

GEOLOGIC MAP NO. 4 **EXPLANATION** Alluvium Valley fill and terrace gravels related to present drainage. High-level gravels Poorly sorted terrace gravels, including some landslide debris not related to present drainage except locally. Basalt flows Includes dark aphanitic vesicular flows of indeterminate age; flow units near El Morro are the most recent. UNCONFORMITY Mesa Verde group Massive cross-bedded carbonaceous sandstone; probably equivalent to the Gallup sandstone of the Gallup area. Mancos shale Gray-black platy calcareous marine shale; fossiliferous. Kd Dakota (?) formation Massive cross-bedded buff-brown conglomeratic sandstone. UNCONFORMITY Thoreau formation Massive to thin-bedded red, brown, and white sandstone and siltstone; alternating even-bedded and cross-bedded layers. UNCONFORMITY Entrada sandstone Massive well-sorted cross-bedded, medium-grained friable orange-red sandstone. UNCONFORMITY Wingate formation A lower (Rock Point member?) unit of alternating red-brown even-bedded sandstone and chocolate-brown to red thin-bedded siltstone grading upward into (Lukachukai member?) alternating friable well-sorted reddish-brown sandstone and massive chert-pebble conglomerate.

Red, brown, and purple siltstone interbedded with reddish-brown mudstone containing thin coarse-grained sandstone lenses. Lime-pebble conglomerate common in

Upper member

Middle member Medium-to thick-bedded hard yellow-gray cross-bedded sandstone and pebble con-

glomerate with thin partings of purple-gray siltstone and mudstone.

Lower member

Thin-bedded fine-grained purple-white silty sandstone with interbedded massive purple and chocolate-brown siltstone and mudstone. UNCONFORMITY

San Andres formation Lower: blue-gray to white fossiliferous limestone; middle: gray-yellow moderately well-sorted calcareous sandstone; upper: massive gray-pink fossiliferous

Glorieta formation Massive white-buff coarse-grained well-sorted cross-bedded pure quartz lime-

Upper member Pink poorly-sorted sandstone and siltstone with well-sorted medium-grained white-buff sandstone.

Limestone member Three beds of blue-gray fetid thin-bedded limestone separated by variegated

sandstone, siltstone, and mudstone.

Second member

Variegated thin-bedded calcareous poorly-sorted alternating sandstone and

Meseta Blanca member Cross-bedded and thin-bedded well-sorted very fine-grained orange sandstone.

Abo formation

Cross-bedded and even-bedded layers of chocolate-brown sandstone, siltstone, and conglomerate.

Conglomerate and arkose composed principally of fragments of the underlying Precambrian(?) schist, gneiss, and other metamorphic rocks (Pak); thin sparsely fossiliferous limestone lenses are interbedded with the arkose (PIs).

UNCONFORMITY

Precambrian(?) rocks Granite gneiss with aplitic factes and quartz veins (P€g); metarhyolite and metasedimentary rocks, principally chlorite, sericite, and biotite schist (P€m).

Contact Dashed where approximately located;

dotted where concealed.

NEW MEXICO

Dashed where approximately located; dotted where concealed.