

August 11, 2015

MEMORANDUM

To: Mark Helper, Brian Hunt
From: Tom Grimshaw
Subject: Mountain City Geologic Quadrangle Map Project: Status

Progress continues to be made in air photo mapping and field visits to the Mountain City quad. In three previous memos, I provided updated mapping of the eastern and southern 1/3 parts of the quad. Since then, I have been working on the Balcones faulting and the Glen Rose, Walnut, and Edwards outcrops in the remainder of the quad. I do not yet have additional mapped photos to provide at this time.

Previous mapping by Collins (Driftwood quad) and Kolb (Signal Hill quad) is being integrated in this round of mapping along with the mapping by Smith that covers much of the Mountain City quad. I have found that 1958 photos available on the USGS Earth Explorer website are superior for this phase of mapping to the 1967 coverage used up to this point, primarily for two reasons – less cultural disturbance nine years earlier and the fact that the record drought broke in 1957, just a year before the 1958 photos were taken. The drought conditions, I believe, made the limestone units and faults more visible than in the 1967 photos.

I believe that I can now recognize the “couplet” at the base of the Edwards that Mark has identified as a mapping horizon on Lidar mapping. I will be using the Lidar maps by Mark and Marissa to try to verify this observation.

Progress has been slow since last Spring because of extensive travel (Italy, Seattle, and DC), and a three-week trip to South Dakota will begin next week. Nevertheless, I hope to be ready for more site visits this Fall when Brian has indicated that he may be able to participate.

Please call or email if you have any questions or comments.