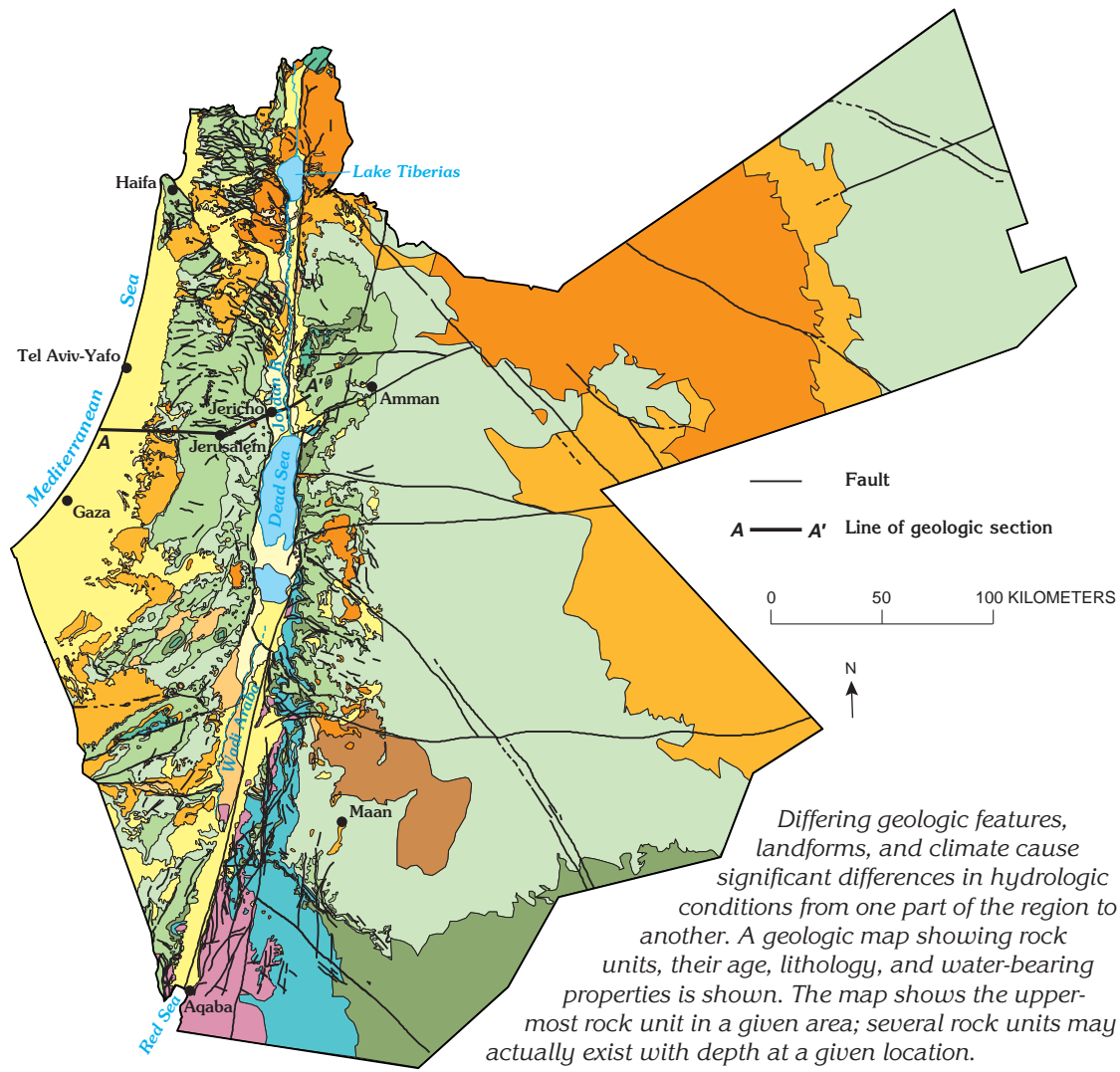


Generalized geologic units and water-bearing properties

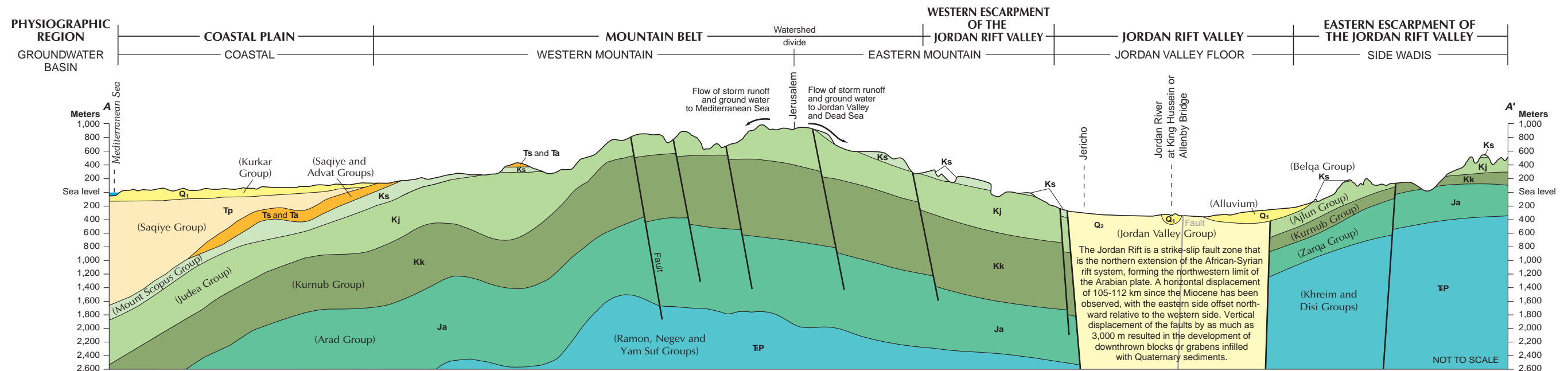


System/Series	Stage	West of Jordan River and Wadi Araba		East of Jordan River and Wadi Araba		This report	SEDIMENTARY ROCKS Unit description					
		Group	Unit	Group	Unit							
Quaternary	Holocene	Kurkar	Qa	Jordan Valley	Aluvium and Lisan Series	Q1	Soil, sand, gravel, sandstone, and conglomerate. Comprise prolific aquifer in Coastal Plain Basin. In Jordan Valley Floor Basin, alluvial fan deposits along flanks form aquifers that contain most of the freshwater of the basin.					
	Pleistocene		Qd					Absent	Q2	In Jordan Valley Floor Basin, upper part includes marl, clay, and evaporites that inhibit groundwater flow. Lower part consists of water-bearing conglomerate, sand, and gravel.		
			Qk									
Tertiary	Pliocene	Saqiye	Ql	Absent	Jordan Valley	Tp	In Coastal Plain Basin, consists mainly of clay and marl, that inhibit groundwater flow.					
			Miocene					Qs				
	Oligocene		Qs									
	Eocene		Tp									
			Ts									
Paleocene	Eocene	Advat	Ta	Belqa	B5	Ta	Chalk, limestone, chert, marl. Generally aquitard; limestone layers are water bearing.					
Cretaceous	Upper	Mount Scopus	Ks	Belqa	B4	Ks	Chalk, chert, limestone, marl. Limestone and chert layers are prolific aquifers in much of Jordan. Well yields are highly variable and are controlled largely by cavernous zones in the limestone that are affected by geologic structure. Flowing wells common in areas of low elevation. Salinity increases in an eastward direction in Jordan.					
			Senonian					Kj	Ajlun	A1/A6	Kj	Limestone, dolomite, marl, shale. Limestone and dolomite layers are prolific aquifers in Eastern and Western Mountain Basins.
	Lower	Albain	Kurmub	Kk	Kurmub	K	Kk	Sandstone, dolomite, marl, sand, shale, clay, sandy limestone. Upper part mostly consists of shale and carbonates forming aquiclude; lower part mostly consists of water-bearing sandstone. High salinity in vicinity of Jordan Rift Valley.				
				Aptian					Kk	Kk	Kk	Kk
Jurassic	Arad	Ja	Z	Zarqa	Z	Ja	Limestone, dolomite, sandstone, marl, shale. Limestone, dolomite and sandstone layers water bearing. Important source of water in Negev, north and south Wadi Araba, and south Jordan Desert Basins. High salinity in parts of region. Groundwater development is limited by drilling depths, high pumping lifts, and mineralization of groundwater.					
Triassic	Ramon	Tr	Pn	Zarqa	Absent	TP	Limestone, sandstone, shale, clay, dolomite, gypsum. Limestone, dolomite and sandstone layers water bearing. Important source of water in Negev, north and south Wadi Araba, and south Jordan Desert Basins. High salinity in parts of region. Upper part largely aquiclude. Groundwater development is limited by drilling depths, high pumping lifts, and mineralization of groundwater.					
Paleozoic	Negev and Yam Suf	Py	Py	Khreim and Disi	R	R	Limestone, sandstone, shale, clay, dolomite, gypsum. Limestone, dolomite and sandstone layers water bearing. Important source of water in Negev, north and south Wadi Araba, and south Jordan Desert Basins. High salinity in parts of region. Upper part largely aquiclude. Groundwater development is limited by drilling depths, high pumping lifts, and mineralization of groundwater.					

System/Series	Stage	West of Jordan River and Wadi Araba Unit		East of Jordan River and Wadi Araba Unit		This report	IGNEOUS AND METAMORPHIC ROCKS Unit description
		Group	Unit	Group	Unit		
Quaternary	Holocene	B4	BA	Ba	Ba		Basalt, tuff, and alkaline magmatic rocks. Major source of water in northern and northeastern part of region. Basalt is hydraulically connected with conglomerate, sandstone, marl, and chalk. Basalt and coarse grained clastics form aquifers that are separated by layers of marl and chalk. Water is generally of very good quality and high well yields are common.
	Pleistocene						
Tertiary	Pliocene	B3	Absent	Absent	Absent		
	Upper	Senonian	B2	Absent	Absent		
	Turonian						
	Cenomanian						
Lower	Albain	B2	Absent	Absent	Absent		
	Aptian						
Jurassic		B1					
Triassic							
Paleozoic							



Volcanic plug rising through eroded sandstone of geologic unit Kk, near Wadi Hasa



A schematic cross section shows the arrangement of rock units along a vertical slice through the earth's surface from the Mediterranean Sea to east of the Jordan River and illustrates the relative vertical positions of the rock units. In general, rock units thicken west of the Jordan River and

continue to thicken toward the Mediterranean Sea. Rock units have been faulted and folded. Volcanic deposits occur as surficial flows and as volcanic necks in subsurface areas. (Local names are in parentheses.)