

				Lithology	
SYSTEM	Series	Formation or group	Thickness (feet)		
QUATERNARY	Recent	Alluvium	?		<u>Sandstone, conglomerate, caliche.</u>
	Pliocene? - Pleistocene?		?		<u>Siltstone, sandstone, conglomerate</u> , partly tuffaceous. Basal recemented limestone and dolomite <u>conglomerate</u> in northern exposures.
	Pliocene?	Upper Volc. grp.	0-100?		<u>Basalt</u> , occasionally scoriaceous. Angular unconformity
TERTIARY	Miocene	Pliocene?	2000+		<u>Claystone, siltstone, sandstone, and conglomerate.</u> Soft, often white.
	Oligocene	Lower Volcanic group	200?-1285		<u>Welded tuff (ignimbrite)</u> , brick-red to purple, with rare interbeds of white tuffaceous <u>sediments</u> .
			300-1000+		<u>Tuff and tuffaceous sediments</u> , white, rarely stained green or orange, occasionally conglomeritic. Usually with a thin <u>basalt</u> near the top, becoming a thick <u>quartz latite porphyry</u> at Shingle Pass.
			0-679		<u>Conglomerate</u> , with interbeds of varicolored <u>clay</u> and <u>sandstone</u> .
				Unconformity	
	Eocene	Sheep Pass formation	F 0-1000?		<u>Clay</u> , green, brown, or red, often silty. Some lenses of <u>limestone</u> , light-gray, near base in Sheep Pass area.
			E 50-154		<u>Calcilutite</u> , very-light-brown, with tan or white <u>chert</u> at the top.
			D 0-493		<u>Calcilutite or marlstone</u> , white, siliceous, rarely cherty.
			C 0-621		<u>Sandstone</u> , light-gray to tan, fine- to medium-grained, friable, porous, with rare interbeds of <u>claystone</u> . Two beds of <u>granule conglomerate</u> near middle. Thin limestone beds near base.
			B 0-1072		<u>Calcilutite and calcisiltite</u> , light-gray to tan, and <u>shale</u> , calcareous. Strong petroliferous odor from fresh surfaces.
			A 0-835		<u>Conglomerate</u> , brown or pink-stained, boulders (at base) to pebbles (at top), in clayey sandstone matrix.
				Unconformity	
PENNSYLVANIAN	Upper Penn.		0-517		<u>Sandstone</u> , yellow and light-brown, soft, calcareous, fine-grained, with a few interbeds of <u>calcilutite</u> and <u>calcisiltite</u> , light-brown.
	Middle Pennsylvanian		1653		<u>Calcisiltite</u> , yellow, brown, or pink, laminated and thin-bedded, "clinking" slopes, and ledges of <u>calcilutite to calcisiltite</u> , light-gray or olive-gray. Rare brown chert.
	Lower Mississippian	Ely limestone	1355		<u>Calcisiltite and calcilutite</u> , light-gray or light-olive-gray, thin- to thick-bedded or massive. Up to 50% of brown chert in some beds. Lower 200 to 300 feet is yellow-orange, coarse-grained <u>calcareous mud-grading</u> downward to <u>calcisiltite</u> and <u>mudstone</u> , olive-gray, pink, or

MISSISSIPPIAN	?	Lower Pennsylvanian	Ely	1355		<u>Calcsiltite and calcilutite</u> , light-gray or light-olive-gray, thin- to thick-bedded or massive. Up to 50% of brown chert in some beds. Lower 200 to 300 feet is yellow-orange, coarse-grained <u>calcarenite</u> and calcareous <u>mudstone</u> .
				350-385	Scotty Wash ss.	<u>Sandstone</u> , gray, pink, red, or brown, thin- to thick-bedded and cross bedded, fine- and medium-grained. Some olive-gray <u>shale</u> .
		Upper Mississippian	Chainman shale	724-1001		<u>Shale</u> , black, fissile, becoming olive-gray at top. Few interbeds of <u>calcsiltite</u> . Lower 150 to 300 feet is brown-gray or varicolored <u>mudstone</u> . Few thin beds of black <u>chert</u> near base.
				670-705	Joens limestone	<u>Calcsiltite and calcarenite</u> , medium-gray, thin- to thick-bedded, crinoidal in parts. Base is massive cliff, middle is clayey <u>calcilutite</u> with much red <u>chert</u> .
DEVONIAN	?	Lower Miss.	West Range fm.	0-114		<u>Shale and calcilutite</u> , olive-gray or yellow-gray.
				0-137		<u>Unconformity</u>
				0-257		<u>Shale and mudstone</u> , "scotty-gray", with a few <u>calcsiltite</u> beds.
						<u>Calcilutite</u> , medium-gray or olive-gray, very clayey.
		Upper Devonian	Guilmette formation	1256-1907		<u>Calcilutite</u> , medium-gray, medium-bedded to massive, interbedded with <u>dolomite</u> , yellow-brown (fine-grained) and light-gray (aphanitic), medium- to thick-bedded. Few yellow clayey zones. Occasional brown <u>chert</u> .
				562-661		<u>Calcilutite</u> , medium-gray, massive, at base. Above is interbedded <u>calcilutite</u> and brown and white <u>dolomite</u> , as above, with much yellow clayey material.
		Middle Devonian	Simonsen dolomite	1061-1168		<u>Dolomite</u> , alternating yellow-brown (fine-grained) and light-gray (aphanitic). Occasional <u>calcilutite</u> bed at top. Cliff of <u>dolomite</u> , brown-gray, fine-grained, in upper part. At base is <u>dolomite</u> , light-gray, medium- and coarse-grained, sandy.
				1293-1323	Sevy dolomite	<u>Dolomite</u> , light-gray to white, blocky, medium- and thick-bedded, aphanitic. Occasional sandy zone. Near top have up to 25 feet of <u>sandstone</u> , cross bedded, in south end of Egan Range.
		Lower Devonian	Laketown dolomite	?		<u>Possible unconformity</u>
				1013		Upper 556 feet is <u>dolomite</u> , yellow-gray, saccharoidal, fine- to medium-grained. Much <u>chert</u> at top. Lower 457 feet is <u>dolomite</u> , brown-gray, medium- and thick-bedded, fine-grained. Some <u>chert</u> and sand.
ORDOVICIAN	?	Cincinnati	Fish Haven dol.	514-549		<u>Dolomite</u> , medium-dark-gray, thin- to thick-bedded, fine-grained.
				465-621	Eureka qtz.	<u>Quartzite</u> , light-gray, white, or pink, thick-bedded or massive, fine-grained. Soft, coarser-grained <u>sandstone</u> near top and at base.
		Chazyan	Lehman	654-760		<u>Calcilutite</u> , medium-gray or "bluish-gray", thin- to thick-bedded, often with interbeds at top of <u>dolomite</u> , olive-gray, fine-grained.
				365-453	Kanesh	<u>Shale</u> , olive-gray, with interbeds of <u>calcsiltite</u> , medium- to dark-gray, especially in lower part.
		Canadian	Pogonip Group	1148		<u>Calcsiltite</u> , medium- and dark-gray, thin- to thick-bedded. Few intraformational limestone <u>conglomerate</u> and olive-gray <u>shale</u> beds.
				770 +		<u>Calcsiltite</u> , medium- and dark-gray, laminated to medium-bedded, with much intraformational limestone <u>conglomerate</u> and olive-gray flaky shale. Up to 5% of gray <u>chert</u> .
				414	House	<u>Calcilutite and calcsiltite</u> , medium-gray, up to 70% of <u>chert</u> .
		Cambrian	Dunderberg fm.	1624-1883		<u>Calcilutite and calcsiltite</u> , medium- and dark-gray, and <u>dolomite</u> , fine-grained to aphanitic. Light-gray coarse-grained <u>dolomite</u> at base.
				290-322		<u>Calcsiltite and calcilutite</u> , medium-gray, thin-bedded to massive. Up to 35% of gray <u>chert</u> in lower part.
				467-494		<u>Shale</u> , olive-gray, flaky, and <u>calcsiltite</u> and oolitic calcarenite, medium-gray, medium-bedded to massive.
						Oolitic calcarenite, <u>calcilutite</u> , and <u>calcsiltite</u> , medium-gray, with "tiger-stripe" surface pattern.
Upper						<u>Calcsiltite and calcilutite</u> , medium-light-gray, thin- to thick-bedded,

