

**EXPLANATION**

**Qal**  
Recent alluvium  
Unconsolidated surficial deposits of silt, sand, and gravel; includes streambed deposits and dune sand

**Qea**  
Early Recent deposits  
Consolidated and unconsolidated deposits of coarsely stratified sand and gravel; includes alluvial plain deposits, surface pebbles mostly covered with desert varnish

**Qk**  
Koh-i-Sultan Volcanic Group  
Agglomerate, tuff, and andesitic lava

**Tr**  
Rakshani formation\*  
Green and brown sandstone and shale, crossbedded in places; includes some conglomerate and limestones

**TKc TKcg**  
Chagai intrusions\*  
TKc; mostly quartz monzonite and granodiorite; some granite; quartz diorite near contacts with Sinjrani volcanic group\*  
TKcg; gabbro

**Kh**  
Humai formation\*  
Gray and green conglomerate, sandstone, and grit, includes a red basal conglomerate as much as 240 feet thick

**Ks Ksr Ksl**  
Sinjrani volcanic group\*  
Ks; Sinjrani volcanic group\* undifferentiated; mostly dark green and black andesite; also includes diabase, basalt, quartz andesite, dacite, rhyolite, tuff, and limestone.  
Ksr; rhyolite.  
Ksl; massive white limestone

— Contact  
Dashed where approximately located

— Fault  
Dashed where approximately located

15  
Strike and dip of beds

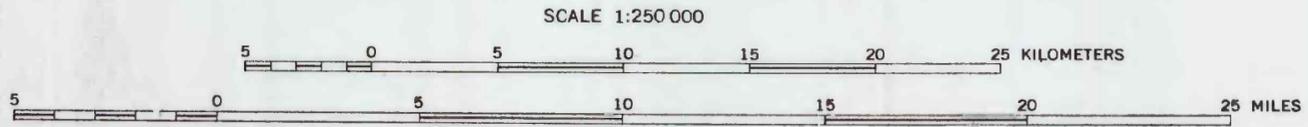
⊕  
Horizontal bed

x  
Travertine (onyx) marble

Cu-1  
Copper deposit

Fe-1  
Iron deposit

**GEOLOGIC MAP OF THE WESTERN CHAGAI HILLS, PAKISTAN**



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This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

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

Base by survey of Pakistan

Geology and base modified from Hunting Survey Corporation 1960, map number 22 by Raymond H. Nagell and Md. Ameen Khan

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