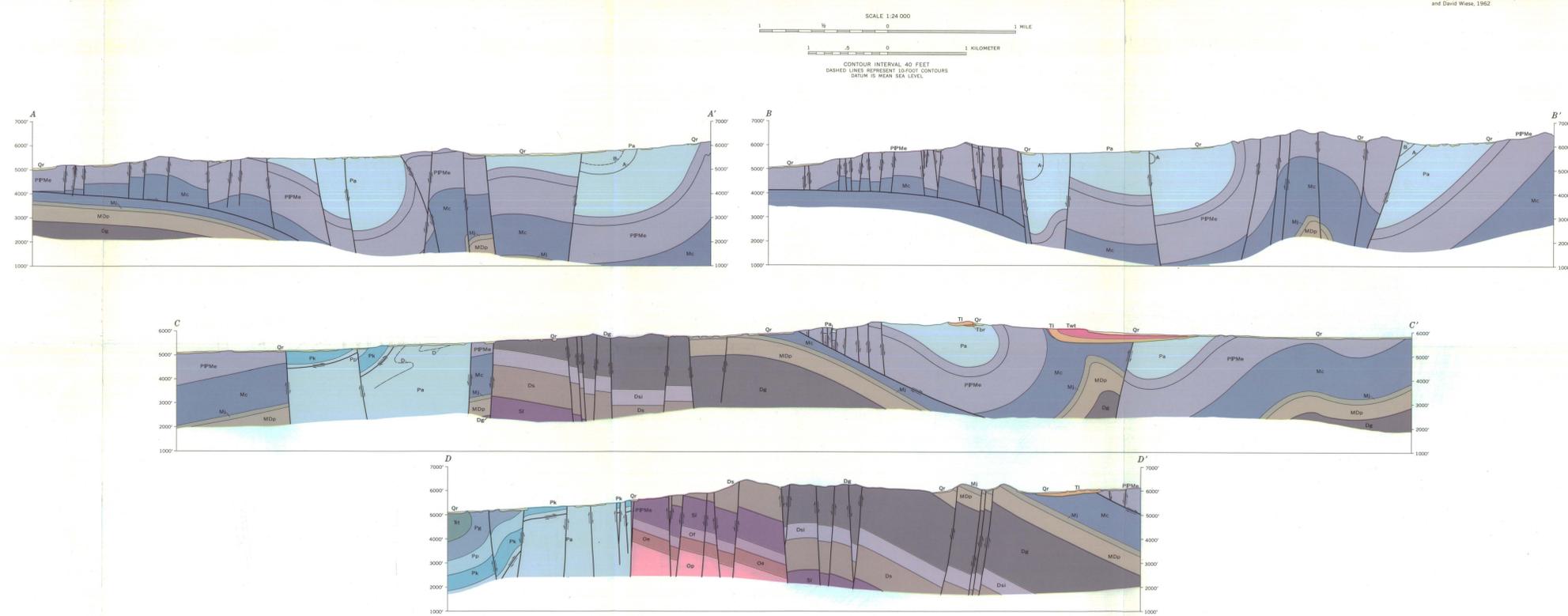
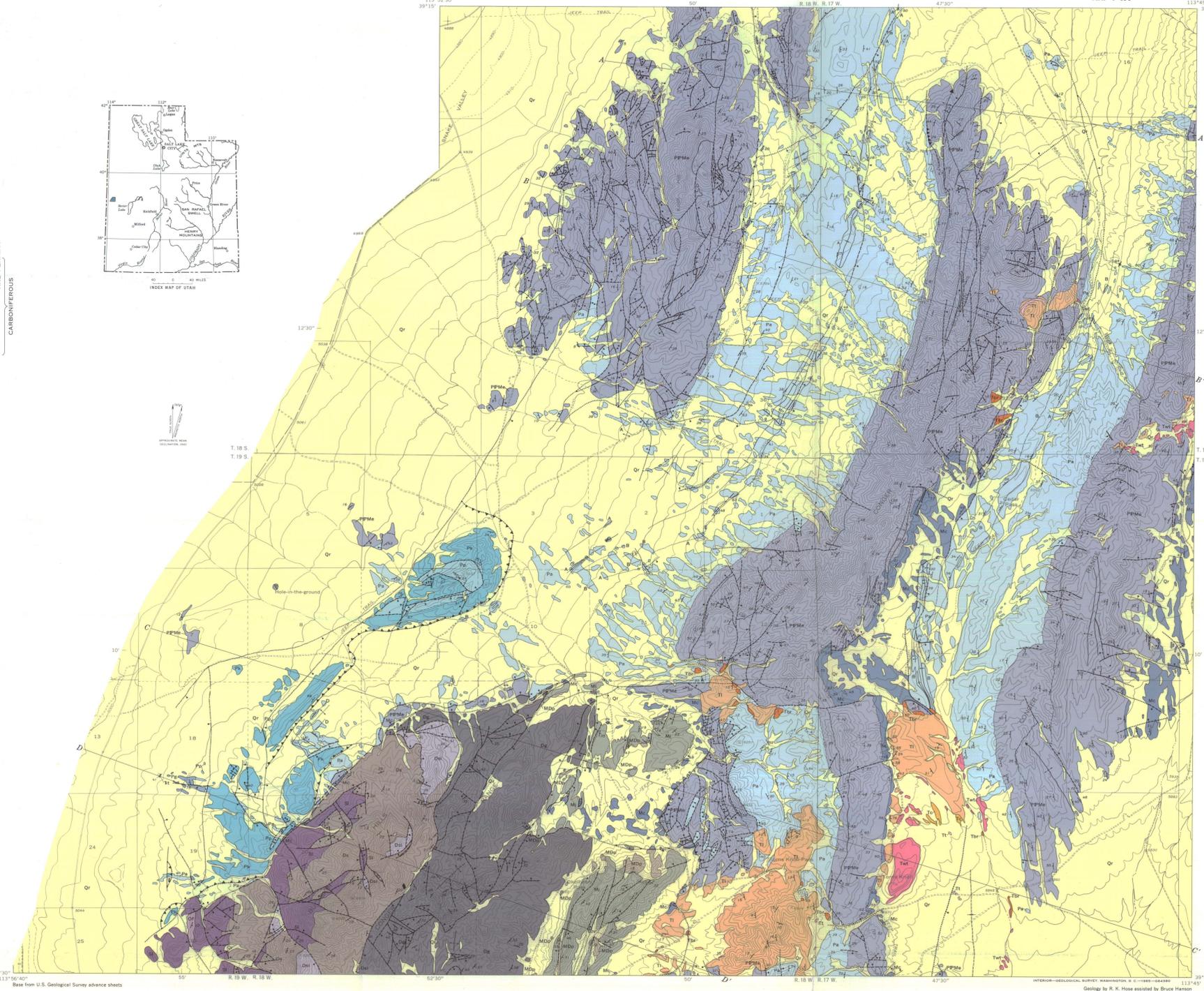


| SYSTEM        | FORMATION                      | LITHOLOGY    | THICKNESS, IN FEET | DESCRIPTION   |
|---------------|--------------------------------|--------------|--------------------|---|
| QUATERNARY    | Alluvium and colluvium         | Unconformity | 0-200              | Alluvial and colluvial material derived from local sources; also includes deposits associated with ancient Lake Bonneville  |
|               | Sedimentary and volcanic rocks |              | 0-700              |   |
| TERTIARY      |                                | Unconformity |                    |   |
|               | Thaynes Formation              |              | 21000              | Predominantly yellowish-gray claystone and platy siltstone. Fine-grained sandstone beds are present from 900 to 1,200 feet above the base. Limestone beds from half a foot to 16 feet thick are present throughout; those of the lower 500 feet weather chocolate brown. Reddish-colored claystone and siltstone are present from 500 to 800 feet above the base. Most of the Thaynes has been removed by erosion so that it is overlain by Tertiary and Quaternary rocks. Only the base few feet are exposed in this quadrangle  |
| PERMIAN       | Genter Limestone               |              | 800                | Uniform sequence of resistant ledge-forming organic detrital limestone interbedded with thicker zones of slope-forming rusty brown argillaceous detrital limestone. Brownish-black irregularly shaped siliceous limestone nodules characterize the resistant beds. <i>Trachytrypa pulchra</i> (Meek) fauna ranges throughout  |
|               | Plympton Formation             |              | 600                | Mainly yellowish-gray to olive-gray medium- to fine-grained chert abundant as beds, nodules, and concretions; local siltstone and sandstone units in upper half of formation weather grayish yellow to pale red; gypsum or its brackish residual occurs in upper 200 feet   |
|               | Kaibab Limestone               |              | 400                | Principally massive light-gray to yellowish-gray coarse-grained organic detrital limestone with resistant coarse-grained grayish-yellow limy dolomite in middle 30 feet; siliceous limestone concretions and chert nodules common. Fossils typical of the Kaibab Limestone of the Colorado Plateau area occur just above the middle   |
|               | Acturus Formation              |              | 2000               | Predominantly fine-grained poorly indurated grayish-yellow sandstone, throughout which limestone and limy dolomite beds 1 to 18 inches thick and more or less evenly bedded; brick red colors common in upper few hundred feet; gypsum concretions in several horizons; three persistent limestone beds (A, B, and C) mapped in upper part. Bed D, 2 to 3 feet thick, is characterized by calcareous sponges. Bed E, 5 to 10 feet thick, contains abundant echinoid spines and broken fossil debris in a fine-grained matrix; weathers to olive-gray irregularly shaped plates, also contains calcareous sponges. Bed A, 4 to 6 feet thick, contains irregularly elongate chert or siliceous limestone nodules  |
|               |                                | Unconformity |                    |   |
|               | Ely Limestone                  |              | 200                | 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 light olive gray; platy limestone weathers to crumpled shales; chert common throughout as thin beds, nodules, and siliceous concretions. Unconformity 200 to 400 feet below top of Ely is shown on map; structure of upper 350 to 400 feet area of Permian age; those in the basal 1 to 50 feet are regarded as Mississippian age; the remainder are of Pennsylvanian age and are as young as early Des Moines  |
| MISSISSIPPIAN | Chalmers Shale                 |              | 150-180            | Primarily dark-gray shale and platy light olive-gray siltstone. Medium dark-gray resistant and lenticular limestone beds and zones of calcareous concretions are present. The unit in other parts of the Confusion Range is very fossiliferous and yields representatives of the <i>Oriskany</i> , <i>St. Louis</i> , and <i>St. Genevieve</i> zones of Merriam; and Chester age (MacKenzie Gordon, written communication, 1951)  |
|               | Joana Limestone                |              | 200                | Massive light brownish-gray to medium dark-gray coarse-grained organic detrital limestone; upper member gray to olive gray; faunas east of the map area indicate a late Mississippian or Chester age  |
|               | Pilot Shale                    |              | 700                | Platy calcareous siltstone and calcareous to noncalcareous shale; medium gray to brownish gray limestone in lower 160 feet; marine fauna of Late Devonian age in middle part; Mississippian fauna in nodular zone in upper 100 to 200 feet east of map area   |
|               | Guilmette Formation            |              | 250                | Medium-gray to dark-gray limestone in upper 500 feet; weathers olive gray; many beds bioturbated, mainly stromatolitic; a few lenticular quartzite sandstone beds as much as 3 feet thick. <i>Murchisonia</i> sp. in upper few feet. <i>Trachytrypa pulchra</i> (Meek) in lower half. Finely crystalline dark-gray dolomite 500 to 1,200 feet below top; weathers dark yellowish-brown; massive, resistant, includes many stromatolitic structures with gray limestone 1,300 to 2,000 feet below top; weathers dark gray to olive gray with yellowish gray mottling; well bedded; beds 6 inches to 3 feet thick. <i>Trachytrypa pulchra</i> (Meek) in upper part. Medium dark-gray to grayish-black limestone in basal 160 feet; large fragments of chert locally prominent; weathers dark gray to yellowish gray. Fossils identical to those in Mississippian communication, 1955 indicate a Middle Devonian age for all but the uppermost few feet which is Late Devonian |
| DEVONIAN      | Simonson Dolomite              |              | 60-670             | Principally fine-grained medium dark-gray dolomite and dense, medium light-gray dolomite in upper 500 feet; weathers dark gray to dark yellowish gray; dense, medium-gray limestone locally in upper 100 feet; dolomite locally present 200 to 350 feet above base; lower 150 feet is pale yellowish-brown dolomite with saccharoidal texture; weathers light olive gray; <i>Strigopora</i> sp. present locally in upper 50 feet. <i>Murchisonia</i> sp. present 100 to 150 feet below top  |
|               | Sevy Dolomite                  |              | 1300               | Predominantly medium-gray very finely crystalline dolomite; weathers light gray to 6 feet thick; weathers to columnar blocks; scattered micritic to coarse-grained well-rounded, frosted quartz grains in upper 60 feet; fine to medium crystalline dolomite in lower 100 feet  |
|               |                                | Unconformity |                    |   |
| SILURIAN      | Laketown Dolomite              |              | 1200               | Predominantly medium dark-gray massive, cliff-forming dolomite; weathers olive gray; yellowish-gray dolomite units 150 to 350 feet and 430 to 500 feet below top; dark-gray dolomite consists of nodules of admiral to subangular grains that range in diameter from 0.015 to 0.4 mm; grains average 0.4 mm in diameter in yellowish-gray dolomite lenses and nodules of chert common 600 to 500 feet below top   |
|               | Fish Haven Dolomite            |              | 425                | Southeast of the map area the formation comprises a lower member 260 feet thick consisting mainly of quartzitic 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 olive yellowish orange. Because of the thinner sections present to the west, thickness is assumed to be between 400 and 600 feet in the subsurface of this quadrangle  |
| ORDOVICIAN    | Eureka Quartzite               |              | 400-400            | This group is not exposed in the map area but it is to the southwest about 25 miles. Strain (1951) assigns about 3,000 feet of strata to the group which is divided into several formations. The Pogonip consists mainly of cherty, platy limestone, sandy dolomite and conglomeratic limestone; fine-grained silty limestone and yellowish-brown shale with limestone interbeds  |
|               | Pogonip Group                  |              | 3000               |   |

- EXPLANATION**
- Qr Alluvium and colluvium
  - Ts Sedimentary and volcanic rocks
  - Th Thaynes Formation
  - G Genter Limestone
  - P Plympton Formation
  - K Kaibab Limestone
  - A Acturus Formation
  - E Ely Limestone
  - Ch Chalmers Shale
  - J Joana Limestone
  - P Pilot Shale
  - G Guilmette Formation
  - S Simonson Dolomite
  - Se Sevy Dolomite
  - L Laketown Dolomite
  - F Fish Haven Dolomite
  - O Eureka Quartzite
  - P Pogonip Group
- CONTACTS**
- Contact
  - - - - - Dashed where poorly exposed or inferred; dotted where concealed
  - - - - - Fault
  - - - - - Dashed where poorly exposed or inferred; dotted where concealed. Bar and ball on downthrown side
  - - - - - Low-angle fault
  - - - - - Dashed where poorly exposed or inferred; dotted where concealed. Sawtooth on upper plate
  - - - - - Anticline
  - - - - - Showing approximate position of axial trace; dashed where approximately located, dotted where concealed
  - - - - - Overturned anticline
  - - - - - Showing approximate trace of axial surface
  - - - - - Syncline
  - - - - - Showing approximate position of axial trace; dashed where approximately located, dotted where concealed
  - - - - - Overturned syncline
  - - - - - Showing approximate trace of axial surface
  - - - - - Synform
  - - - - - In up-dip-down beds, showing approximate position of axial trace; dotted where concealed
  - - - - - Trough of minor syncline
  - - - - - Strike and dip of beds
  - - - - - Strike and dip of overturned beds
  - - - - - Strike of vertical beds



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

By  
Richard K. Hose

1965