GOVERNMENT OF PAKISTAN
MINISTRY OF INDUSTRIES AND NATURAL RESOURCES

GEOLOGICAL SURVEY OF PAKISTAN

PK-22
PLATE 1

Base by Survey of Pakistan

Geology by Karl W. Stauffer, mapped in 1963–64 mainly by photogeologic interpretation. Data are insufficient for complete geologic solution in certain areas

RECONNAISSANCE GEOLOGIC MAP OF THE KHYBER PASS, PAKISTAN

SCALE 1:100 000

1 0 1 2 3 4 5 6 7 8 9 10 MILES

1 0 1 2 3 4 5 6 7 8 9 10 KILOMETERS

PREPARED AS PART OF THE MINERAL EXPLORATION AND DEVELOPMENT PROGRAM
SPONSORED BY THE GOVERNMENT OF PAKISTAN AND THE UNITED STATES
AGENCY FOR INTERNATIONAL DEVELOPMENT

EXPLANATION

SEDIMENTARY AND METAMORPHIC ROCKS

QUATERNARY

Recent

Qal — Alluvial deposits
Unconsolidated clay, sand, and gravel

Pleistocene

Qt — Terrace deposits
Largely unconsolidated terrace deposits of clay, sand, and gravel

TERTIARY

Oligocene and Miocene

Tm — Murree Formation
Mostly gray sandstone with some reddish-brown shale

Eocene

Tk — Kohat Formation
Cream colored nummulitic limestone

Paleocene

Ts — Sedimentary rocks, undivided
Shale, sandstone, and limestone of all or parts of the Hangu Formation, Lockhart Limestone, and Patala Formation

CARBONIFEROUS TO JURASSIC(?)

JCk — Khyber Limestone*
Massive, gray, unfossiliferous limestone

DEVONIAN(?) TO PERMIAN

PDa — Ali Masjid Formation*
White buff and quartzite with some calcareous sandstone

COs — Shagai Limestone*
Limestone and dolomite; Ordovician to Devonian and perhaps Carboniferous in age

ORDOVICIAN(?) TO CARBONIFEROUS(?)

CO — Biotite-quartz schist and related metasedimentary rocks

Landi Kotal Slate*

Is / COls — Slate
Mostly greenish-gray slate, with some limestone interbeds Is; *includes Silurian strata but age may extend from Ordovician to Carboniferous*

COll — Limestone and slate
Interbedded limestone and slate, probably Ordovician to Carboniferous in age

PLUTONIC ROCKS

m — Mafic intrusive rocks
Dikes and sills largely dolerite, probably late Tertiary in age

wg — Warsak Granite-Gneiss
Partly porphyritic, biotite-aegerite-arfvedsonite gneiss

mi — Migmatite
Coarse-grained mixed rock composed of lenses and sheets of silicic intrusive rock in slates and schists of the Landi Kotal Slate

*Stratigraphic names are formal names used in published reports and whose status with respect to the Stratigraphic code of Pakistan is currently under examination

Contact

U / D Fault
Dashed where approximately located; dotted where concealed; U, *upthrown side;* D, *downthrown side*

UPPER PLATE (?) Thrust fault
Dashed where approximately located; dotted where concealed; T, *upper plate*

Anticline
Showing crestline and direction of plunge dashed where approximately located

Syncline
Showing troughline and direction of plunge

Inclined / Horizontal
Strike and dip of beds

Approximate strike and direction of dip of beds or foliation obtained from aerial photographs

Strike and dip of bed and bearing and plunge of lineation

Bearing and plunge of lineation

Districts having the same name as their headquarters are not otherwise named. The spelling of names taken from best available Survey of Pakistan sources; populated places classified from Ministry of Home Affairs 1961 census tables. Boundaries shown on this map are not necessarily authoritative