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TECTONIC MAP OF CHINA AND MONGOLIA

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EXPLANATION

The earth's crust can be divided into principal regions on the basis of differences in its state of tectonic mobility, and further subdivided into regions on the basis of differences in its gross physiographic and structural characteristics. Both principal regions and regions are outlined on Sheet 2; names of the latter and a few subregions appear below. They are analyzed in the accompanying table.

All regions exhibit at least partial development of a tectonic cycle, most have undergone continuing deformation for a long time, and some have been deformed by several orogenic cycles. On the map, the age of folding most important in tectonic development, the age of the last important metamorphism, the age of intrusion, or the principal post-orogenic deposition are shown by color. Lithology is shown by pattern or map boundaries.

Sedimentary and volcanic rocks deposited on the foldbelts are shown in many places on the map. These rocks are thick basin deposits formed as a result of crustal movements in foldbelts, or are sedimentary and volcanic rocks of various ages that form relatively thin deposits on broad tectonically stable regions.

Tectonic features and rock units are shown in their present outcrop position as indicated in geologic source material available in 1966.

ROCKS OF SHIELDS AND FOLDBELTS
(contacts dashed where inferred)

Geologic Time Scale for China and Mongolia	ARCHEAN	PROTEROZOIC	PHANEROZOIC				
			Sinian	Paleozoic		Mesozoic	Cenozoic
Major Orogenic Cycles	Archean Orogenies	Proterozoic Orogenies	No major Orogenies	Early Paleozoic Orogenies	Late Paleozoic Orogenies	Mesozoic Orogenies	Cenozoic Orogenies

Supra-Basement Rocks: separated from the basement by geophysical discontinuity at unconformity or intrusive contact

Basin deposits: mostly continental clastic sediments; volcanic rocks shown by overprint; generally in foldbelt depressions or foredeeps unconformably overlying more deformed rocks

Geosynclinal sedimentary rocks: mostly marine clastic sediments; carbonates widespread in some miogeosynclines; volcanic rocks, mostly submarine, of eugeosynclines, shown by overprint; generally strongly deformed

Basement Rocks

Weakly metamorphosed rocks; slate and phyllite (trends of foliation mostly inferred); some volcanic rocks

Strongly metamorphosed rocks: mostly schist and gneiss (trends of foliation generally inferred)

Felsic igneous intrusive rocks: mostly granitic batholiths; includes alkalic rock and quartz diorite

Mafic igneous intrusive rocks: mostly gabbroic plutons; includes diorite and anorthosite

Ultramafic igneous intrusive rocks: peridotite, dunite, and serpentine

Color indicates age of principal deposition

Color indicates age of folding most important in tectonic development

Color indicates age of metamorphism

Color indicates age of most intensive metamorphism

Color indicates age of intrusion

DEPOSITS COVERING SHIELDS AND FOLDBELTS

Thin surficial deposits: Quaternary alluvium, loess, sand dunes or Upper Tertiary continental deposits; Glaciers; Salt flats

Terrestrial volcanic rocks: flows and pyroclastics; generally little deformed — Mostly basalt and andesite; Mostly rhyolite

Pre-Cenozoic | Cenozoic

(Certain stratigraphic horizons are shown as boundaries of lithologic and tectonic significance, and selected phenomena are shown by limiting boundaries; dashed where inferred)

Map boundaries show base of

Quaternary and Tertiary deposits in China; mainly alluvial in east (one structure contour shown in North China Basins), alluvial and eolian in Sinkiang, lacustrine in Tibet

Quaternary loess deposits of significant thickness in China

Jurassic and Cretaceous deposits in eastern China; mainly continental clastic rocks, some coal
Mesozoic rocks in Tibet; mainly marine clastics and carbonates

Carboniferous rocks in northern China; mainly continental clastics with some coal and thin limestones
Carboniferous and Devonian rocks in southern and western China; mainly marine clastics and carbonates

Sinian and lower Paleozoic marine clastic and calcareous rocks

Map boundaries show limits of

Permian basalt flows in southern China, mainly continental, interlayered between marine limestones and continental clastics

DEPTH TO CRYSTALLINE OR SEVERELY DEFORMED ROCKS OF SHIELDS AND FOLDBELTS

(Depth generalized below average surface elevation of regions, shown in kilometers; dashed where inferred. Only one figure, indicating maximum known depth shown for small basins. Age of underlying crystalline or severely deformed rocks indicated by color)

Pre-Sinian — 10 — Late Paleozoic — 5

TECTONIC FEATURES

	Pre-Cenozoic	Cenozoic
Anticlinal axis		
Synclinal axis		
Approximate position and trend of undetermined number of fold axes		
Closely compressed anticline		
Dome, mostly over salt structures in Szechwan Basin		
Normal fault; hachures on the downthrown side		
Lateral fault; arrow shows apparent displacement		
Thrust fault; barbs on upthrown side		
Unclassified fault		
Buried fault or linear feature in basement		

Volcanic Features

Volcano: active; inactive

TECTONIC REGIONS

Principal region

(see index map on sheet 2 for names of principal regions)

ORDOS BASIN — Region

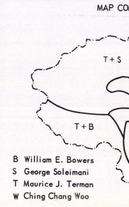
Kucha Basin — Subregion

LINE OF CROSS-SECTION

E — E' — E'' — E'''

Study Area boundary

MAP COMPILERS



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THE DELINEATION OF INTERNATIONAL BOUNDARIES ON THIS MAP MUST NOT BE CONSIDERED AUTHORITATIVE

100 0 100 200 300 400 500 Statute Miles
100 0 100 200 300 400 500 600 700 800 900 Kilometers
100 0 100 200 300 400 Nautical Miles

Base: World, 1:5,000,000; Sheets 2, 6, 7, and 8; 1964, American Geographical Society
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TECTONIC MAP OF CHINA AND MONGOLIA
SHEET 1