

**PLATE 2 Group.** Study Area location-index maps (**PLATE 1**-derivative hydrogeologic base) that shows the names and locations of 1) major geographic and cultural features; and 2) hydrogeologic mapping-unit subdivisions. 1:100,000 scale compilations on Google Earth® image bases:

**PLATE 2A.** Digital compilation of the hydrogeologic Base map (**PL. 1A**) with an overlay of part of the 4 milligal contour-interval Bouguer (isostatic-residual) gravity-map of Jiménez and Keller (2000, Fig 4) The Southern Jornada Basin (SJB), Mesilla Basin (MeB), and El Parabién Basin (EPB) are outlined in orange, green, and dark red, respectively.

**PLATE 2B.** Index map showing names and locations of major Hydrogeologic Subdivisions in the Study Area. Explanations of Subdivision acronyms and names, and boundary fault zones (lines with bar and ball symbols are given on in **PLATES 2B-1** and **2B-2a, b** (*cf.* **PLS. 1** to **7**). Solid and dashed black lines are boundaries of interbasin-uplift and intrabasin subdivisions. The Mesilla GW Basin (MeB) is shown with blue shades. It has 15 map-unit subdivisions, and includes the Mesilla Valley of the Rio Grande (MeV-dark blue). The Southern Jornada (SJB-light green) and El Parabién (EPB-pink) GW Basins have 3 and 2 map-unit subdivisions, respectively. Selden Canyon (SCyn) of the Rio Grande separates the MeV from the southeastern part of the Rincon Valley Basin (RVB-beige), which has 2 map-unit subdivisions. El Paso del Norte (EPdN) of the Rio Grande/Bravo occupies 1) the “Narrows” between the MeV and the El Paso Valley/Valle de Juárez area of the Southwest Hueco Bolson (SWHB-pinkish gray), and 2) the *water gap* between the Franklin Mountains and Cerro del Cristo Rey Uplifts (FMU and CCRU). The Fillmore Pass Corridor (FPC-very light blue) between the Bishops Cap and northern Franklin Mountains Uplifts (BCU and FMU) is the site of an Ancestral Rio Grande (ARG) distributary-channel belt between the MeB and the Western Hueco Bolson (WHB). The Méndez-Vergel (Inflow) Corridor (MVIC-very light blue) between the Sierra Juárez and Sierra Sapello Uplifts (SrJU and SrSU) is the site of another Ancestral Rio Grande (ARG) distributary-channel belt between the southern end of the MeB and the Southwest Hueco Bolson (SWHB).

**PLATE 2C.** Schematic geologic cross sections I-I' to III-III' that show major subsurface stratigraphic and structural relationships in the central and southern parts of the Study Area, with section locations shown on **PLATE 1B**. Section I-I' shows basic bedrock geologic relationships in the northern MeB/MeV and southern part of the Southern Jornada Basin (SJU). Section II-II' illustrates these relationships in a central MeB area that includes the deeply buried Lanark intrusive complex (TmLC) that forms much of the central Mid-Basin High (MeB-MBH; **Part 6.3.2a**). Section III-III' shows basic geologic relationships in an area located about 5 mi (8 km) south of the International Boundary.