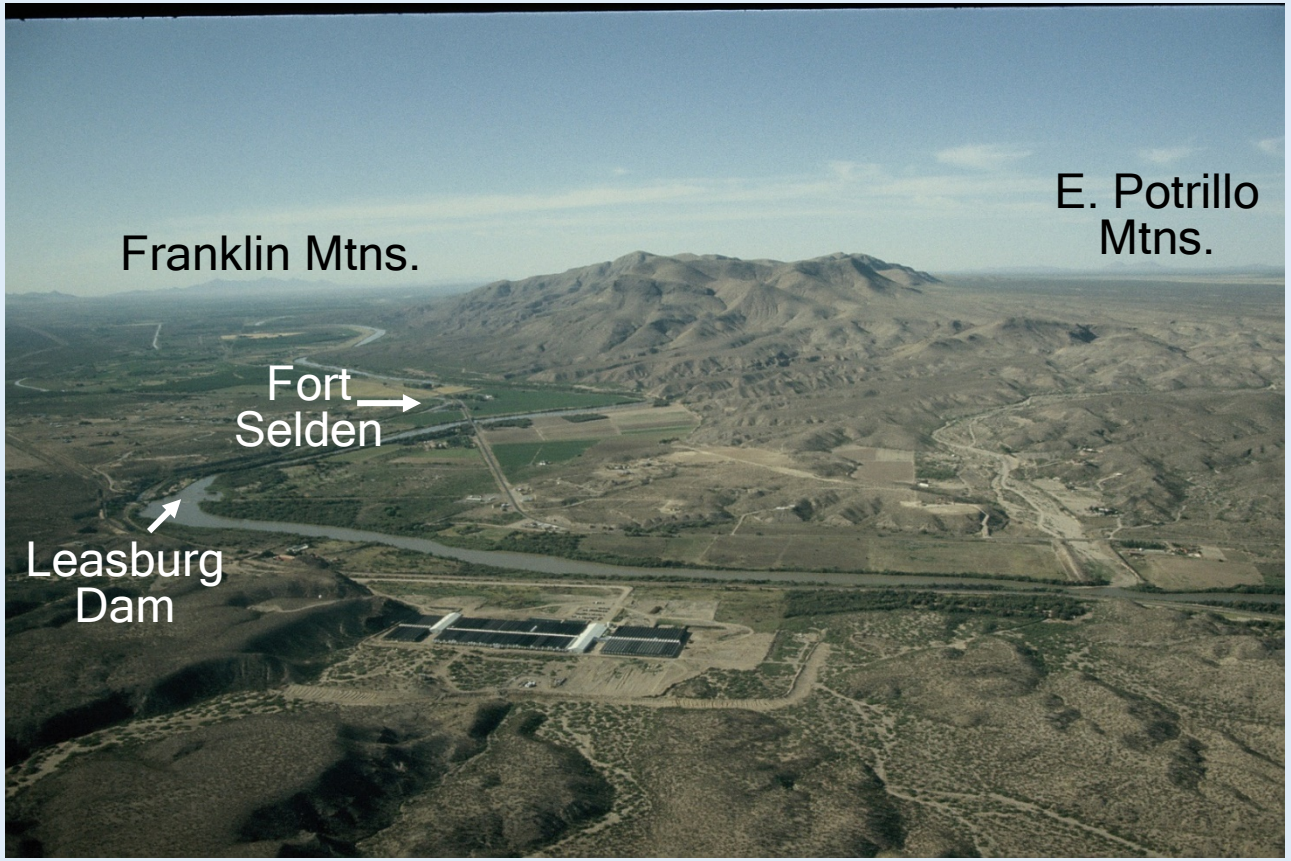
PART F3—Plates F3-1 to F3-4 Series. Low-Level Aerial Photographs of Major Landscape, Cultural, and Hydrogeologic Features in the Southern Rio Grande Rift Region

Plates F3-1a to 1j. USGS-NAQUA Project—June 4, 1991 Rio Grande Valley and Canyon Overflight Series: Elephant Butte Reservoir to the Lower Mesilla Valley. *See* Plate 1-3 RG Project Map

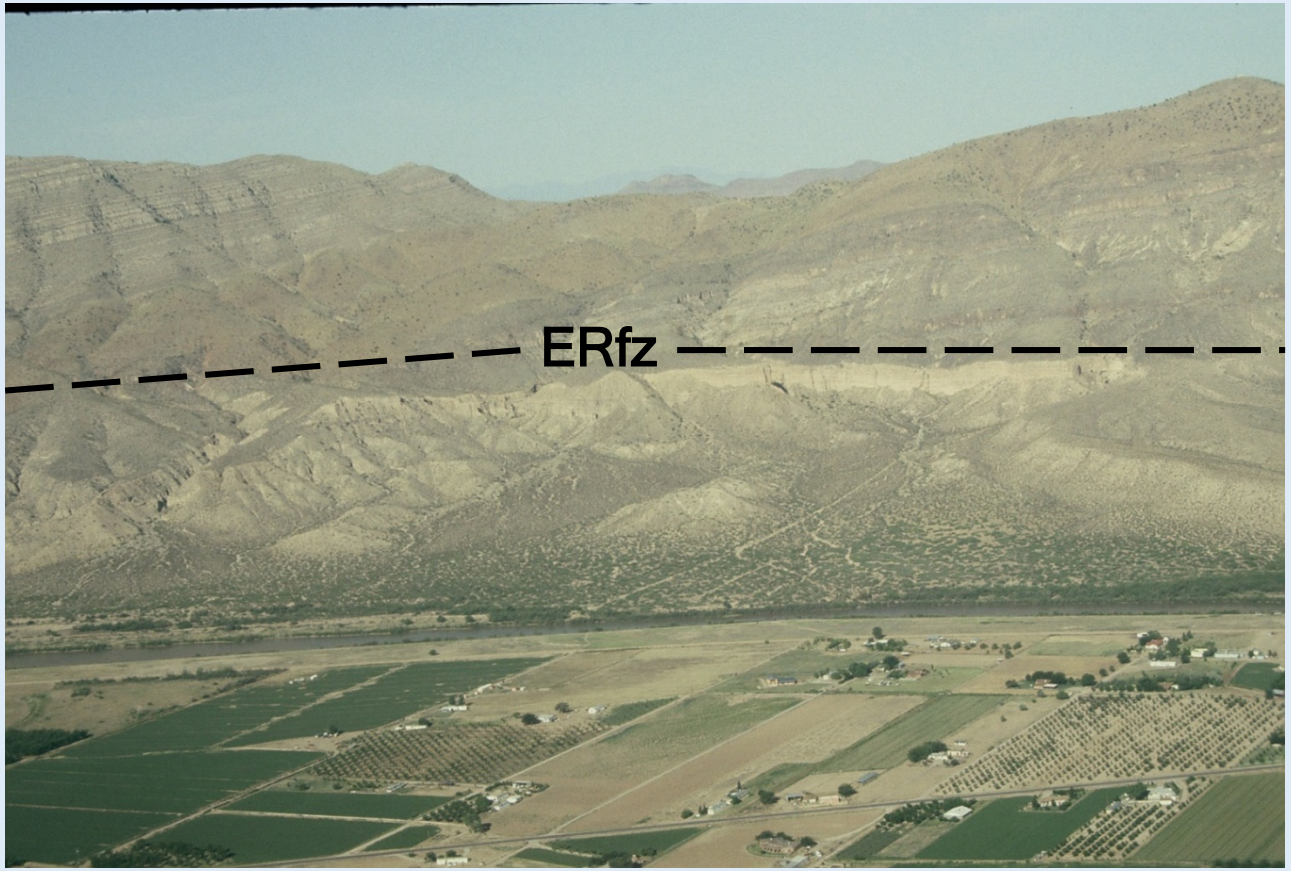
Pl. F3-1a (NM BMMR). View to SW from south end of Elephant Butte (EB) Reservoir toward northern Palomas Basin and southern Black Range. EB "Island" and Dam in foreground, with Rio Grande canyon reach between Dam and the City of T or C

Pl. F3-1b (NM BMMR). View to W from Caballo Dam and Reservoir on the Rio Grande up Percha Creek Valley in the Palomas Basin (Pls. F5-3a and 3b). Southern Black Range (peak alt. 10,011 ft/3,051 m) is on the skyline

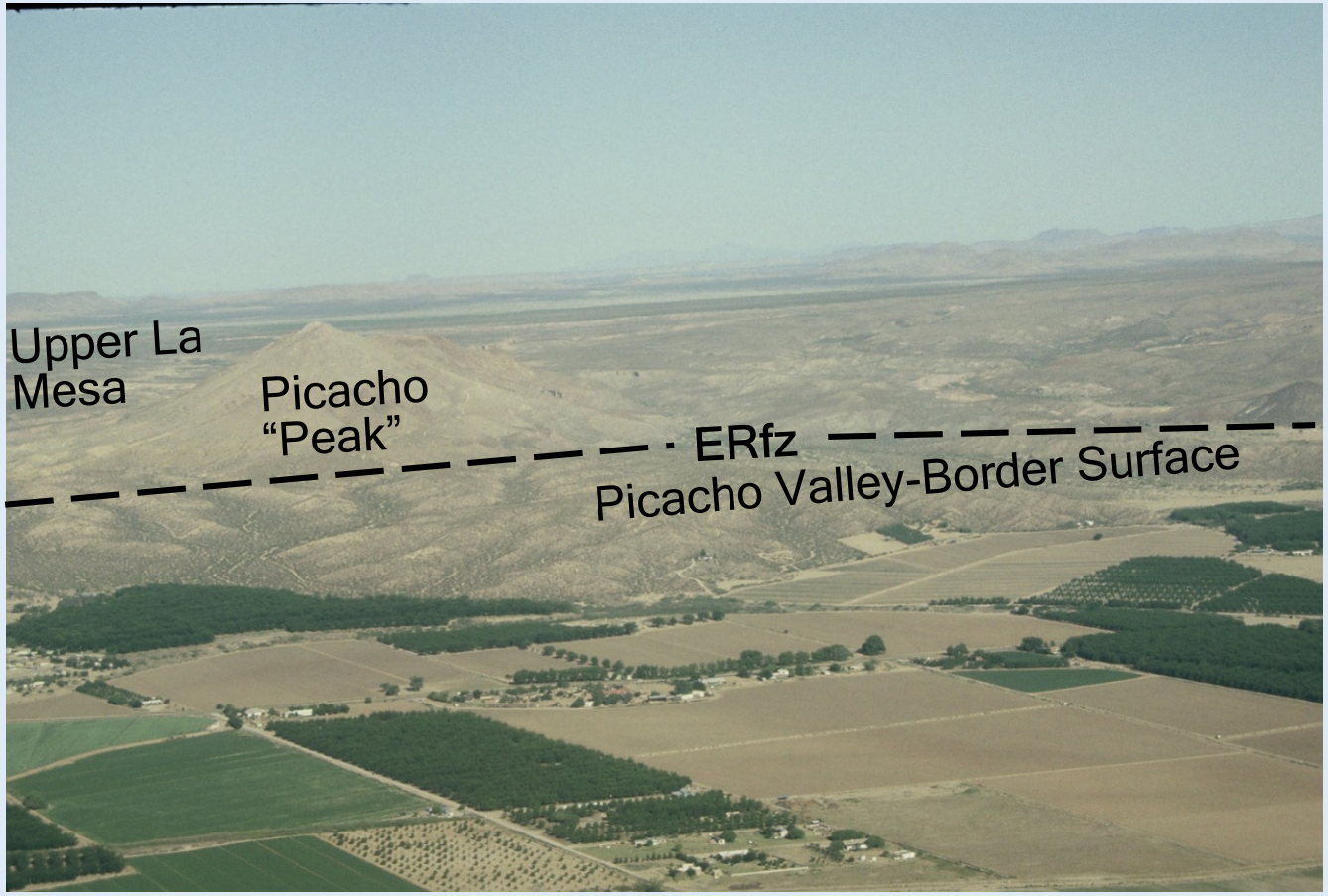
Pl. F3-1c (NM BMMR). View to South of lower Selden Canyon and upper Mesilla Valley of the Rio Grande. Radium Springs Geothermal Greenhouses in foreground upstream from Leasburg Dam. Robledo Mtns. in photo-center, with Cedar-Corralitos Upland Basin to the west



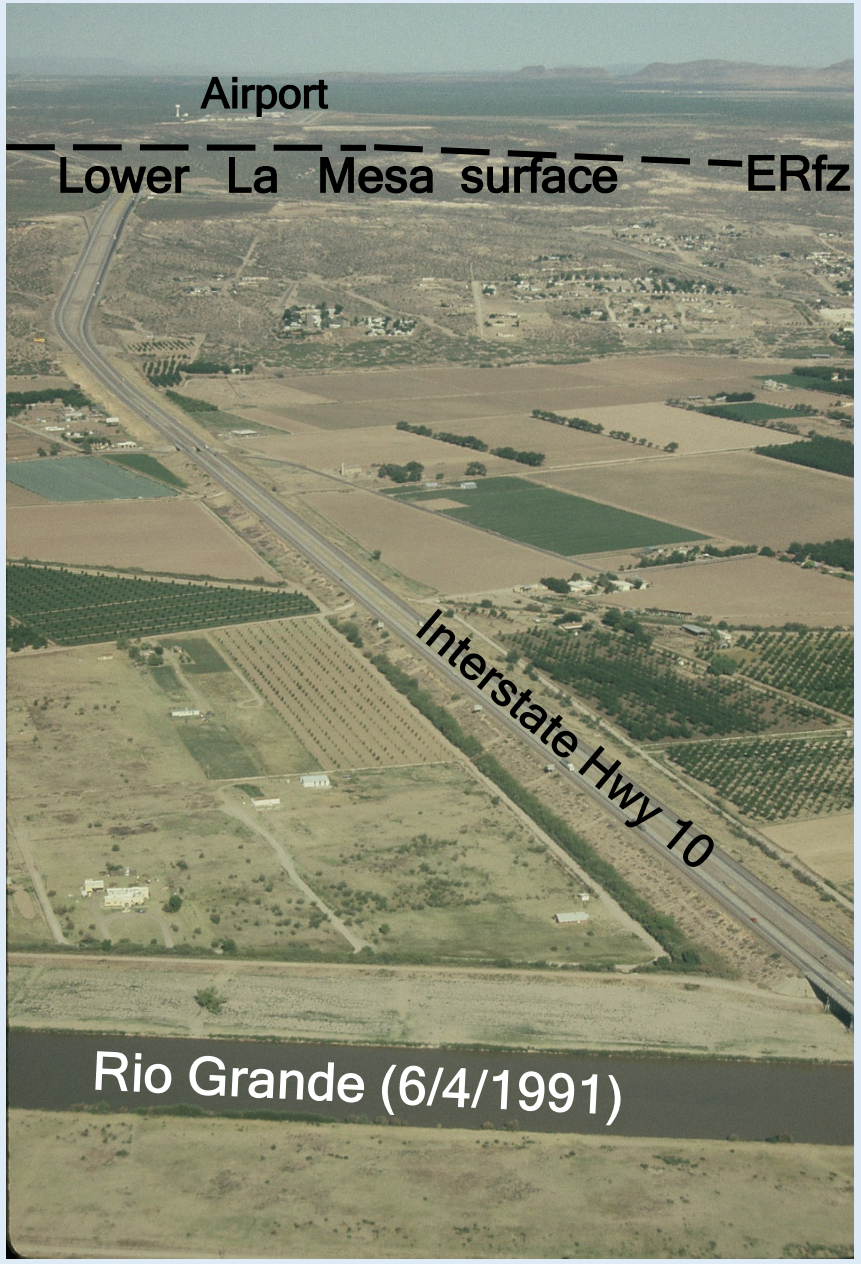
Pl. F3-1d (NM BMMR). View of the East-Central Robledo Mtns. and East Robledo Fault Zone (ERfz) from the Leasburg Inflow Corridor (LBic) Area of the Upper Mesilla Valley (MeV); with Upper SFG Basin-Fill Exposed in Piedmont Area between Rio Grande and ERfz



Pl. F3-1e (NM BMMR). Picacho “Peak”, ERfz, and the Picacho (Village) area of the Mesilla Valley; with the Rough and Ready, and Cedar Hills on skyline west of the Aden-Robledo Uplift (ARU) and the Corralitos Ranch Subbasin of the Cedar-Corralitos Upland Basin



Pl. F3-1f (NM BMMR). Interstate Hwy. 10 west of the Rio Grande in Upper Mesilla Valley; with the Mesilla Basin-West Mesa area, Cedar-Corralitos Upland Basin, and the Rough and Ready Hills on the western skyline. The East Robledo Fault Zone (ERfz) forms the northwestern structural boundary of the Fairacres Subbasin (FASB) of the Mesilla GW Basin (MeB)



Pl. F3-1g (NM BMMR). Rio Grande Project-Mesilla Diversion Dam near Stahmann Farm Pecan Orchard. Western border of the Mesilla Valley, and potential site for managed aquifer recharge (MAR) in background

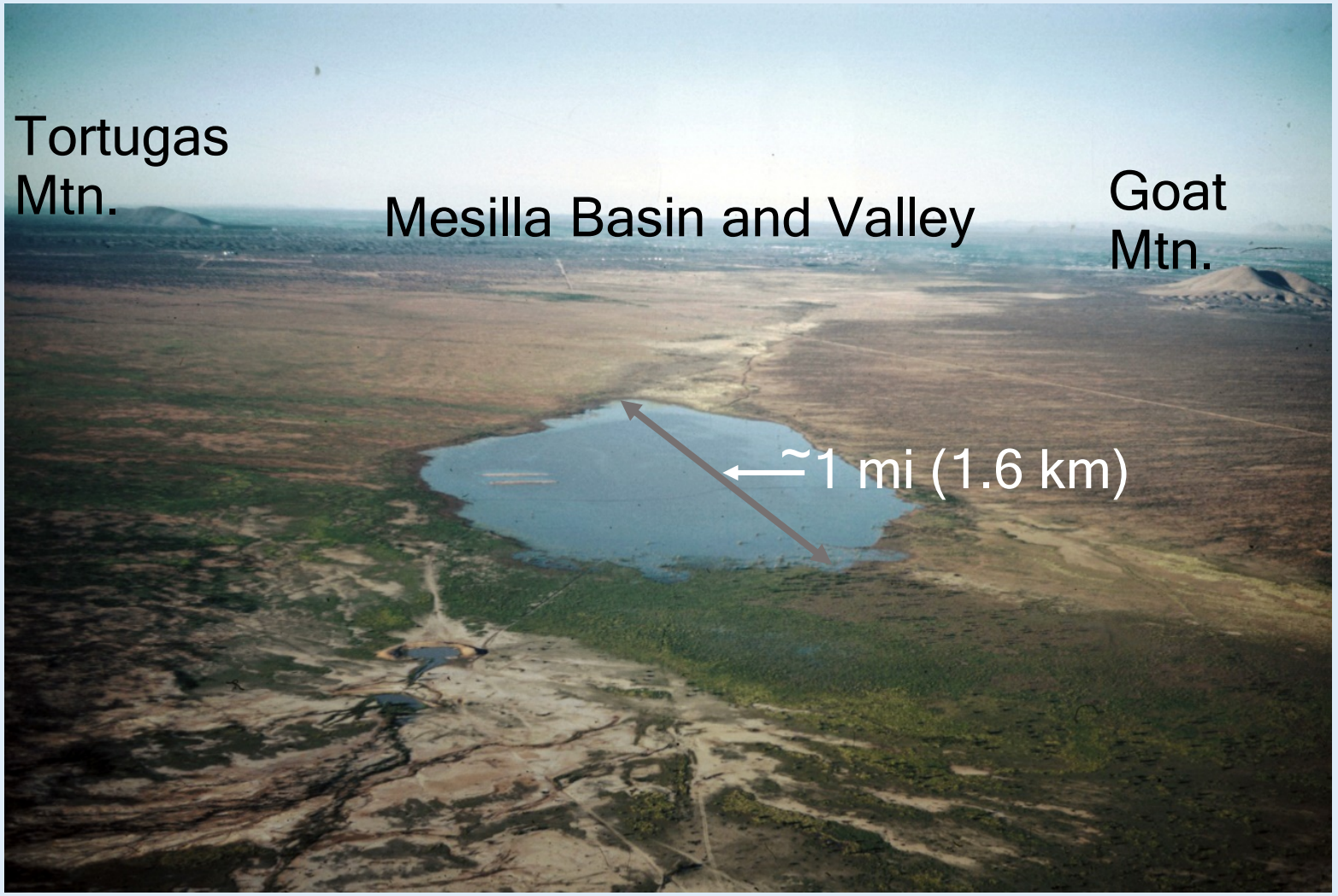
Pl. F3-1h (NM BMMR). View to SW of the Stahmann Farms pecan orchard on the west-central Mesilla Valley floor, with the East Potrillo Mtns. on the western skyline. Basalt flows from the Santo Tomas, San Miguel, and Black Mesa volcanic centers partly cap Mesilla-Valley border and Mesilla Basin-West Mesa surfaces. *See* Pl. F3-2d

Pl. F3-1i. Upper SFG Camp Rice Fm (HSU-USF2) exposed on western MeV rim NW of Sunland Park. Early-stage Santa Teresa Industrial Park (STIP) Development in southern MeB-West Mesa Area, with western Sierra Juárez and Sierra Sapello on southern skyline in Mexico

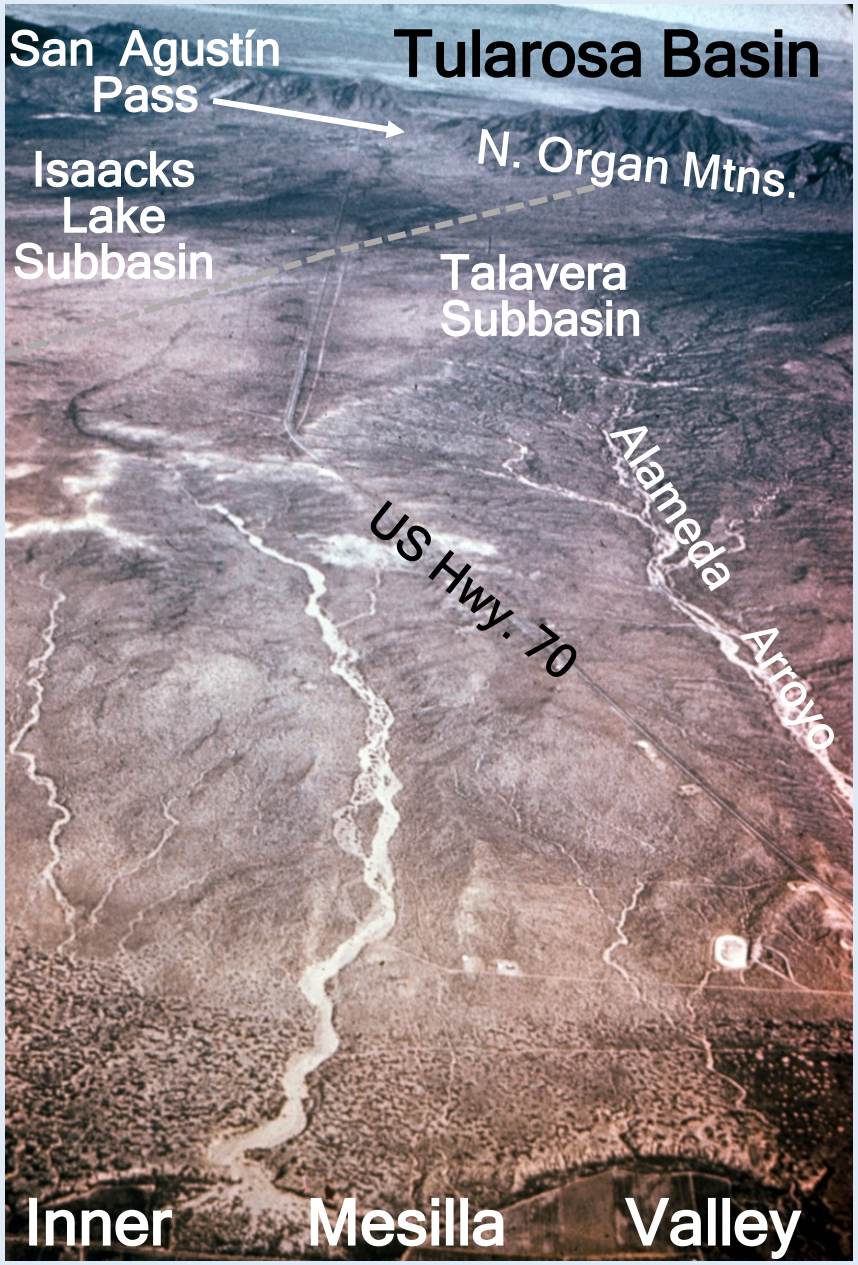
Pl. F3-1j (NM BMMR). Anapra and Sunland Park area of the Lower Mesilla Valley, with Cerro del Cristo Rey in left center and Sierra Juárez on the southern skyline

Plates F3-2a to F3-2j. Mesilla Valley Area, and Contiguous RG-Rift Basins and Mountain Uplifts

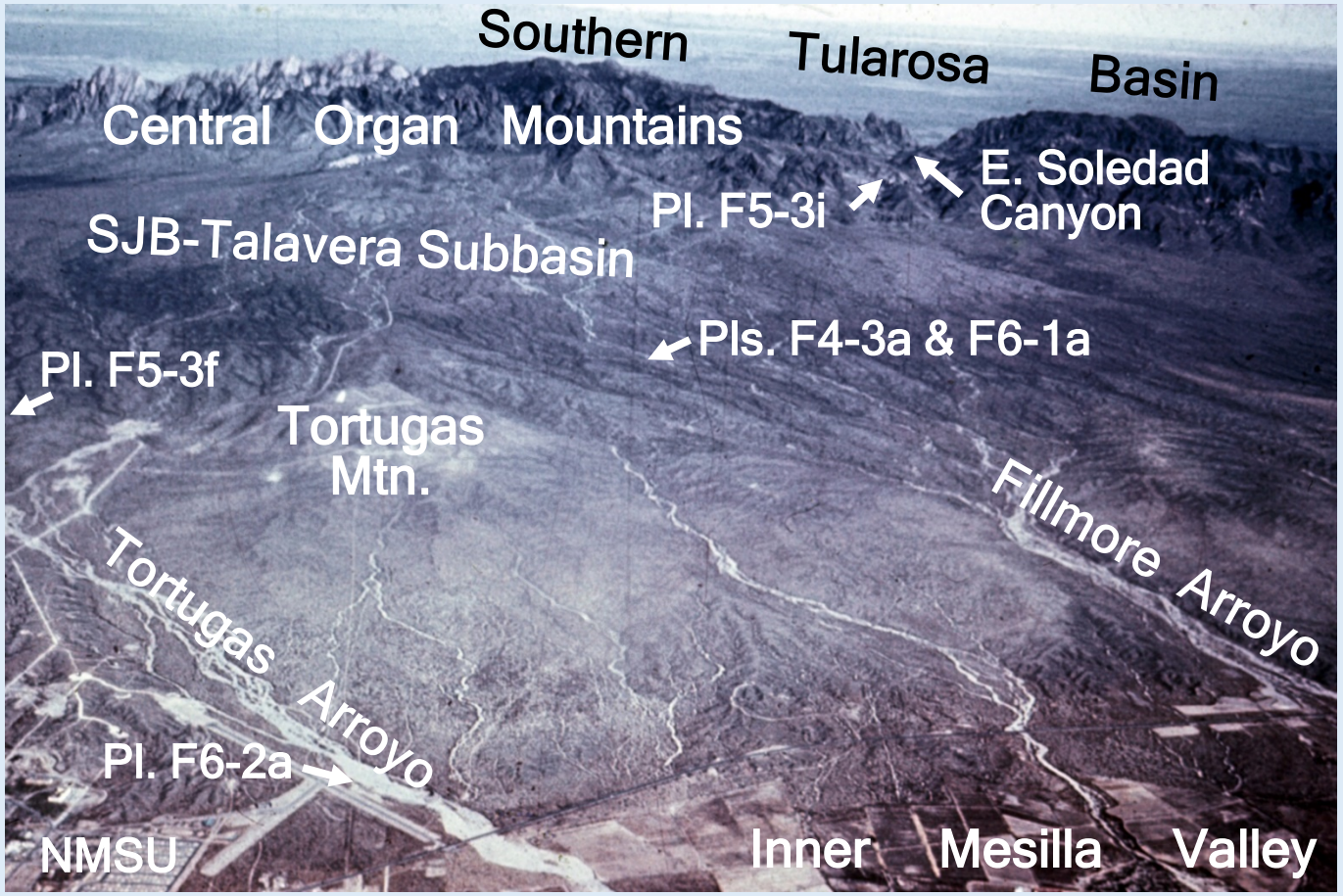
Pl. F3-2a (USDA-SCS; 7/12/1963). View to SW toward Mesilla Basin from Isaacks Lake Subbasin of the Southern Jornada GW Basin. Isaacks Lake Playa after 7/8-9/1963 storm event.



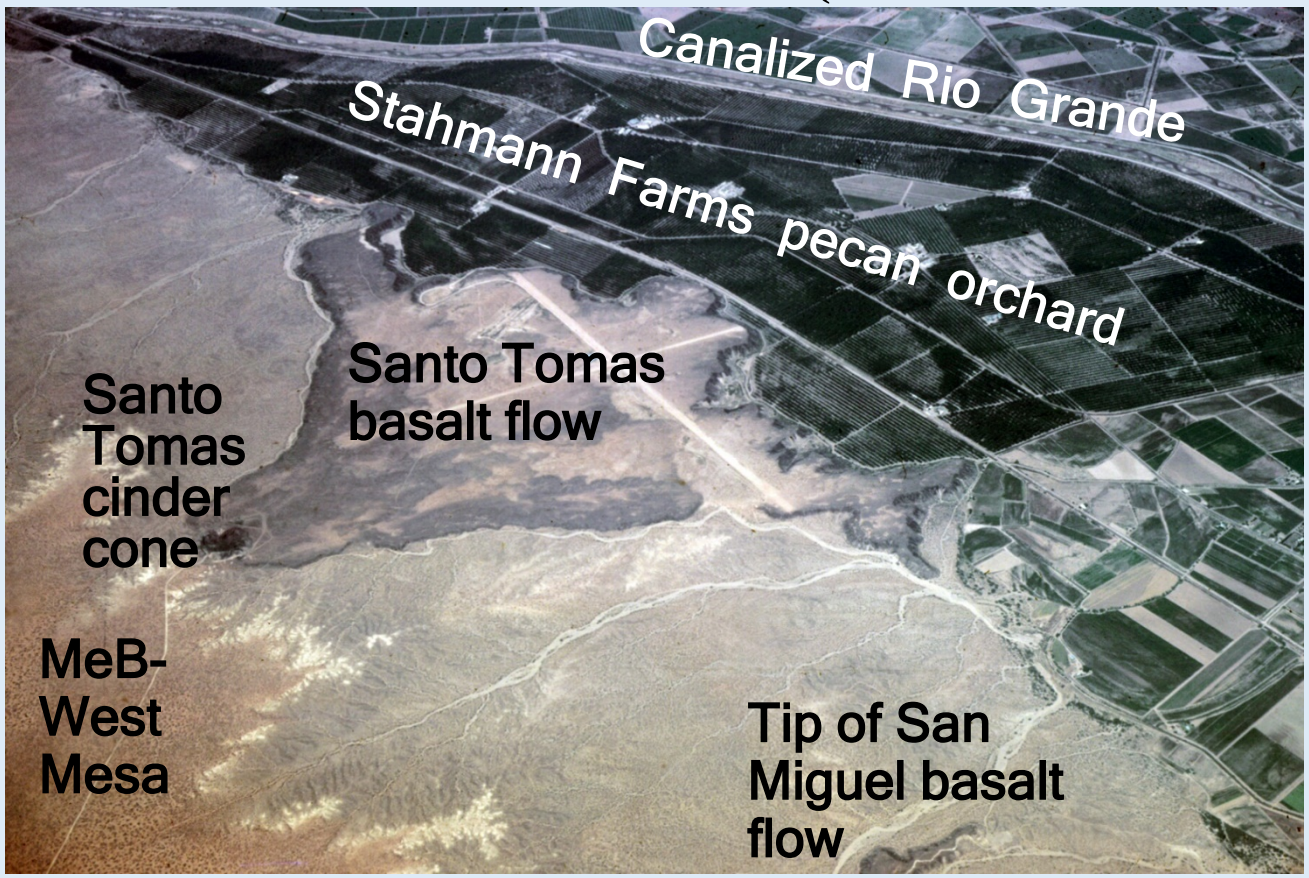
Pl. F3-2b (USDA-SCS; 9/1969). View across the Southern Jornada GW Basin (SJB) from the eastern edge of the inner Mesilla Valley, with the San Agustín and Organ Mtns. in the background. The SJB-Isaacks Lake and Talavera Subbasin boundary is shown with a dashed blue line, which also marks the approximate location of the drainage divide between the Jornada and Mesilla Basin surface-watersheds and GW-flow systems.



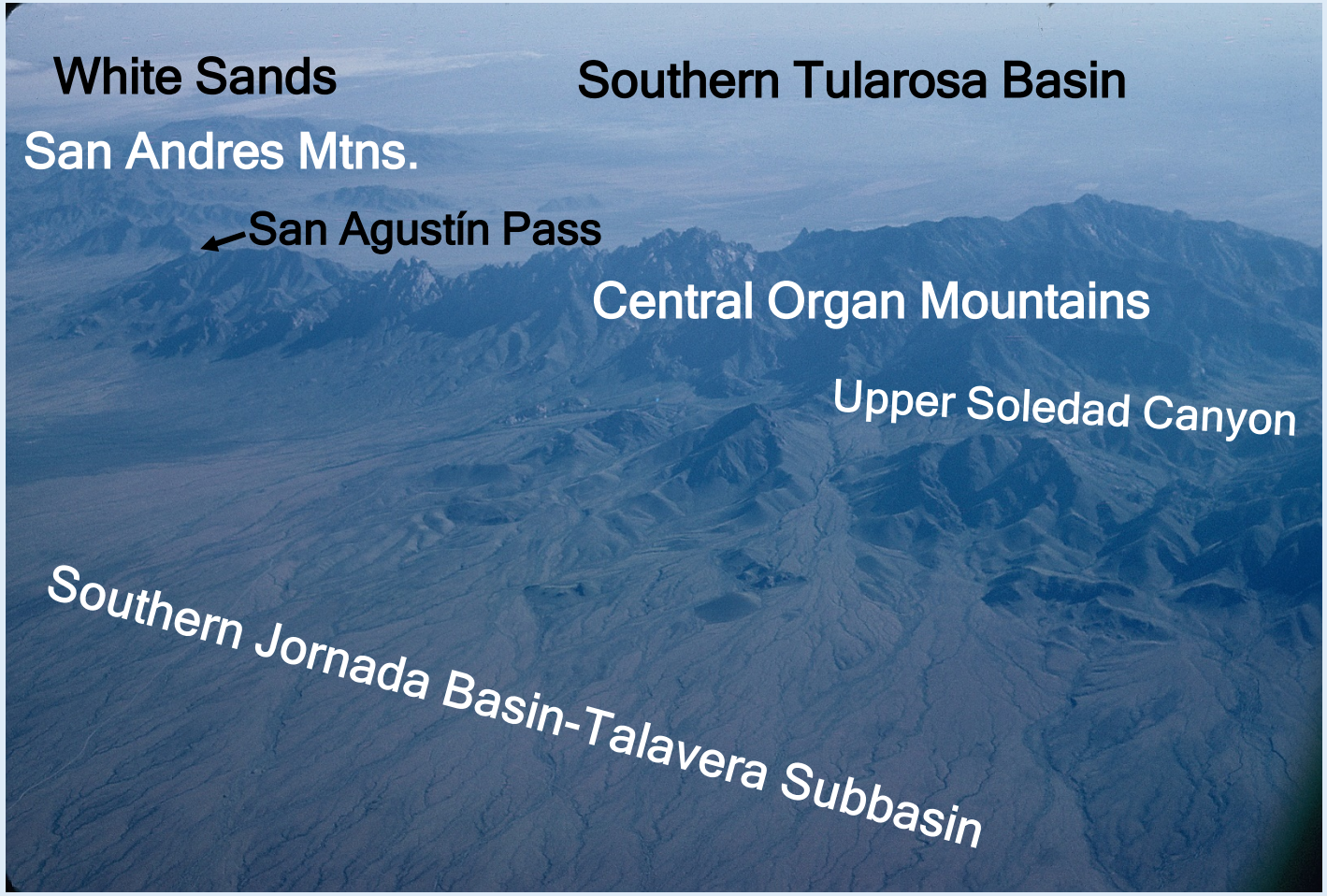
Pl. F3-2c (USDA-SCS; 6/1970). South end of the Southern Jornada GW Basin (SJB) and eastern edge of the inner Mesilla Valley; with Organ Mtns. and Tularosa Basin in background. *See* Pls. F3-2e; F4-3a; F5-3f, 3i and 7a; F6-1h



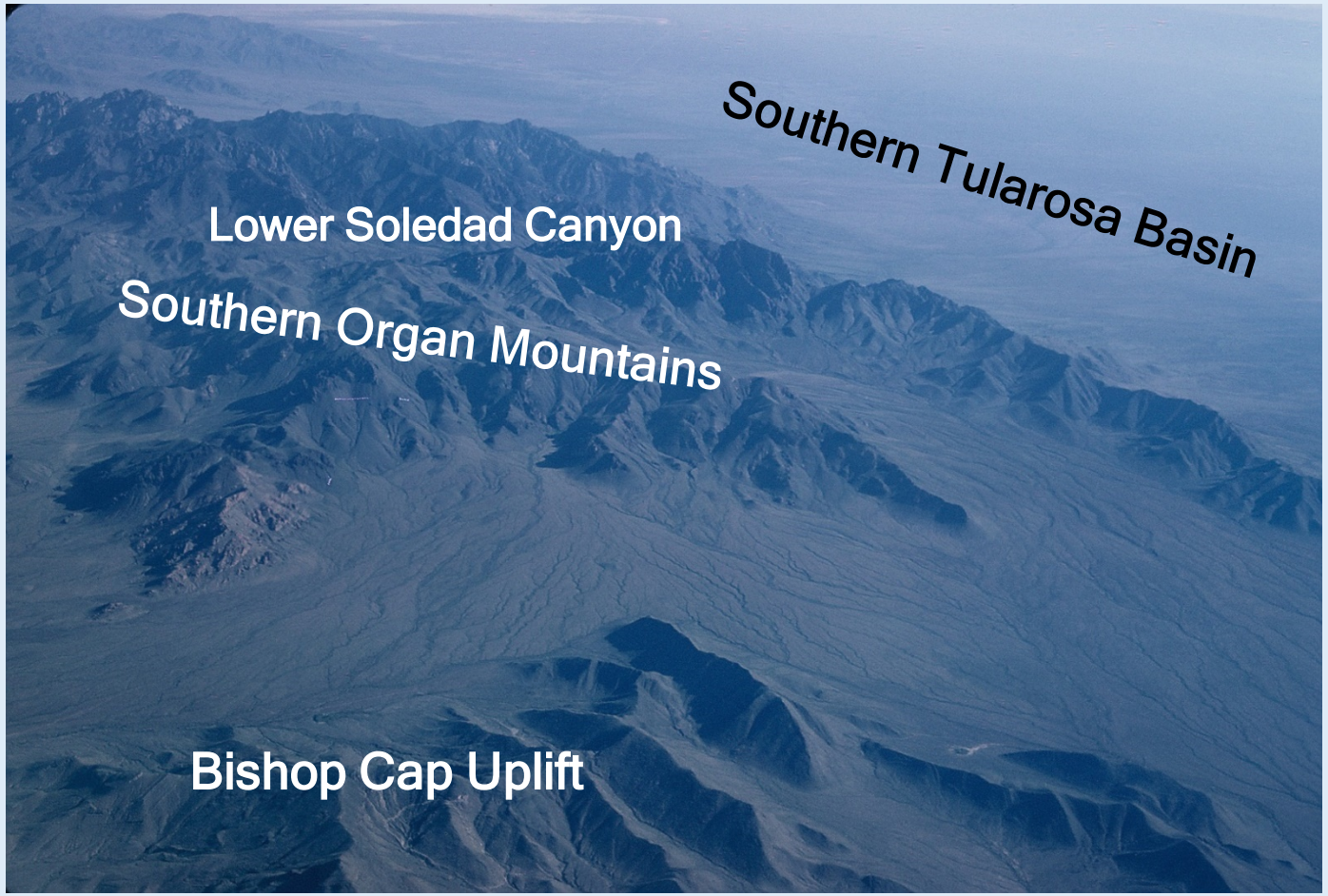
Pl. F3-2d (USDA/SCS-10/1968). The Santo Tomas basalt flow caps Camp Rice Fm and RG-terrace deposits in the MeV-border area W of the Stahmann Farm pecan orchard. The canalized reach of the Rio Grande is immediately downstream from the Mesilla Dam (Pls. Fi-4 and F3-1g).



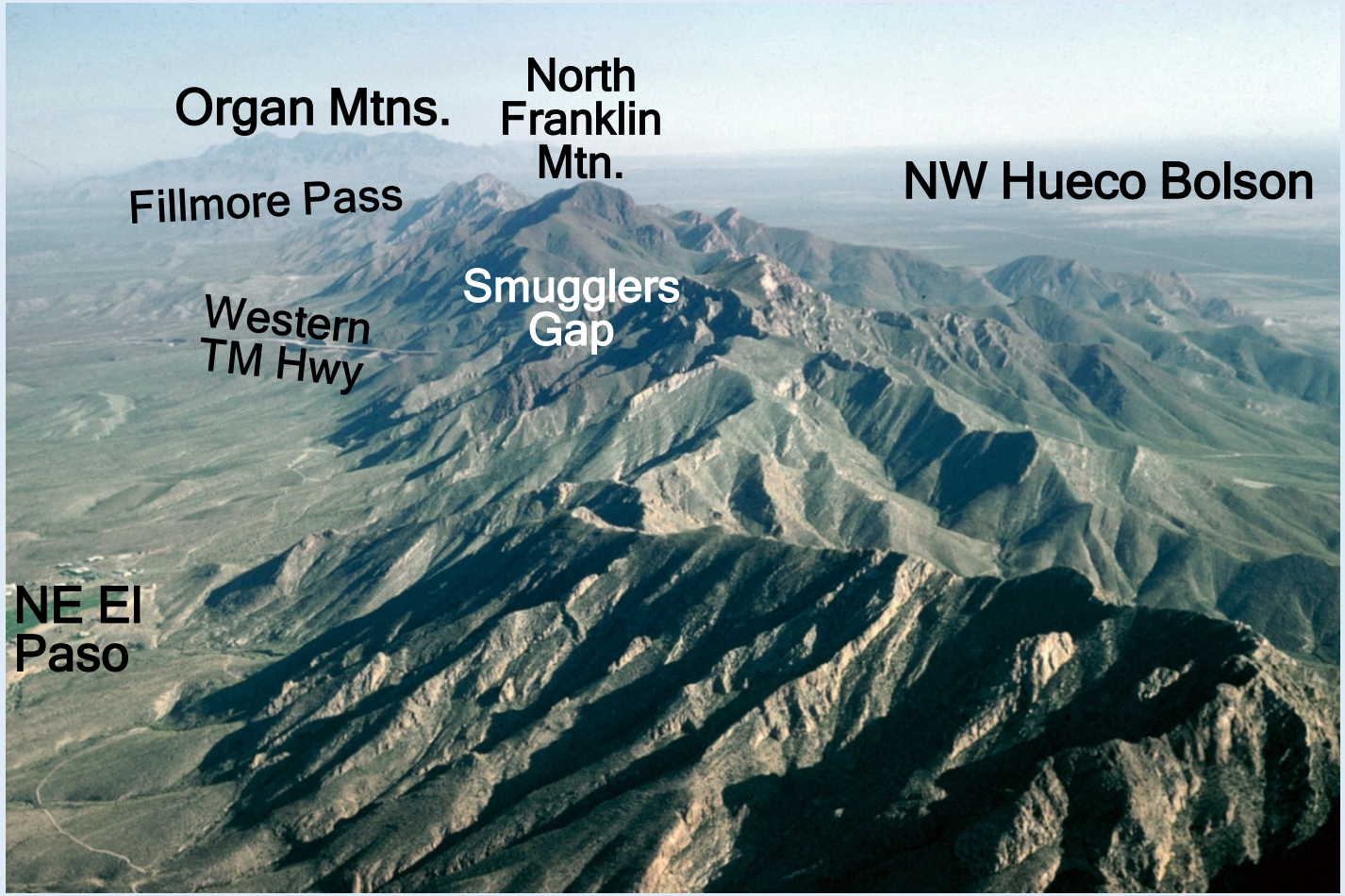
Pl. F3-2e (USDA-SCS; 9/15/1968). View from the south end of the Southern Jornada Basin and the Organ Mountains to the Southern San Andres Mtns., with the Tularosa Basin-White Sands area in the background. *See* Pls. F3-2b and F5-3f



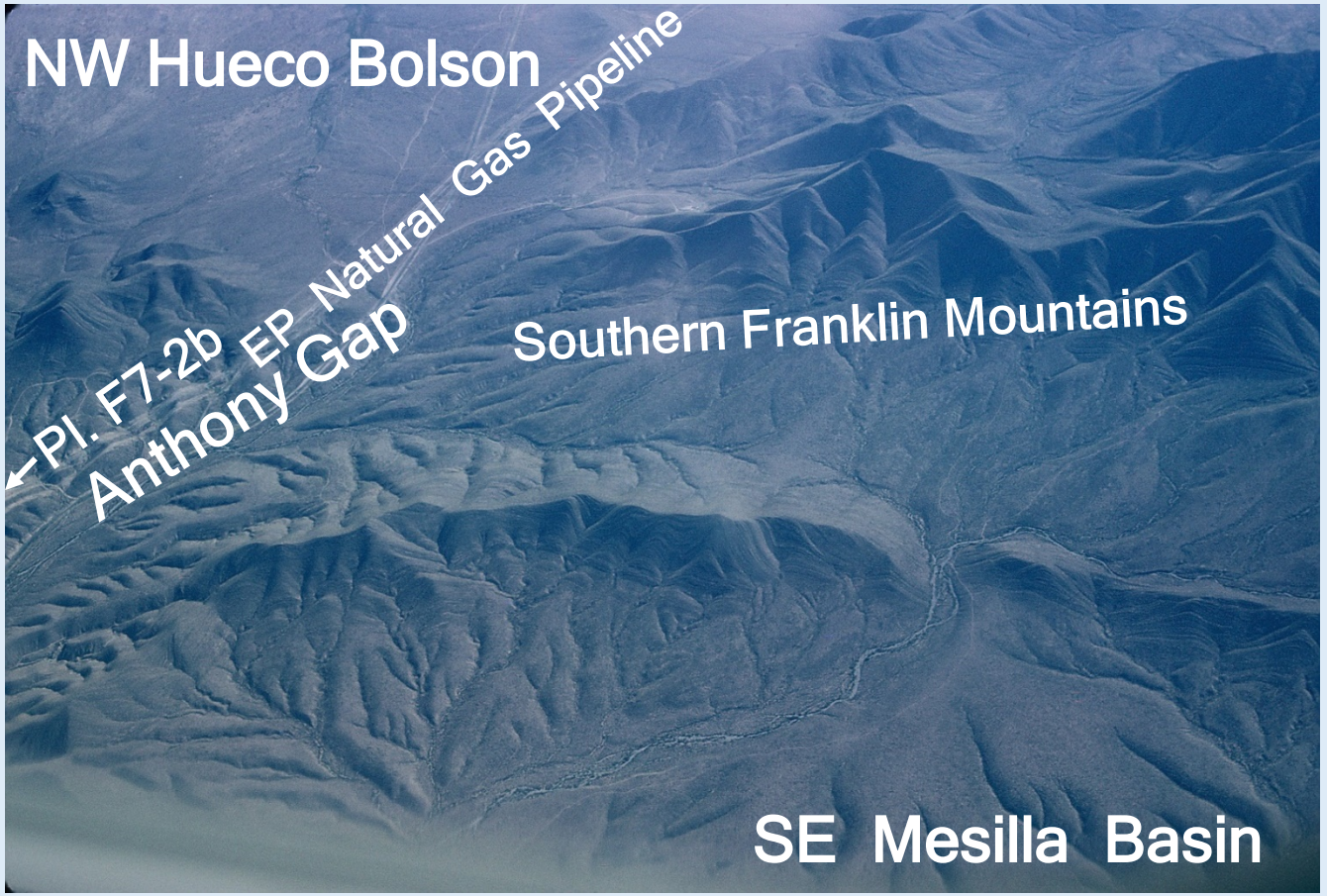
Pl. F3-2f (USDA-SCS; 9/15/1968). View from Bishop Cap Uplift and the Organ Mountains to the Southern San Andres Mtns., with the Tularosa Basin-White Sands area in the background.



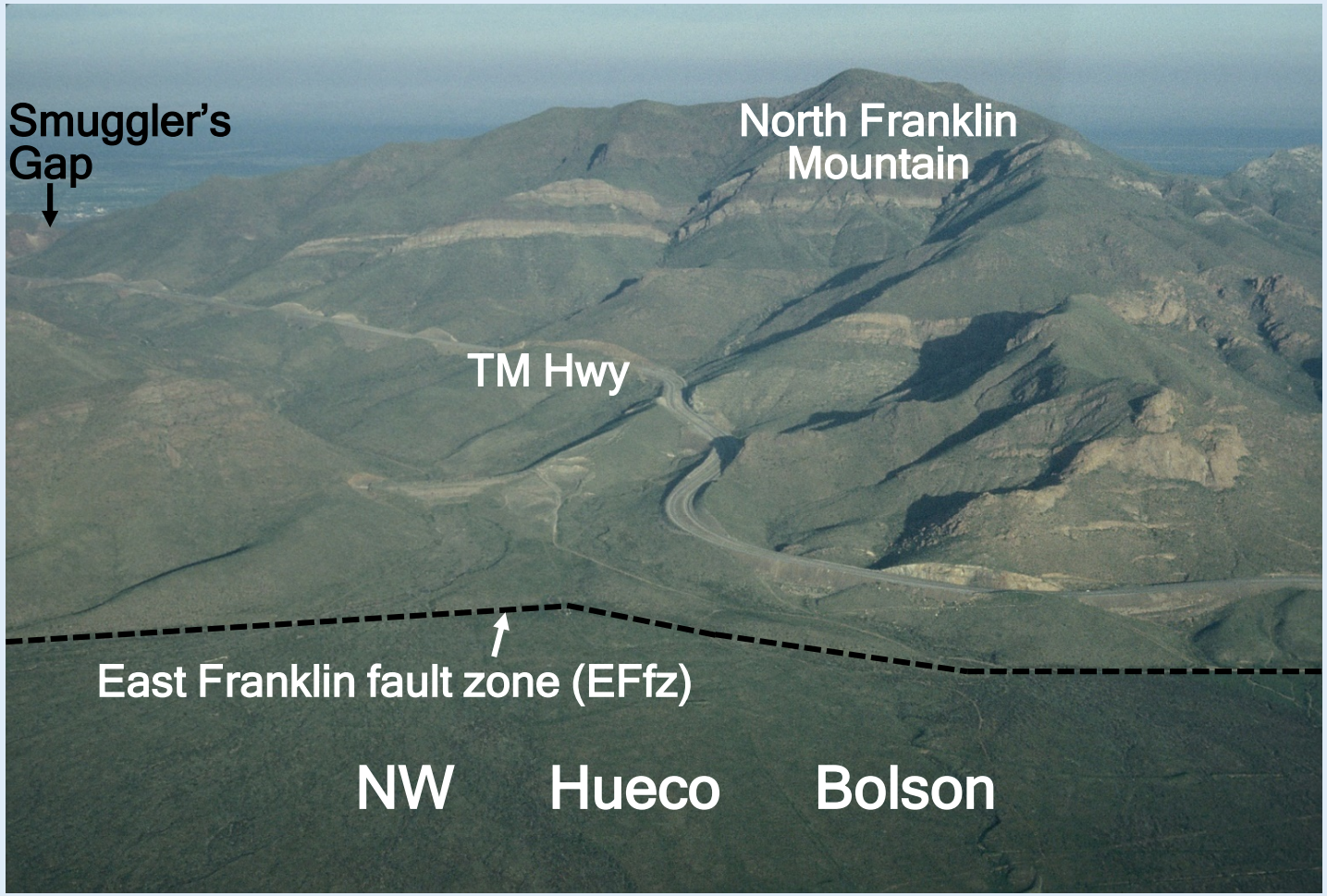
Pl. F3-2g (USDA-SCS; 9/15/1968). West-tilted Franklin Mountain fault-block complex between the Mesilla Basin and NW Hueco Bolson RG-rift structural depressions



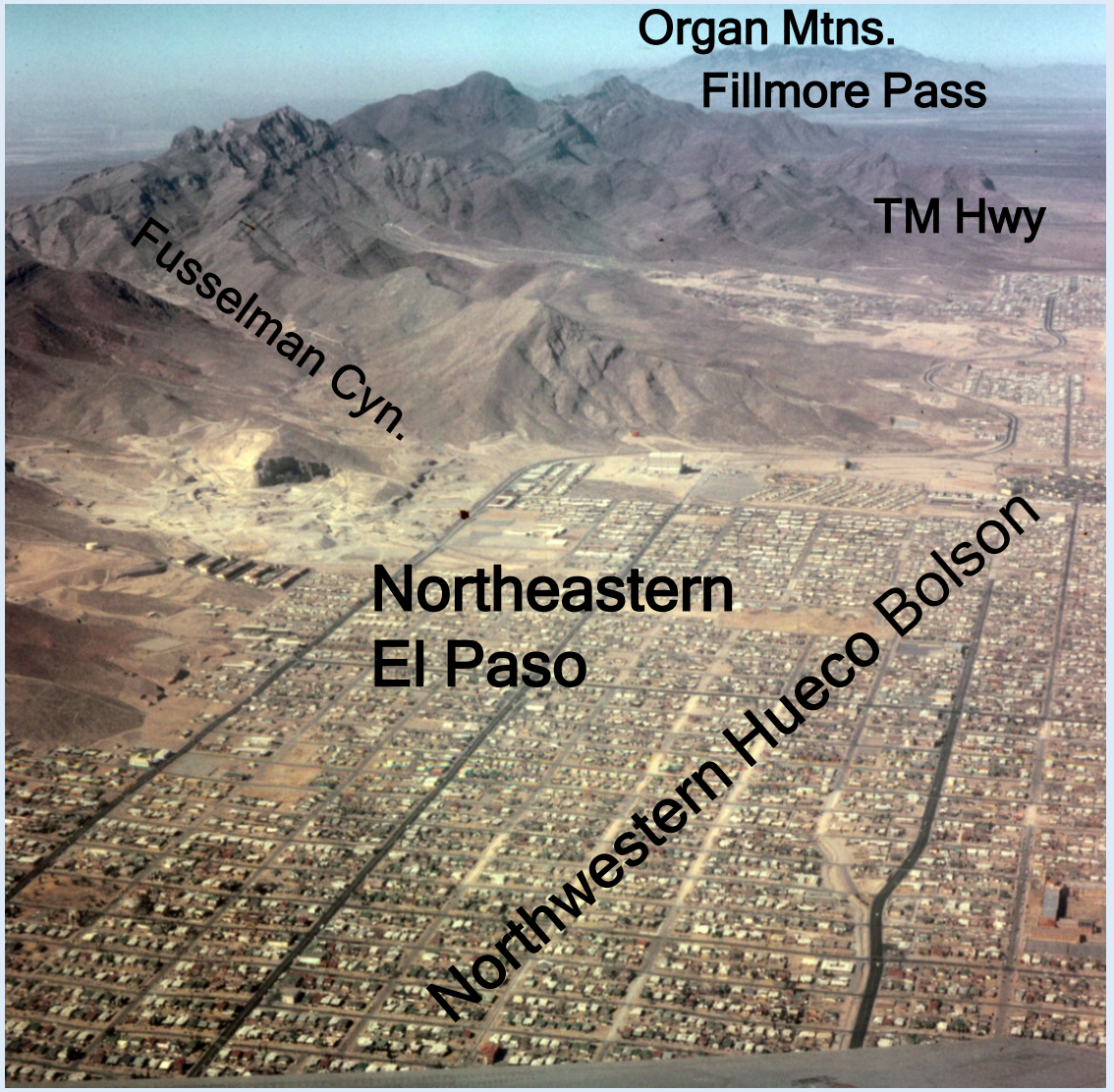
Pl. F3-2h (USDA-SCS; 9/15/1968). Anthony Gap pass between the northern and southern Franklin Mountains, and the northwestern Hueco Bolson and southeastern Mesilla Basins of the Rio Grande rift. See Pl. F7-2b



Pl. F3-2i (NM BMMR; 8/21/1984). Transmountain (TM) Hwy at SE base of North Franklin Mtn. (7,192 ft/2,192 m) ascends towards Smuggler's Gap Pass (5,250 ft/1,600 m). Mesilla Basin on western skyline



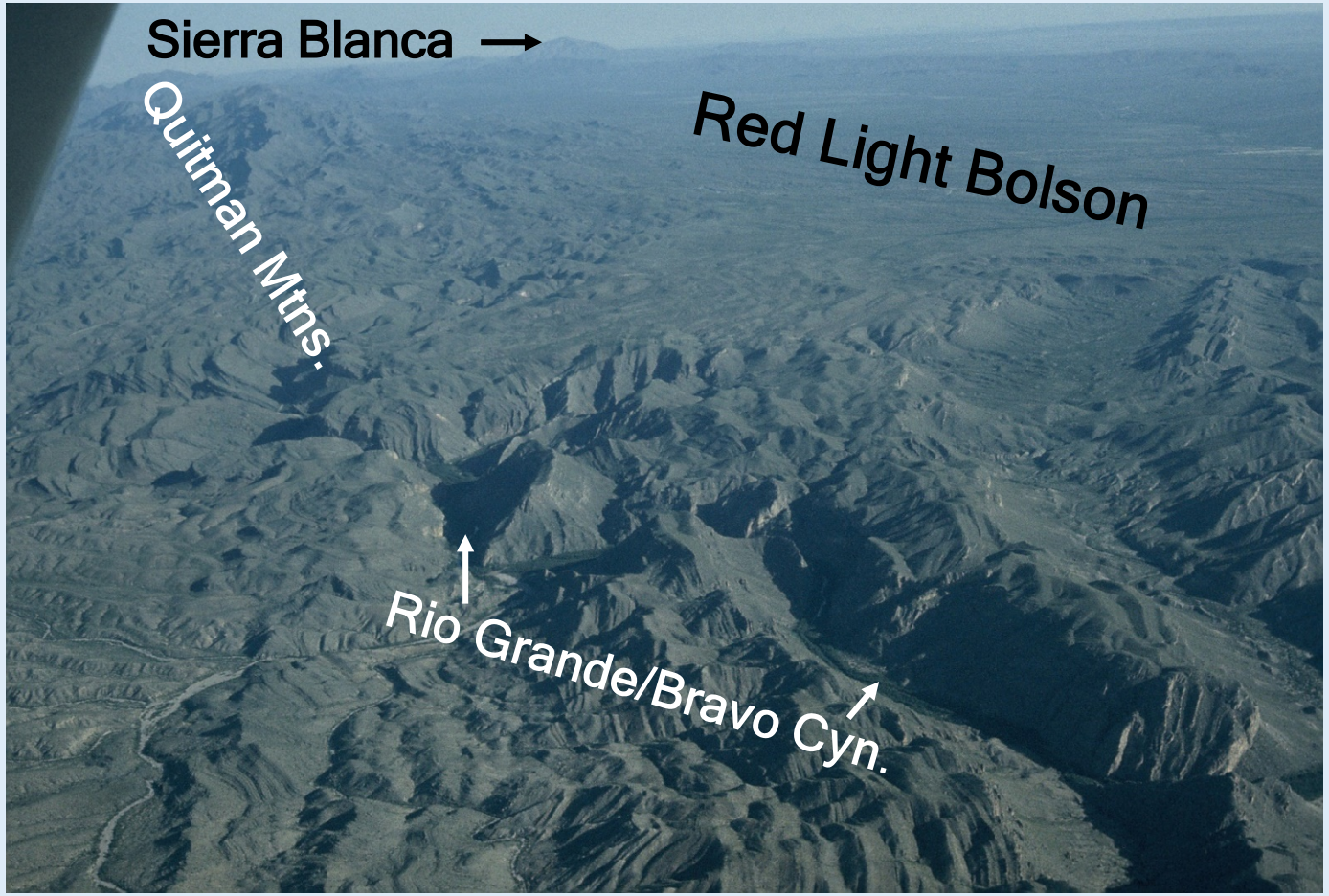
Pl. F3-2j (USDA-SCS; 3/4/1971). NW View of the Central Franklin Mtns. from NE part of El Paso and the NW Hueco Bolson. Organ Mtns. on northern skyline are located N of Fillmore Pass and E of the central Mesilla Basin



Plates F3-3a and F3-3c. August 21, 1984 USGS Overflight of the Rio Grande/Bravo Valley and Canyon Area Between SE Hueco Bolson and NW Presidio Bolson

Pl. F3-3a (NM BMMR). Upper Fort Hancock and basal Camp Rice Fms of the Upper SFG are well exposed in badlands of the SE Hueco Bolson area near McNary and the Madden Arroyo section of the SP(UP) RR (Pl. F7-2a).

Pl. F3-3b (NM BMMR). Rio Grande/Bravo Canyon across Southern End of Quitman Mtns. Uplift SE of Indian Hot Springs. *See* Pl. F4-1m to 1o



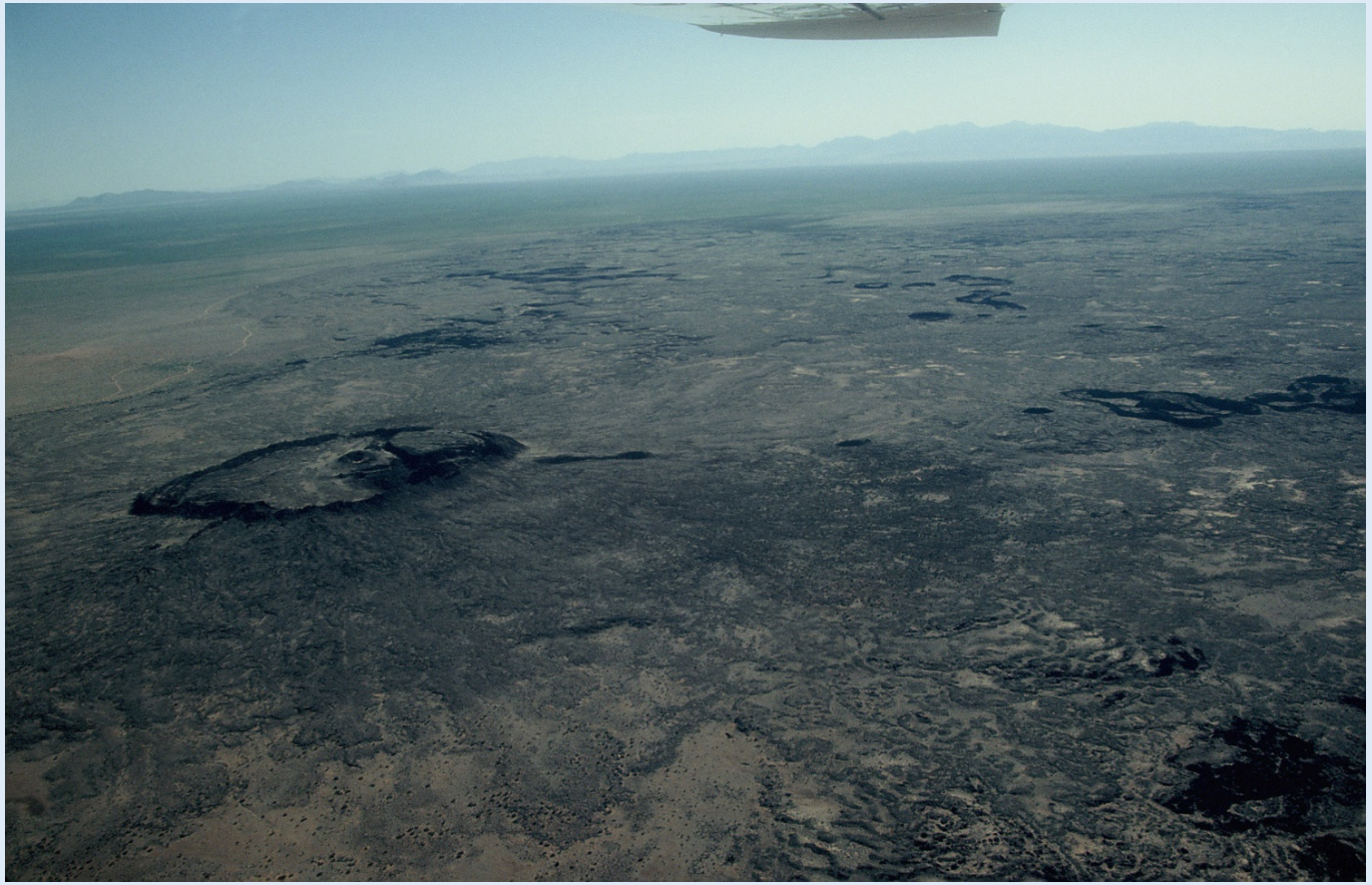
Pl. F3-3c (NM BMMR). View to SW across Rio Grande/Bravo Canyon in SE-Dipping Lower Cretaceous Sedimentary Rocks of the Indio Mtns.

Plates F3-4a to F3-4e. USGS-NAQUA Project—June 4, 1991 Rio Grande Basin Overflight Series: Late-Pleistocene Volcanic Features of the Mesilla Basin West Mesa Area

Pl. F3-4a (NM BMMR). Late Pleistocene Hunts Hole hydromagmatic volcanic center (maar) in the Kilbourne-Noria Subbasin of the MeB, with the East Potrillo Mountains on the southwestern skyline. Pl. F2-3

Pl. F3-4b (NM BMMR). Late Pleistocene Kilbourne Hole hydromagmatic volcanic center in the Kilbourne-Noria Subbasin of the MeB; wth Sierra de Las Uvas, and the Robledo and Organ Mtns. on the northeastern skyline. *See* Pls. F2-3, and F7-3a to 3d

Pl. F3-4c (NM BMMR). Aden Crater and Aden volcanic field (~19 ka) in the Aden Sector of the Aden-Robledo Uplift on the northwestern border the MeB. The Robledo, Doña Ana, San Andres and Organ Mtns. are on the northeastern skyline. *See* Pls. F2-3, F3-4d, and F7-3e



Pl. F3-4d (NM BMMR). Aden Crater and western Aden volcanic field in the Aden Sector of the Aden-Robledo Uplift; with Sierra de Las Uvas, Sleeping Lady Hills, Cedar-Corralitos Upland Basin, and the Robledo Mtns. on the northern skyline. *See* Pls. F2-3, F3-4c and 4e, and F7-3e.

Pl. F3-4e (NM BMMR). Aden Crater (~19 ka) in Foreground, with West Aden Hills and Aden Hills Uplifts on Northwestern Skyline. *See* Pls. F2-3, and F3-4c and 4d

Plates F3-5a and F3-5b. Fall 2019 Border-Wall Overflight Series. Courtesy of PBS-New Mexico in Focus—Our Land: New Mexico's Environmental Past, Present and Future. ***See*** **APPENDIX H1**

Pl. F3-5a. Border Wall and Northern Rim of Potrillo Maar in Foreground. View to ESE Across the Southern Mesilla Basin and the Fluvial-Deltaic Plain of the Ancestral Rio Grande (ARG). The Franklin Mtns., and Sierras Juárez and Sapello are on the Eastern Skyline. *See* Pl. F7-2f

Pl. F3-5b. Early impact of Border Wall construction where it crosses a typical Chihuahuan Desert (*Mesquite* scrub) landscape of the Malpais GW Basin at the southwestern edge of Doña Ana County. See Pls. F2-3 and F2-3.