

Table 1.--Mesozoic stratigraphy of the Ordos (Shaanganning) Basin, China  
(after Institute of Geology, Chinese Academy of Geological Sciences, 1980; Han and Yang, 1980;  
Huang Difan and others, 1981; and Wuhan College of Geology, 1981)

Era	System	Series	Group Formation and Member		Thickness in meters (m) <sup>2</sup>	Description	Group, Formation, and Member			Series		
							Coal Deposits (Han and Yang, 1980)		Oil and Gas Deposits (Huang and others, 1981)			
MESOZOIC	Cretaceous	Late Cretaceous	Tegaimiao Formation		n.a. <sup>1</sup>	Mudstone, siltstone, and sandstone. In the upper part, orange-red, orange-brown, silty mudstone, interbedded with light-orange-red siltstone, containing <i>protoceratops</i> sp. In the lower part, orange-red, yellowish-pink, feldspathic, and coarse-grained sandstone.				Late Cretaceous		
				Early Cretaceous	Zhidan Group	Seventh Member	226	Sandstone, mudstone, and coal. Grayish-white, yellowish-green sandstone, intercalated with reddish-brown, dark gray silty mudstone and thin coal. Abundant plant fossils.	Seventh Member	Fluvial and lake depositional lithofacies.	Anding and Zhiluo Formations. Dominantly lake deposits. 400 m.	●
		Sixth Member	539			Mudstone, sandstone, and conglomerate. In the upper part, varied-color, sandy mudstone, interbedded with limestone, sandstone, and conglomeratic sandstone. In the lower part, yellowish-green feldspathic sandstone, conglomerate, and breccia. Limestone is fossiliferous.	Sixth Member					
		Fifth Member	376			Mudstone and sandstone. In the upper part, purplish-red intercalated with sandstone. In the middle and lower parts, purplish-red, orange-red, orangish-yellow, and feldspathic sandstone, containing reptile fauna.	Fifth Member					
		Fourth-Third Members	933			Sandstone. Yellowish-green, grayish-green, feldspathic sandstone, intercalated with mudstone and detrital volcanic materials with fauna.	Fourth-Third Members					
		Second Member	392			Mudstone, sandstone, and conglomerate. In the upper part, purplish-red conglomerate, intercalated with mudstone and containing pollen spores and conchostracan fossils. In the lower part, interlayers of dark red to purplish-red mudstone, siltstone, and sandstone, containing detrital volcanic materials.	Second Member					
	First Member	0-65	Conglomerate. Purplish-gray.	First Member								
	Jurassic	Late Jurassic									Late Jurassic	
			Middle Jurassic	Anding Formation		20-142	Shale, oil-shale, marl, and sandstone. In the upper part, grayish-yellow and pink marl, grading downward into the lower black to grayish-black oil-shale, shale, and calcareous sandstone interlayers with scattered pyrite. Regionally lithologic variation is distinct. Abundant fossils.		Anding Formation. 48-142 m. Chiefly lake deposits, containing oil-shale in the south of the basin.	Totally about 1,300 m.	●	Middle Jurassic
		Zhiluo Formation				90-500	Mudstone, siltstone, and sandstone. Yellowish-green, grayish-green, and purplish-red mudstone and siltstone interlayers grading downward into yellowish-green and gray feldspathic sandstone, grayish-green and dark purple mudstone and silty mudstone, intercalated with basal conglomeratic sandstone. Faunal assemblages consist of pollen and spores, and plant remains. Locally coal beds.		Zhiluo Formation. 90-500 m. Fluvial and lake deposits, containing mineable coal beds in the northwest of basin.			
		Yanan Formation		Zaoyuan Member	200-300	Sandstone, mudstone, shale, and oil-shale. Gray to grayish-green sandstone, interbedded with grayish-black to dark-gray, fossiliferous shale, mudstone, and oil-shale. Containing mineable coal.		Yanan Formation. 150-296 m. Subdivided into 4 members. The fourth member is missing in the southwest of the basin. The first member, equivalent to Baotashan Sandstone Member, containing mineable coal and oil-shale. The remaining members, equivalent to Zaoyuan Member, also containing mineable coal and oil-shale. Chiefly lake depositional lithofacies.	Yanan Formation. 120-410 m. Dominantly lake deposits.			Middle Jurassic to Early Jurassic
				Baotashan Sandstone Member		Sandstone, siltstone, and shale. Grayish-white, yellowish-gray, yellowish-pink, fine- to coarse-grained sandstone intercalated with grayish-black clayey siltstone and shale grading downward into a basal conglomerate. Containing coal and oil-shale.						
Early Jurassic		Fuxian Formation		15-100	Mudstone, shale, sandstone, and conglomerate. Purplish-red mudstone, intercalated with sandstone and some marl and concretions; grading upward into grayish-green sandstone and shale interbeds. Locally containing coal beds, oil-shale, basal conglomeratic sandstone and conglomerate.		Fuxian Formation. 15-140 m. Fluvial and lake deposits and locally thin coal and oil-shale.	Fuxian Formation. 120-150 m.	●			Early Jurassic
Triassic	Late Triassic	Yanchang Formation	Upper Member	0-228	Mudstone, yellowish-green, grayish-green, grayish-black, interbedded with sandstone, siltstone, and shale; containing principal coal beds. Locally oil-shale of 4-14 m in the upper part.		Wayobao Formation. 94-410 m. Fluvial and lake deposits, containing mineable coals, no. 1 and no. 3.	Fifth Member	●			Late Triassic
			Middle Member	95-200	Sandstone, siltstone, and mudstone. Grayish-green to yellowish-green, fine-grained sandstone; interbedded with siltstone and mudstone. Locally thin coal.		Yongping Formation. 95-183 m. Fluvial deposits and locally thin coal. Missing in the south and southwest of the basin.	Fourth Member				
			Lower Member	210-325	Sandstone, siltstone and mudstone. Gray, grayish-green sandstone with siltstone; intercalated with mudstone and locally thin coal.		Hujiacun Formation. 172-383 m. Fluvial and lake deposits, containing thin coal in the south of the basin.	Third Member				
	Middle Triassic	Tongchuan Formation	Upper Member	100-596	Mudstone, sandstone, siltstone, shale, and oil-shale. Grayish-green, yellowish- and pinkish-red mudstone and sandstone interbedded with siltstone and grayish-black shale. Locally oil-shale of more than 30 m thick, and thin coal.		Tongchuan Formation. 100-447 m. Fluvial and lake deposits, containing thin coal in the north and southwest parts of the basin.	Second Member		●		
			Lower Member		Sandstone. Grayish-green, yellowish- and pinkish-red, intercalated with shale, siltstone, and mudstone in the upper part. Locally thin coal.			First Member				
	Early Triassic	Emaying Formation		3	110-131	Mudstone. Brick red or orange red, intercalated with a small amount of sandstone and grayish-green mudstone lenses.				●	Early Triassic	
				4	160-400	Sandstone. Grayish-white, purplish-red, and grayish-purple, locally containing conglomerate.						
Permian	Late Permian		Shiqianfeng Formation									

1. N.a., not available.  
2. Figures of thickness vary in accord with individual investigation. ● Petroleum ■ Oil shale ■ Coal  
3. Heshangou Formation.  
4. Lujiagou Formation.