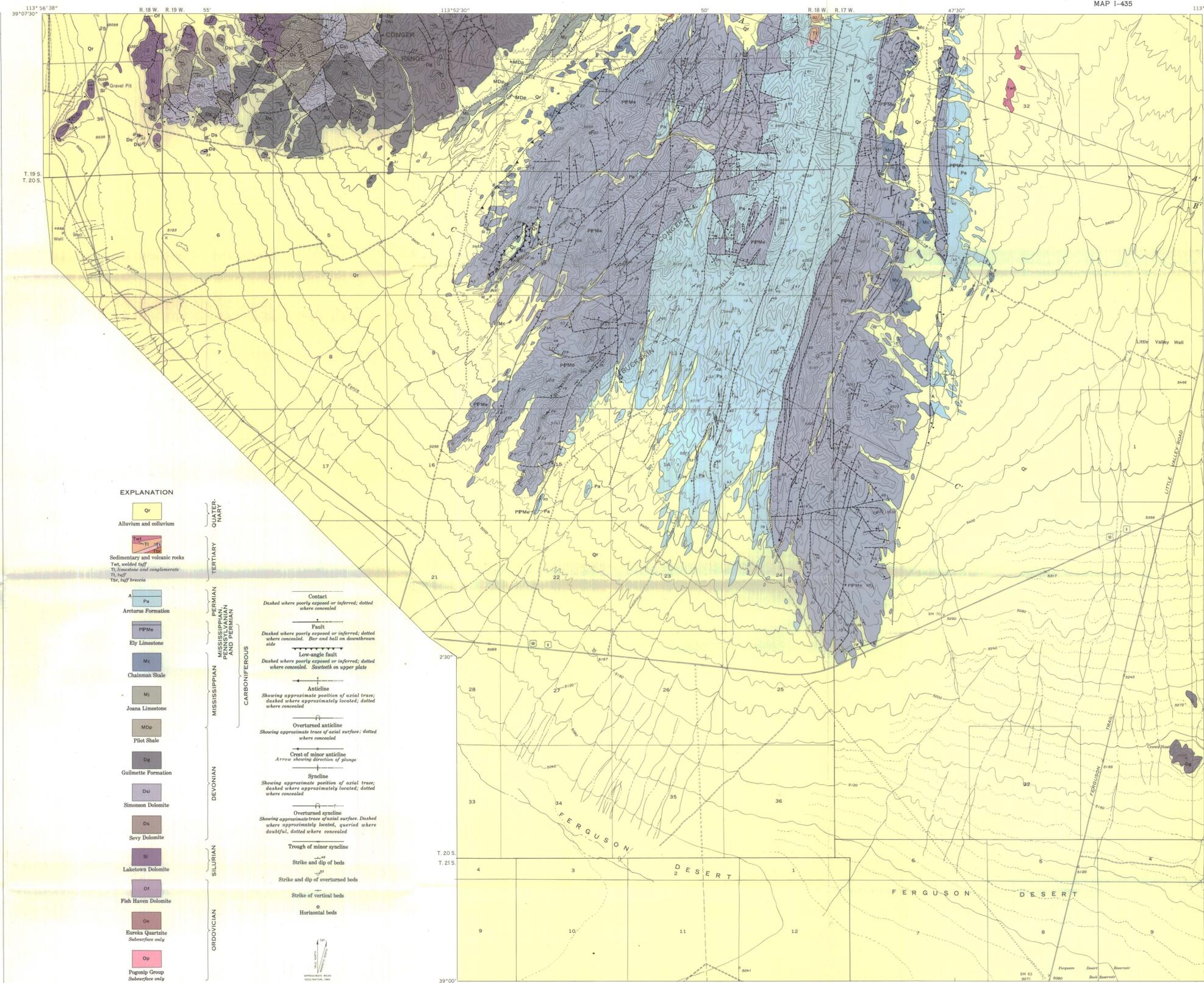


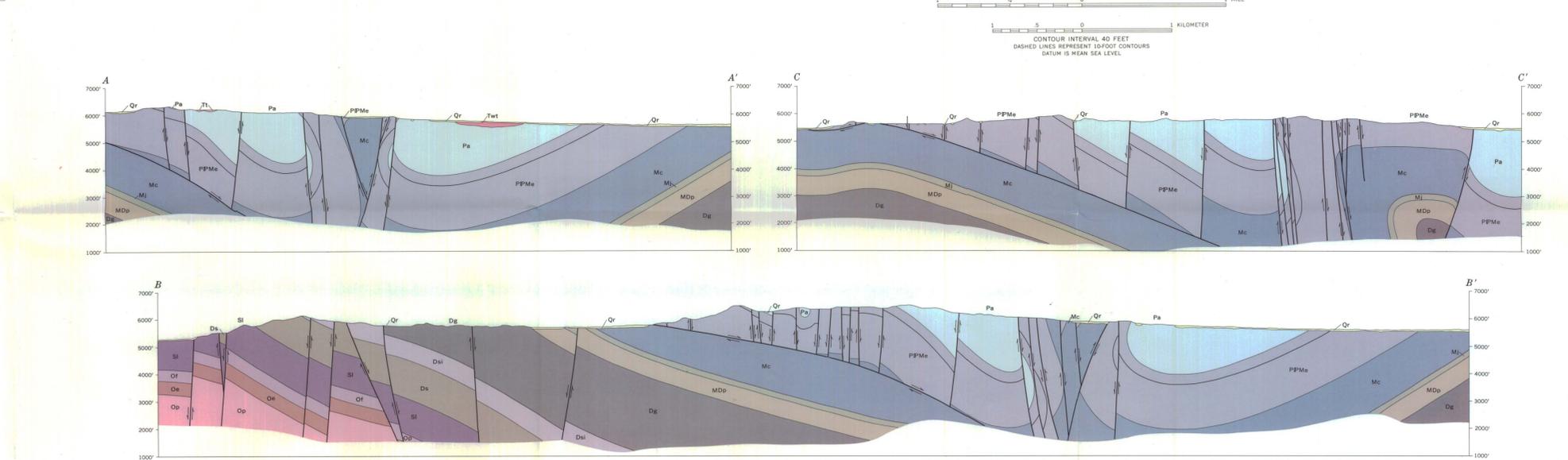
SYSTEM	FORMATION	LITHOLOGY	THICKNESS, IN FEET	DESCRIPTION
QUATERNARY	Alluvium and colluvium	XXXXXX	0-200	Alluvial and colluvial material derived from local sources; also includes deposits associated with ancient Lake Bonneville
	Sedimentary and volcanic rocks	Twt, Tt, Tbr	0-700	Twt, welded rhyolitic tuff Tt, buff-colored limestone with local lenses of conglomerate Tbr, olive-weathering tuff containing montmorillonitic clays Tbr, tuff breccia
PERMIAN	Artcurus Formation	Pa	300-350	Predominantly fine-grained poorly indurated grayish-yellow sandstone throughout which limestone and limy dolomite beds 4 to 10 feet thick are spaced more or less evenly; brick red colors common in upper few hundred feet; gypsum present at several horizons; one persistent limestone bed (A) mapped in upper part. Bed A, 4 to 6 feet thick, contains irregularly elongate chert or siliceous limestone nodules
	Ely Limestone	PPMe	3000	Alternating resistant medium- to coarse-grained medium-gray organic detrital limestone and somewhat thicker units of slope-forming medium-gray, fine-grained platy limestone; resistant limestone weathers medium gray to brownish gray; platy limestone weathers to brownish slopes; chert common throughout as thin beds, nodules, and siliceous concretions. Unconformity 375 to 400 feet below top of Ely is shown on map. Structure cross sections and explanations. Fossils in the upper 375 to 400 feet are of Permian age; those in the basal 15 to 50 feet are regarded as of Mississippian age; the remainder are of Pennsylvanian age and are as young as Des Moines
MISSISSIPPIAN	Chainman Shale	Mc	400-450	Primarily dark-gray shale and platy light olive-gray siltstone. Medium dark-gray persistent and lenticular limestone beds and zones of calcareous concretions are present. As much as 110 feet of medium dark-gray dense, bituminous limestone and organic detrital limestone in upper part locally; shale zone 150 to 350 feet below the top contains several lenticular quartzite siltstone or very fine grained sandstone beds as much as 3 feet thick; the formation is very fossiliferous and yields representatives of the Go, Do, E, and E ₂ goniatite zones of Maramec and Chester age. (Mackenzie Gordon, Jr., written communication 1963)
	Joana Limestone	Mj	300	Massive light brownish-gray to medium dark-gray coarse-grained organic detrital limestone; weathers medium gray to olive gray; faunas south of the map area indicate a late Kinderhook or Osage age
DEVONIAN	Pilot Shale	Mdp	700	Platy calcareous siltstone and calcareous to non-calcareous shale; medium-gray platy dolomitic siltstone in lower 100 feet
	Gulmette Formation	Dg	2500	Medium-gray to dark-gray limestone in upper 500 feet; weathers olive gray; many beds biostromal, mainly stromatopora; a few lenticular quartzite sandstone beds as much as 3 feet thick. <i>Mesozooceras</i> sp. in upper few feet; <i>Zenilospirifer</i> / <i>isidifer</i> (<i>Meehl</i>) in lower part. Finely crystalline dark-gray dolomite 500 to 1,300 feet below top; weathers dark yellowish-brown; many resistant; includes many stromatopora bivalves with bryozoans, corals, and brachiopods. Dense, dark-gray limestone 1,300 to 1,950 feet below top; weathers medium dark gray with yellowish-gray mottling; well bedded; beds 6 in. to 3 feet thick; <i>Tylosites</i> sp. in upper half. Dense, massive, dark-gray to gray-black limestone to basal 600 feet; large irregularly shaped masses of breccia locally prominent; weathers dark to yellowish gray. Fossils identified by C. W. Merriam include a Middle Devonian age and in the upper 5 to 50 feet, Late Devonian
SILURIAN	Sevy Dolomite	Ds	1300	Predominantly medium-gray very finely crystalline dolomite; weathers light gray to yellowish gray; well bedded; beds 1/2 to 6 feet thick; weathers to cuboidal blocks; scattered medium- to coarse-sized well-rounded, frosted quartz grains in upper 60 feet; fine to medium crystalline dolomite in lower 100 feet
	Laketown Dolomite	Sl	100-1000	Predominantly medium dark-gray massive, cliff-forming dolomite; weathers olive gray, yellowish-gray dolomite units at top, 150 to 340 feet and 430 to 500 feet below top; dark-gray dolomite consists of mosaic of anhedral to subhedral grains that range in diameter from 0.015 to 0.04 mm; grains average 0.4 mm in diameter in yellowish-gray dolomite; lenses and nodules of chert common 400 to 500 feet below top
ORDOVICIAN	Fish Haven Dolomite	Op	425	Primarily medium-dark-gray finely crystalline dolomite which contains sparse chert nodules in the upper 100 feet. Upper 100 feet forms a massive ledge
	Eureka Quartzite	Op	420-600	Southeast of the map area the formation comprises a lower member 260 feet thick consisting mainly of quartzite siltstone and sandstone but with limestone dolomite and claystone interbeds; a medial member about 60 feet thick consisting of medium-dark-gray finely crystalline dolomite; and an upper member 430 feet thick consisting of white to very pale orange orthoquartzite which weathers brownish black to moderate yellowish orange
Pogonip Group			3000	Hintze (1951) assigns about 3,000 feet of strata to the group which is divided into several formations. The group consists mainly of cherty, platy, limestone, sandy detrital and conglomeratic limestone, fine-grained silty limestone and yellowish-brown shale with limestone interbeds



Base from U.S. Geological Survey advance sheets including field additions made in 1960

SCALE 1:24 000

CONTOUR INTERVAL 40 FEET
DASHED LINES REPRESENT 100-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL



GEOLOGIC MAP AND SECTIONS OF THE CONGER RANGE SE QUADRANGLE AND ADJACENT AREA, CONFUSION RANGE, MILLARD COUNTY, UTAH

By
Richard K. Hose
1965