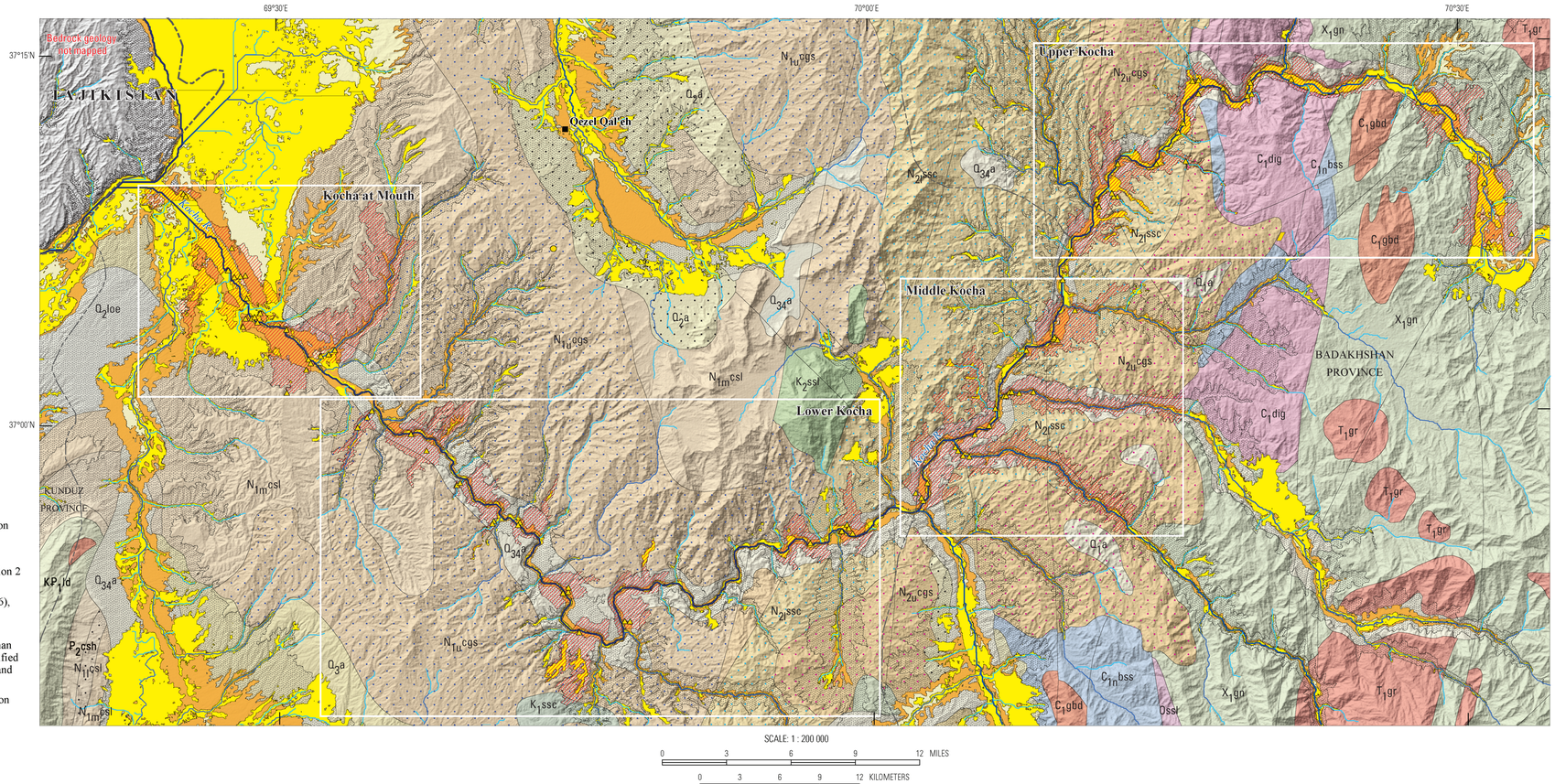
Hydrography and geomorphology derived from ASTER GDEM Version 2 data.

Layered and plutonic rock descriptions from Doebrich and Wahl (2006), modified from Abdullah and Chmyriov (1977) and Abdullah and others (1977).

Placer gold concentration points and borehole locations from the Afghan Geological Survey. Vein gold, gold-bearing skarn copper, and unclassified gold occurrences from Abdullah and Chmyriov (1977) and Abdullah and others (1977).

Cultural data and political boundaries from the Afghanistan Information Management Service (AIMS) Web site (http://www.aims.org.af).

Projection: Universal Transverse Mercator (UTM), zone 42 north; World Geodetic System (WGS) 1984 Datum.



***C*. Kocha River study area.**

Figure 6. Maps and photographs showing the geologic and geomorphic units of the placer gold deposits in the North Takhar Area of Interest, Takhar Province, Afghanistan.