### Triassic

- Johnnie Formation - massive cross-bedded red sandstones. Forms prominent ridges and outcrops; is the “classic” red-bed sandstone seen throughout the southwest.

- Chinle Formation - red shaly sandstones, red, brown and green shales with thin zones of chert and calcareous conglomerates.

- Moenkopi Formation - tan to buff thin-bedded limestone with minor dolomite overlain by red to orange-brown sandstones. Not a common unit in the east Mojave, perhaps removed by erosion.

- Kaibab Formation - tan to very light gray, thick-bedded limestones with minor dolomite at base. Extremely chemically and physically fossiliferous with large well-prepared brachiopods. Recognized by the chert beds and fossil content.

- Supai Formation - red to pink sandstones and shale with a few sporadic beds of gypsum. Generally poorly exposed on debris-covered slopes.

### Jurassic

- Bird Spring Formation - predominantly medium-gray limestones with lesser shale and calcareous sandstones. Locally altered to dolomite; minor chert. Often recognized by the presence of silicified, 2-3' fragments and lesser brachiopods.

- Carrara Formation - lower members composed of brown to brown-red shale and algal dolomite with minor red-brown sandy siltstone. Characteristic olive-green weathering appearance of siltstones. Upper members dominantly tan to gray limestones, locally cherty with caliche filled fractures. Not fossiliferous.

- Zabriskie Quartzite - dark gray quartzite interbedded with dolomite, algal and conglomerate; Zabriskie Group, a thin blue-gray calcareous limestone. A prominent marker bed. Rainstorm Member, a dark gray shale grading upward into dolomite conglomerate locally overlies the calcareous limestone.

### Cretaceous

- Montezuma Limestone - light gray, generally massive dolomite and limestone, locally cherty. Abundant crossbed fragments and lesser brachiopods.

- Sultan Limestone - dark, very gray, thin to medium-bedded limestones and dolomite. Characterized by the dark color of its weathered outcrop and tendency to form ledges. Not fossiliferous.

- Papagoi Group - interbedded tan to buff dolomite and limestones. Characterized by solution karst features near the top of the unit. Although nowhere as extensive as the Great Basin, only sporadically present in the southeastern Mojave; perhaps removed by erosion.

- Nopah Formation - massive to thick-bedded tan to buff dolomite. Forms steep slopes and vertical faces. Dunderburg Shale lies at the base. Shale is tan to light gray, calcareous and slightly siliceous.

- Bonanza King Formation - lower Papoose Lake Member comprised of blue-gray limestone and dolomite. Basal dikes strongly embayed and locally dolomitized. Middle to upper members consists of tan to white limestone; locally cherty. This unit is a prominent edge former and the most laterally extensive in the east Mojave. Not fossiliferous.

- Carrera Formation - lower members comprised of brown to brown-red shale and algal dolomite with minor red-brown sandy siltstone. Characteristic olive-green weathering appearance of siltstones. Upper members dominantly tan to gray limestones, locally cherty with caliche filled fractures. Not fossiliferous.

- Zabriskie Quartzite - white to light tan, well sorted and strongly indurated. Minor cross-bedding, generally massive, prominent edge former.

- Wood Canyon Formation - red brown cross-bedded, arkosic sandstones. Minor cross-bedding and scouring, locally pale yellowish or reddish brown. Millimeter to centimeter scale laminae; clayey to sandy siltstone; siltstone and conglomerate beds at base. Precambrian basement - strongly foliated gneisses with minor interbedded quartze and marble. Intruded by 1.05 Ga granite, syenite and carbonatite complex and cut by 750-800 Ma dikes.

### Generalized Stratigraphic Column

**East Mojave**

**D.R. JESSEY**

**Cal Poly - Pomona**

### Miogeoclinal

- Wood Canyon Formation - see cratonal description.

- Stirling Quartzite - lower and upper units are dark gray to purple massive quartzite; middle unit is a black calcareous siltstone.

- Johnnie Formation - dark gray quartzite interbedded with dolomite, algal and conglomerate; Johnnie Group, is a thin blue-gray calcareous limestone. An important marker bed. Plainsom Member, a dark gray shale grading upward into dolomite conglomerate locally overlies the calcareous limestone.

- Noonday Dolomite - cream to gray, poorly bedded algal dolomite and, algalic dolomite with minor cross-bedded quartze.

- Kingston Peak Formation - sequence of interbedded sandstones and shales grading upward into conglomerate now generally recognized to be a diamictite.

- Beck Springs Dolomite - blue-gray massive to well laminated dolomite; locally calcareous.

- Crystal Springs Formation - basal arkosic sandstones grading upward into shaly/mudstone, middle member massivestromatolitic limestones overlain by dolomite/argillaceous dolomite; upper member thick-bedded limestone intruded by diabase sills (1.05 Ga).

- Precambrian basement - strongly foliated gneisses with minor interbedded quartze and marble. Intruded by 1.05 Ga granite, syenite and carbonatite complex and cut by 750-800 Ma dikes.