

Table 3.--Description of Permian rocks cropping out in parts of northwestern Texas and the Texas Panhandle.  
(Geologic names as used on the U.S. Geological Survey Geologic map of Texas, 1937)

Subdivision	Approximate thickness (feet)	Description		Salt water
		General lithology	Salt	
Quartermaster formation	Northwestern Texas (Dickens, Hall, and Motley Counties), 200-300.	Predominately red, thin sandstone and gypsiferous shale.	Not known to contain salt in areas studied.	May contain salt water in some localities, especially where buried.
Cloud Chief gypsum	Northwestern Texas (Hall County), 300?	Red, fine-grained sandstone, with irregular beds of gypsum, thin dolomite, and red shale.	Unknown but may contain salt in the basal part.	Probably contains salt water locally.
Whitehorse sandstone	Northwestern Texas (Hall County), 400?	Red, fine-grained sandstone and irregular beds of dolomite and gypsum. Contains thick beds of halite locally.	Contains thick beds of salt locally, especially south and west of Cottle County and probably in the Panhandle.	Contains salt water in many areas in northwestern Texas. Salt springs may issue from near the base locally.
Dog Creek shale	Northwestern Texas (Childress and Hardeman Counties), 280.	Red and brown, silty, blocky, gypsiferous shale and irregular beds of dolomite and massive gypsum.	Contains salt locally in northwestern Texas and probably in the Panhandle.	The occurrence of salt water probably is widespread. Salt springs issue from the formation in Cottle and King Counties.
Blaine gypsum	Not determined, but may be 250 feet in Hall County.	Red and brown gypsiferous silty shale, massive beds of white and light-gray gypsum, and several discontinuous impure beds of dolomite.	Contains salt in parts of northwestern Texas and it may be widespread in the Panhandle.	Contains salt water in many localities in northwestern Texas and the Texas Panhandle. Salt water may seep from the rocks locally in northwestern Texas.
San Angelo sandstone	Northwestern Texas (Foard County), 100-160.	Brown and red-brown, massive sandstone and siltstone, silty shale, and conglomerate.	May contain salt locally in northwestern Texas. Salt is present in the Panhandle.	Salt water is present in the Panhandle and occurs locally in northwestern Texas.
Clear Fork group	Northwestern Texas (Childress County), 1,200.	Red silty gypsiferous shale, fine-grained sandstone, and irregular thin beds of dolomite and gypsum. Contains halite in many places.	Salt is widespread in the Panhandle and is present locally in northwestern Texas.	Contains salt water locally in many areas.
Wichita group	Northwestern Texas (Childress County), 900; Panhandle (Gray County), 700.	Panhandle (Gray County), anhydrite with streaks of gray shale and shaly dolomite.	May contain a small amount of salt in the Panhandle.	Contains salt water where deeply buried.