Figure 4A. Palinspastic reconstruction of aeromagnetic map in Figure 3 after restoration of dextral separations on major north-striking faults by rematching major ductile structures that define the Chama aeromagnetic lineament and restoration of contractile deformation on major Laramide and Ancestral Rocky Mountain structures. Geographic localities and selected geologic structures are the same as in Figure 3A. The net deformation produced by this model entails ~22 km of east-west shortening near the latitude of Santa Fe, and ~55 km to as much as ~90 km of net dextral separation (red numerals at top). Reference points are: Ch-Chama; C—Cuba; A—Albuquerque; SF—Santa Fe; VC—Valles caldera; T—Taos; LV—Las Vegas; S-Socorro; B-Belen; V-Vaughn. Faults (white lines) are from the New Mexico Bureau of Geology and Mineral Resources (2003). Selected geologic structures are: DNf-Del Norte fault (subsurface only); Gf-Gallina fault; Nf-Nacimiento fault; SHf-Sand Hill fault; MPf-Montosa-Paloma-Hubble Springs faults; Tf-Tecolote fault (new name for the western boundary structure of the Pedernal uplift; mostly subsurface); TCf—Tijeras-Cañoncito fault; Ef-Embudo fault; TPf-Tusas-Picuris fault (mostly subsurface); Bf-Borrego fault; PPf—Picuris-Pecos fault; GEf—Glorieta Mesa-Estancia Basin fault; Cf—Chupadera fault; SdCff—Sangre de Cristo frontal faults.



Palinspastic reconstruction of Proterozoic basement-related aeromagnetic features in north-central New Mexico: Implications for Mesoproterozoic to late Cenozoic tectonism S.M. Cather, K.E. Karlstrom, J.M. Timmons, and M.T. Heizler Figure 4A Supplement to: *Geosphere*, v. 2, no. 6, doi: 10.1130/GES00045.S5. ©2006 Geological Society of America

10 km