

Table 2. Stratigraphy of the Songliao Basin, Northeastern China

(After Chinese Academy of Geological Sciences, 1982; Gu, 1982; Institute of Geology, Academia Sinica, 1958; Li, 1982; Liu, Xu, and Huang, 1981; Ma, Yang, Ding, and Guan, 1984; Wang and Liu, 1980; Wang, Zhang, Zhang, and Tan, 1983; and Xu and Wang, 1981)

Stratigraphy of the Songliao Basin, Northeastern China (cont.)

Era	System	Series	Formation	Member	Thickness in Meters	Lithology and Description	Petroleum Geology			Remarks
							Source Rocks	Reservoir and Rock Types	Cap Rocks	
Cenozoic	Quaternary				40—133	Clay, silt, sand, gravel and glacial deposits.				Commercial oil and gas are concentrated in the Yangdachengzi, Fuyu Gaotaizi, Putaohua, Shaertu, and Heidimiao Reservoirs (Ma, Yang, Ding and Guan, 1984; Fig. 1). The Nenjiang Formation is given a late Early Cretaceous age (Albian Stage) by Xu and Wang, 1981; but Ma, Yang, Ding and Guan, assigned to an Early Senonian age (1984, Fig. 1) as well as Wang and Liu, to a late Middle Cretaceous age (1980; p. 276, Table 16-II). Upper Jurassic stratigraphy chiefly based on Wang and Liu (1980; p. 252-254) and Institute of Geology, Academia Sinica (1958, p. 121-124).
	Tertiary	Neogene	Taikang		0—122	Sandstone, conglomerate, siltstone and mudstone.				
		Paleogene	Yian		0—221	Sandstone, conglomeratic sandstone, mudstone and siltstone.				
Mesozoic	Cretaceous	Upper Cretaceous	Mingshui	2	0—354	Mudstone, siltstone, sandstone, conglomerate and lignite beds. Locally tuffaceous.				
				1	0—243	Mudstone intercalated with conglomerate.				
			Sifangtai		0—394	Sandstone and mudstone interbeds.				
					0—394	Mudstone and siltstone with basal conglomerate.				
		Middle Cretaceous	Nenjiang	5	0—355	Mudstone, shale, siltstone and sandstone.				
				4	234—304	Shale, mudstone, siltstone and sandstone.				
				3	70—131	Shale and mudstone with reef-limestone and bioclastic limestone and marl.				
				2	170—251	Shale, siltstone and mudstone with marl, limestone, and oil-shale.	Mudstone, shale, oil-shale and marl	Heidimiao, irregular floodplain and deltaic distributary plain, medium-fine and poorly to well sorted sandstone; and deltaic front bar, sheeted and lenticular, well sorted medium-fine sandstone. Locally reef limestone.	Shale and mudstone	
				1	27—222	Shale, oil-shale and mudstone.	Shale, oil-shale	Shaertu, floodplain and deltaic front, medium-fine, fairly well sorted sandstone.		
			Yaojia	2,3	72—150	Shale and mudstone.	Shale and mudstone			
				1	0—78	Siltstone and sandstone.		Putaohua, deltaic front well-sorted sandstone.		
			Qingshankou	2,3	273—503	Shale, limestone, siltstone and mudstone.	Shale and mudstone	Gaotaizi, floodplain and deltaic front, medium-fine, fairly to well-sorted, irregular and sheeted sandstone. Locally reef limestone.	Shale and mudstone	
				1	72—131	Shale, oil-shale and mudstone.	Shale and oil-shale			
				4	65—98	Mudstone, shale and sandstone with oil-shale.	Mudstone	Fuyu, irregular fluvial medium-grained sandstone.	Mudstone and shale	
		Quantou								
			3	451—672	Mudstone and sandstone interbeds.	Mudstone	Yangdachengzi, irregular flood plain and deltaic distributary plain, medium-fine and poorly to well-sorted sandstone; and deltaic front bar, sheeted and lenticular, well-sorted medium-fine sandstone.			
			2	212—417	Mudstone and shale interbeds.	Mudstone and shale				
			1	356—651	Sandstone, conglomeratic sandstone, and mudstone dominated around the basin border.		Nongan, fluvial and fluvial-deltaic, medium-fine and poorly to well sorted and irregular to sheeted sandstone. Locally channel sandstone and conglomerate.			
Lower Cretaceous	Denlouku	4	134—212	Sandstone and mudstone interbeds.						
		3	250—621	Mudstone and sandstone interbeds.						
		2	309—700	Mudstone, shale and sandstone.	Mudstone and shale					
		1	119—220	Sandstone, conglomeratic sandstone and mudstone.						
Jurassic	Upper Jurassic				550—1,300	Sandstone, conglomeratic sandstone, quartzite and conglomerate interbedded with andesite, tuff, shale and mineable coal.	Shale			
						Early Mesozoic and Late Paleozoic biotite and biotite-hornblende granites. Limestone, shale, and sandstone partially metamorphosed into marble, hornfels, shale, and quartzite.				
Paleozoic	Permian—Carboniferous				?					