PART F4—Plates F4-1 to F4-3 Series. Land-Surface Photographs of Major Geomorphic, Cultural and Hydrogeologic Features in the Lower Rincon Valley, Mesilla Basin, and Hueco Bolson Region

Plates F4-1a to F4-1m (Slides 61 to 73). Representative Geomorphic, Cultural, and Hydrogeologic Features in the Valleys and Canyons of the Rio Grande/Bravo Fluvial System Between the Lower Rincon Valley, NM and El Paso del Norte

Pl. F4-1a (USDA-SCS; June 1963). View of San Diego Mtn. and the Tonuco Uplift from the eastern rim of the lower Rincon Valley and the western edge of the Southern Jornada GW Basin (SJB), with the Robledo Mtns. on the SW skyline. Jeep is on La Mesa Surface petrocalcic soil that caps Upper SFG-ARG basin fill (HSU-USF2, LFA 1-2)

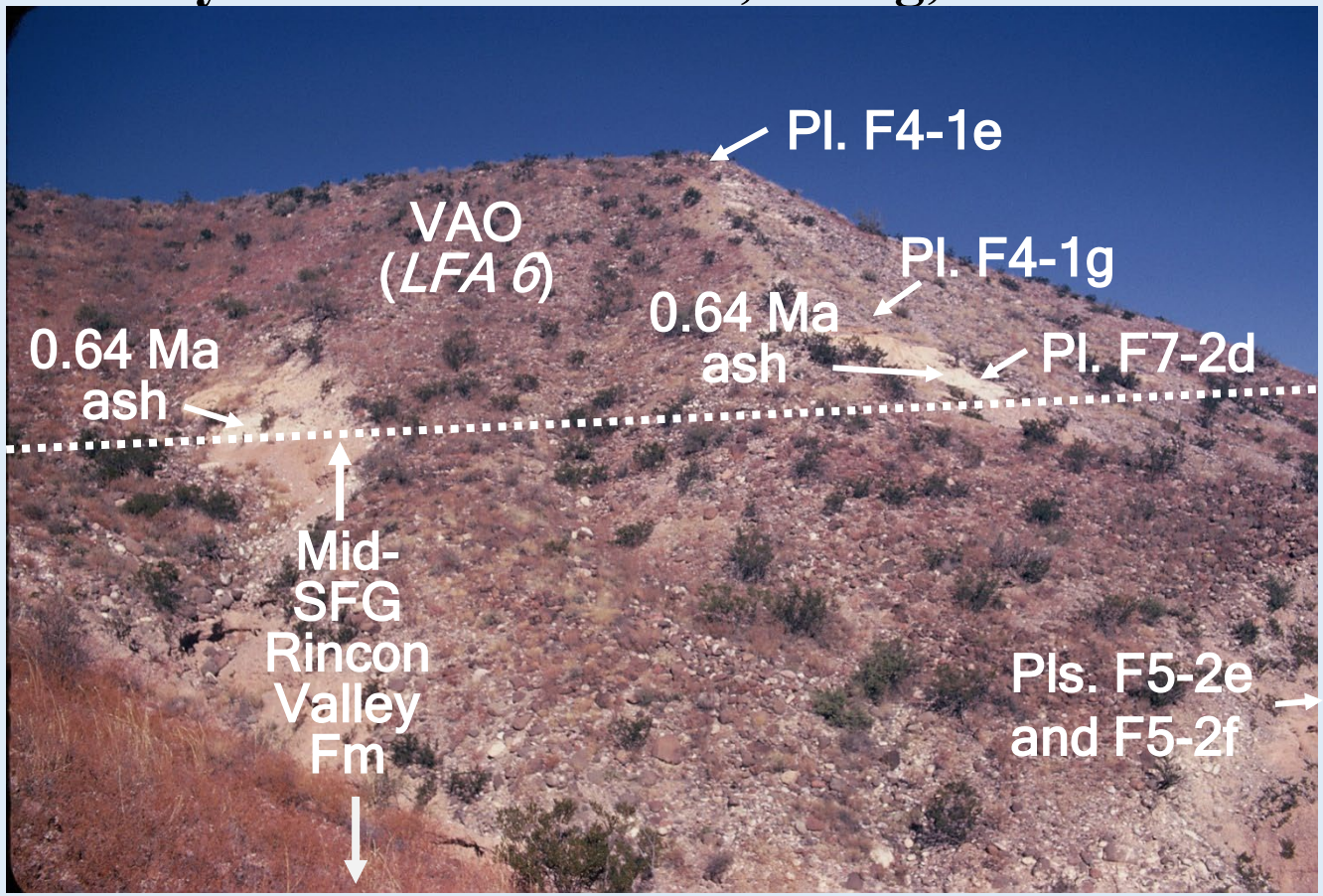
Pl. F4-1b (R.T. Hanson-USGS; 9/15/2004). Hayner Farms chili field and pecan orchard in lower Rincon Valley of the Rio Grande. The summit of San Diego Mtn. (Tonuco Uplift) on the eastern skyline is underlain by Lower SFG conglomerates of the type Hayner Ranch Fm (HSU-LSF/*LSF 8*)

Pl. F4-1c (NM BMMR; 5/1989). Bean field on lower Rincon Valley floor is bordered on the SW by bluffs with exposures of light reddish-brown beds of the Middle SFG-Rincon Valley Fm that are capped by Upper SFG-Camp Rice Fm (ARG and piedmont facies)

PL. F4-1d (NM WRRI, 4/2/2007). Bank-full Rio Grande at the lower end of the Rincon Valley and head of Selden Canyon. San Diego Mtn. and the northern Selden Hills are on the northern skyline. *See* Pl. F4-1b

Pl. F4-1e (NM WRRI, 5/26/2000). View of the SE end of Rincon Valley and head of Selden Canyon from the rim of VAO-capped Ash Mine Mesa (Pl. F4-1d). San Diego Mtn., Tonuco Uplift, and the NW Selden Hills are on the northern skyline. S*ee* Pls. F4-1b, 1d and 1f

Pl. F4-1f (USDA-SCS; 1972). Eastern face of Ash Mine Mesa at edge of Selden Cyn and mouth of Broad Cyn. Older fan alluvium (VAO) caps 0.64 Ma Lava Creek Ash and RG-terrace deposits that are unconformable on the Middle SFG Rincon Valley Fm. *See* Pls. F4-1e, F4-1g, F5-2e and F7-2d



Pl. F4-1g (NM WRRI; 5/26/2000). View of the upper end of Selden Canyon from the eastern edge of Ash Mine Mesa. Older Broad Cyn. fan gvl. (VAO-*LFA 6*) caps reworked bed of 0.64 Ma Lava Creek B Ash in foreground. San Diego Mtn., Tonuco Uplift, and northern Selden Hills are on the northern skyline. S*ee* Pls. F4-1e and F4-1f

Pl. F4-1h (NM WRRI; 5/21/2007). View to NE across the upper Mesilla Valley of the Rio Grande. Middle- to late-Quaternary valley-border deposits flanking the Robledo Mtns. are in the foreground, with the Doña Ana Mtns. on the skyline (*See* Pl. F4-1i)

Pl. F4-1i (NM WRRI, 5/21/2007). View of the Rio Grande channel and floodplain in the upper Mesilla Valley in the area of Pl. F4-1h. Middle- to late- Quaternary valley-border deposits flanking the Robledo Mtns. are on the northern skyline

Pl. F4-1j (HAWLEY GEOMATTERS, 7/27/10). View to N across the Mesilla Valley from Smuggler's Gap in the Franklin Mtns. The Transmountain Hwy. is in the foreground, with the Robledo Mtns. on the NW skyline. *See* Pls. F3-2h and F3-2j

Pl. F4-1k (HAWLEY GEOMATTERS, 7/27/10). View to W across the southern Mesilla Basin from Smuggler's Gap in the Franklin Mtns., with the southern Mesilla Valley in the foreground. The East Potrillo Mtns. and Mt. Cox and Riley peaks are on the skyline. *See* Pls. F3-1i, F3-3a and F3-4a

Pl. F4-1l (HAWLEY GEOMATTERS, 7/27/10). View across the SE end of the Mesilla Valley and the upper El Paso del Norte from Smuggler's Gap. Cerro del Cristo and Sierra Juárez are in the background. *See* Pls. F3-1j and F4-1m

PL. F4-1m (HAWLEY GEOMATTERS, 7/27/10). The Rio Grande at Courchesne Bridge and Gaging Station at SE end of the Mesilla Valley and head of El Paso del Norte. Cerro del Cristo Rey is on the SW skyline. Hydrologist James Hogan at lower left

Plates F4-2a to F4-2g (Slides 75 to 81). Representative Geomorphic, Cultural, and Hydrogeologic Features in the Valleys and Canyons of the Rio Grande/Bravo Fluvial System Between Southeastern Hueco Bolson and Indian Hot Springs

Pl. F4-2a (NM WRRI; 5/18/2003). The Rio Grande/Bravo at low stage near SE end of the Hueco Bolson and below the Fort Quitman Gaging Station (*see* Pl. F1-4). Hydrologist Barry Hibbs sampling water-salinity levels in foreground, with the Quitman Mountains on the southeastern skyline

Pl. F4-2b (NM WRRI; 5/18/2003). The Rio Grande/Bravo at low stage between Fort Quitman Gaging Station and Indian Hot Springs. Hydrologists Chris Eastoe and Barry Hibbs are on the US-bank of the "Rio Pequeño," with the Quitman Mountains in the northeast background

PL. F4-2c (NM WRRI; 5/18/2003). Chris Eastoe sampling one of the spring pools at Indian Hot Spring, Texas; with the southern Quitman Mtns. on the NE skyline. *See* Pls. F3-3b, and F4-2e to F4-1g

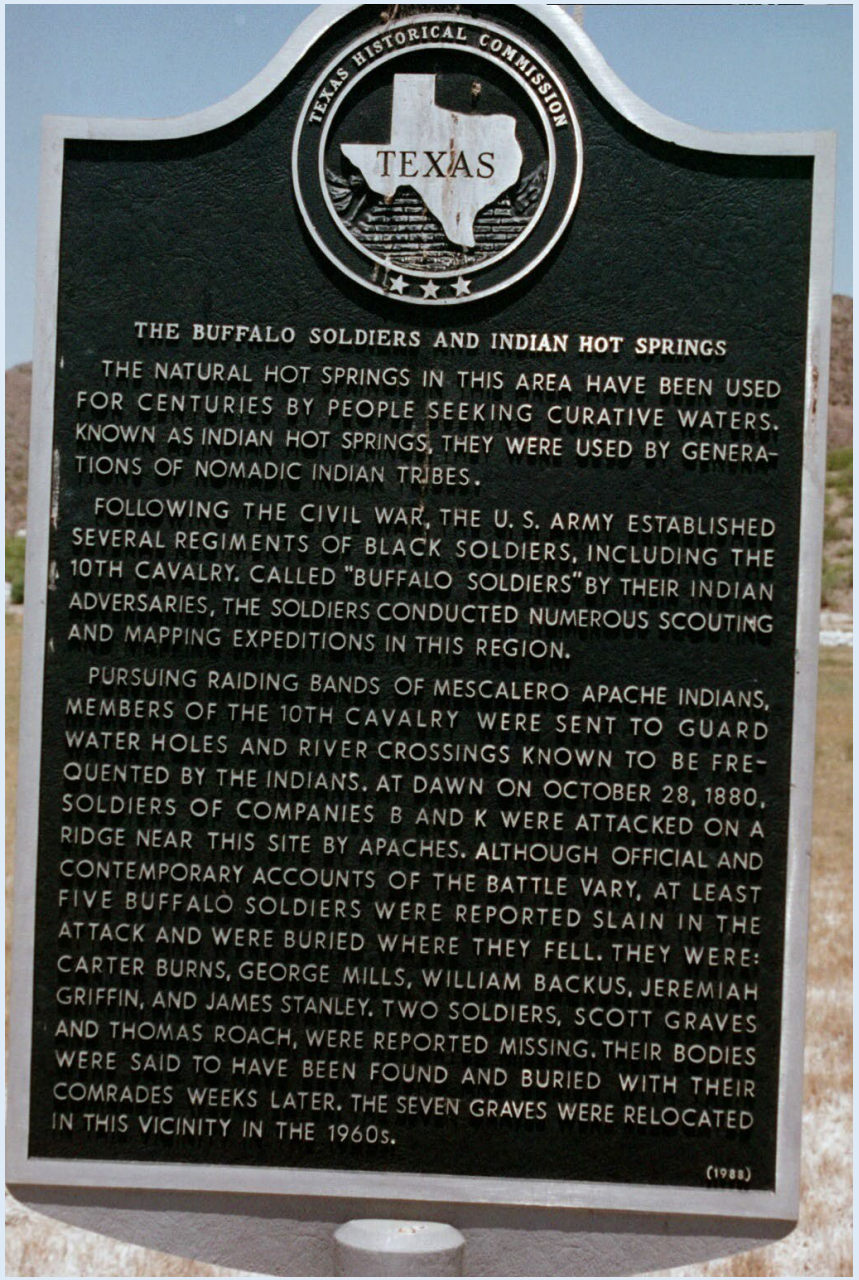
Pl. F4-2d (NM WRRI; 5/18/2003). Entering Eastern Chihuahua Across the International Rio Grande/Bravo "Footbridge" at Indian Hot Springs. *See* Pl. F4-2e

Pl. F4-2e (NM WRRI; 5/18/2003). View Eastward from the "US-Abutment" of the International Rio Grande/Bravo "Footbridge" at Indian Hot Springs, with southern end of Quitman Mtns. in background. *See* Pls. F4-2c and F4-2f)

Pl. F4-2f (NM WRRI; 5/18/2003). Texas Historical Commission "Buffalo Soldiers" Monument at Indian Hot Springs, with southern end of Quitman Mtns. on the northern skyline. *See* Pls. F4-2c and F4-2e

Pl. F4-2g (NM WRRI; 5/18/2003). Texas Historical Commission Monument to the "Buffalo Soldiers" of the U.S. Army 10th Cavalry at Indian Hot Springs

"Three-Flags" site. *See* Pls. F4-3e and F4-3f



Pls. F4-3a and 3b (Slides 83 and 84). Representative Quaternary Geomorphic and Hydrogeologic Features on Piedmont Slopes of the Southern Jornada GW Basin (SJB)

Pl. F4-3a (USDA-SCS; 6/1963). Fillmore Arroyo channel on piedmont slope in the Talavera Subbasin of the SJB. Photo site about 3 mi (5 km) east of Tortugas Mtn. USDA-SCS Soil Scientist Leland (Lee) Gile in foreground, with Organ Mtns. on eastern skyline (peak alt.: 9,012 ft/2,747 m). See Pl. F6-1a

Pl. F4-3b (USDA-SCS; 8/1963). Afternoon arroyo flash flood on upper piedmont slope at E edge of Isaacks Lake Subbasin in Southern Jornada Basin. About 3 mi (5 km) NNW of the village of Organ, with Doña Ana Mtns. on western skyline