
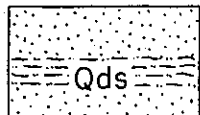

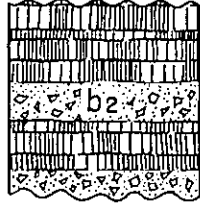
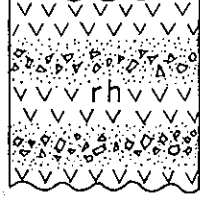
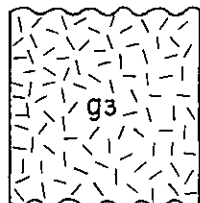
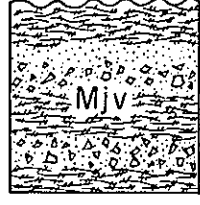
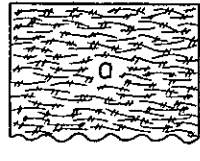
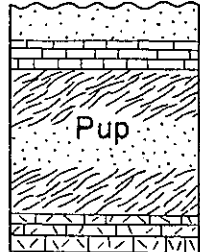


## GEOLOGIC COLUMN AND UNIT DESCRIPTION

AGE	ROCK UNIT	LITHOLOGY; THICKNESS WHERE KNOWN	UNIT DESCRIPTION
QUATERNARY	Alluvium	 Qd Silt, clay, sand and gravel; thickness less than 10 meters	Alluvium, consisting of silt, clay, sand and gravel, is aeolian in origin, having been transported from deserts. It covers river flats and playas.
	Diluvium	 Qds Qds: dune sand and silt; thickness less than 50 m	Diluvium is divided into Qds and Qdl. Qds consists of dune sand and silt. It was deposited in the fluviolacustrine basins of the Mongolian plateau during the late Pleistocene epoch, and was subsequently exposed and wind-eroded. Qdl consists of loess and sandy loess interstratified with aeolian sand and clay.
		 Qdl Qdl: loess, sandy loess, sand and clay; thickness less than 30 m	
TERTIARY	Neogene basalt	 b2 Augite-olivine basalt, tuff and sand	Neogene basalt is exposed north of the lakes Ta-erh Hsi [塔儿海] and Wang-niu P'ao-tzu [汪牛堡] south of Ching-p'eng [庆棚]. This is the Mongolian plateau basalt consisting of superposed flows and sheets of basalt lava, intercalated with tuff and sand. The thickness varies greatly, ranging from 20 meters to more than 500 meters. The lava erupted and overflowed presumably during the Pliocene epoch to cover the Paleogene peneplains.
	Cretaceous rhyolite	 rh Rhyolite, dacite, breccia and tuff; thickness less than 1,000 m	Cretaceous rhyolite, in association with a minor amount of dacite, is generally accompanied by tuff and breccia. It probably erupted during the Middle to Lower Cretaceous. In places it shows a transition to granite porphyry or quartz porphyry. Phenocrysts of moonstone were discovered in the rhyolite exposed north of the Hsi-lin-kuo-lo [锡林郭勒].
MESOZOIC	Cretaceous granite	 gs Hornblende granite, biotite granite, granite porphyry and quartz porphyry	Cretaceous granite, consisting chiefly of coarse-grained hornblende granite and biotite granite, is accompanied by granite porphyry and quartz porphyry. It intrudes the Upper Paleozoic Linhsi formation (Pup) and the Jurassic volcanic complex (Mjv). Strong effects of metamorphism can be seen near the contact with the Linhsi formation.
	Jurassic volcanic complex	 Mjv Cryptocrystalline andesite, porphyritic andesite, breccia and tuff; thickness about 2,000 m	The Jurassic volcanic complex consists of flows and sheets of cryptocrystalline andesite, porphyritic andesite, and andesite breccia, with occasional intercalation of tuff. This may be a volcanic phase of the Lower Jehol formation.
	Andesite	 a Pyroxene andesite and amphibole andesite	Jurassic andesite, consisting of pyroxene andesite and amphibole andesite, is exposed in the northeastern corner of the map area. It may be a facies of the Jurassic volcanic complex.
	Linhsi formation	 Pup Graywacke, arkose, slate, limestone, mica schist, phyllite, hornfels and crystalline limestone; thickness several thousand meters	The Linhsi formation is a marine Permian formation consisting of graywacke, arkose, slate and limestone, locally accompanied by such metamorphic rocks as mica schist, phyllite, hornfels and crystalline limestone. As it is several thousand meters thick, it constitutes the bedrock of the map area. The name Linhsi formation was given by CHARDIN and LICENT (1924) to the formation in the Lin-hsi [林西] district, adjacent on the east (NK 50-3).
PALEOZOIC			

(Column not drawn to scale)

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