
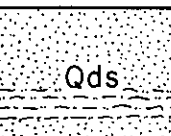

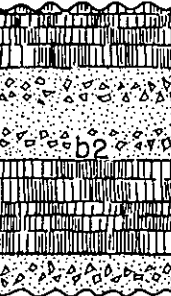






## GEOLOGIC COLUMN AND UNIT DESCRIPTION

AGE	ROCK UNIT	LITHOLOGY; THICKNESS WHERE KNOWN	UNIT DESCRIPTION
QUATERNARY	Alluvium	 Silt, clay, sand and gravel; thickness less than 10 meters	Alluvium, consisting chiefly of silt, clay, sand and gravel of aeolian origin, covers river flats and playas.
	Diluvium	 Qds: dune sand and silt; thickness less than 50 m	Diluvium is divided into Qds and Qdl. Qds consists of sand and silt that were deposited in fluvio-lacustrine basins of the Mongolian plateau during late Pleistocene to be subsequently exposed and wind-eroded. Qdl consists chiefly of loess and sandy loess interstratified with aeolian sand and clay.
		 Qdl: loess, sandy loess, sand and clay; thickness less than 30 m	
TERTIARY	UNCONFORMITY		
	Neogene basalt	 Augite-olivine basalt, tuff and breccia; thickness several hundred meters	Neogene basalt consists of superposed flows and sheets of augite-olivine basalt accompanied by tuff and sand. The basalt may have erupted during the period from Miocene to Pliocene to form the Mongolian plateau. The thickness locally attains several hundred meters.
	UNCONFORMITY		
MESOZOIC	Cretaceous rhyolite	 Rhyolite, dacite, breccia and tuff; thickness several hundred meters	Flows and sheets of rhyolite, accompanied by tuff and breccia, is distributed mainly on the west of the Iuan Ho[河], and may be several hundred meters thick.
	UNCONFORMITY		
	Cretaceous granite	 Granite, granite porphyry and quartz porphyry	Cretaceous granite, accompanied by granite porphyry and quartz porphyry, shows tabular joints. It intrudes the Jurassic rocks and is distributed in the southern part of the map area.
	INTRUSIVE CONTACT		
	Jurassic formation	 Sandstone, shale, tuffaceous shale, conglomerate and coal; thickness less than 1,000 m	The Jurassic formation probably corresponds to the middle Jehol formation, which is Upper Jurassic in age. It consists of sandstone, shale, tuffaceous shale, conglomerate, and thin coal seams. Old native coal pits are found at San-chia[三家], Sun-chieh-tzu-kou[孙家子溝], and Kan-kou-tzu[干溝子].
UNCONFORMITY			
Jurassic volcanic complex	 Cryptocrystalline andesite, trachyte, porphyritic andesite, breccia, tuff and tuffaceous conglomerate; thickness less than 2,000 m	The Jurassic volcanic complex consists of flows and sheets of cryptocrystalline andesite, trachyte, porphyritic andesite, breccia, and variegated tuff and conglomerate. It corresponds to the lower Jehol formation which ranges from Uppermost Triassic to Lower Jurassic in age.	
	(Column not drawn to scale)		

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