

April 16, 2016 Hermleigh, Texas Tornado and Big Spring, Texas Severe Wind Event:

National Weather Service Meteorologists conducted a storm survey for the tornado near Hermleigh, Texas (in Scurry County) that occurred during the early evening of April 16, 2016. No damage was seen during the survey from the Hermleigh tornado (Figure 1), therefore it will be rated an EF-0.

During the early evening of April 16, 2016 (approximately 6:00 pm CDT) high winds from a severe thunderstorm affected Big Spring, Texas. National Weather Service Meteorologists conducted a storm survey on April 17, 2016.

The Lomax 1SSE Texas Tech Mesonet site (Figure 2) recorded a peak wind gust of 74 mph shortly before 6:00 pm CDT. This site is southwest of the City of Big Spring, Texas (Figure 3). The storm survey noted isolated damage in the City of Big Spring, Texas (Figure 4) that was less than a half mile apart. There was visible damage to the roof of an apartment complex (Figure 5) and to a Chevron Station (Figure 6). However, the greatest concentration of damage occurred near the Elbow region (Figure 7); which is southwest of the City of Big Spring. Radar imagery from WFO Midland shows the progression of the Supercell as it moved northeast over the area (Figures 8-10). In the area of the greatest concentration of damage there was damage to wood telephone poles (Figure 11), a mobile home was moved off its foundation (Figure 12), flag poles were bent over (Figure 13), a large tank was overturned (Figure 14), and a barn had its roof uplifted (Figure 15).

To determine the wind speed needed to cause this degree of damage National Weather Service Meteorologists utilized Damage Indicators. These included:

- Mobile Home off blocks – 81 mph
- Barn with roof uplifted – 90 mph
- Apartment threshold visible damage – 76-95 mph
- Broken wood poles – 100-120 mph

In conclusion, the damage was caused by straight-line winds from the Rear Flank Downdraft (RFD) of the Supercell. The RFD is a region of dry air subsiding on the back side of, and wrapping around, a mesocyclone. Based on the damage seen and the Damage Indicators the strongest wind gusts associated with this Supercell was estimated to be between 80-100 mph.



Figure 1 – Hermleigh tornado (Courtesy of Derrick Jack).

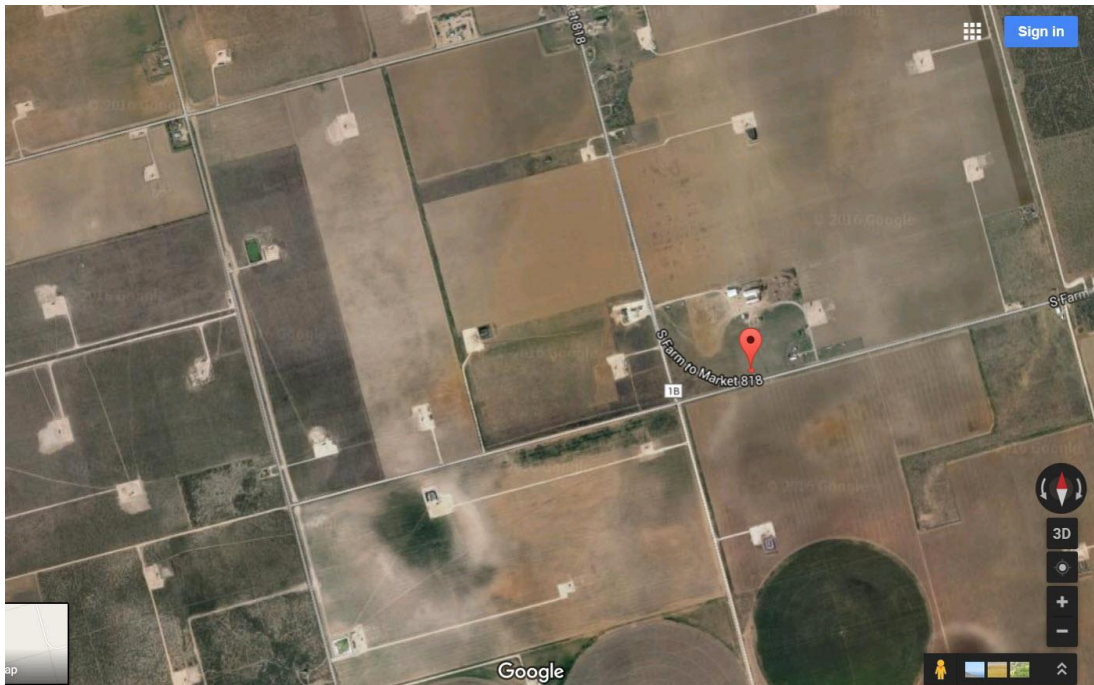


Figure 2 – Location of the Lomax 1SSE Texas Tech Mesonet.

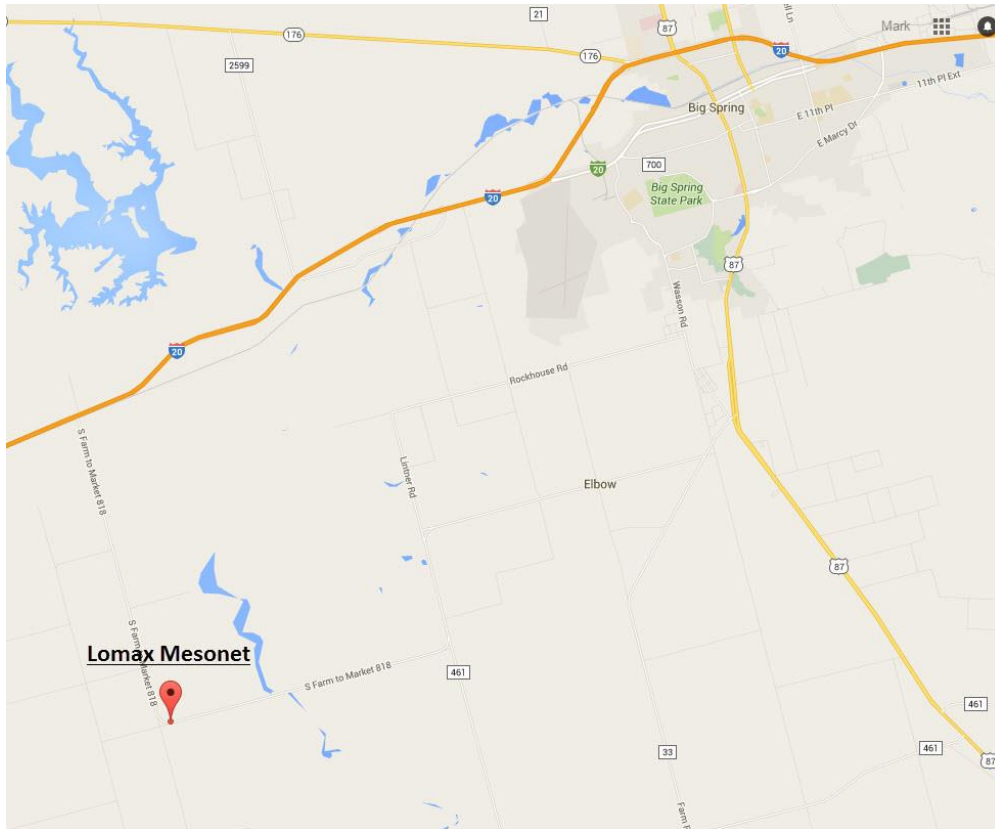


Figure 3 – Lomax 1SSE Mesonet site in relation to Big Spring, Texas.

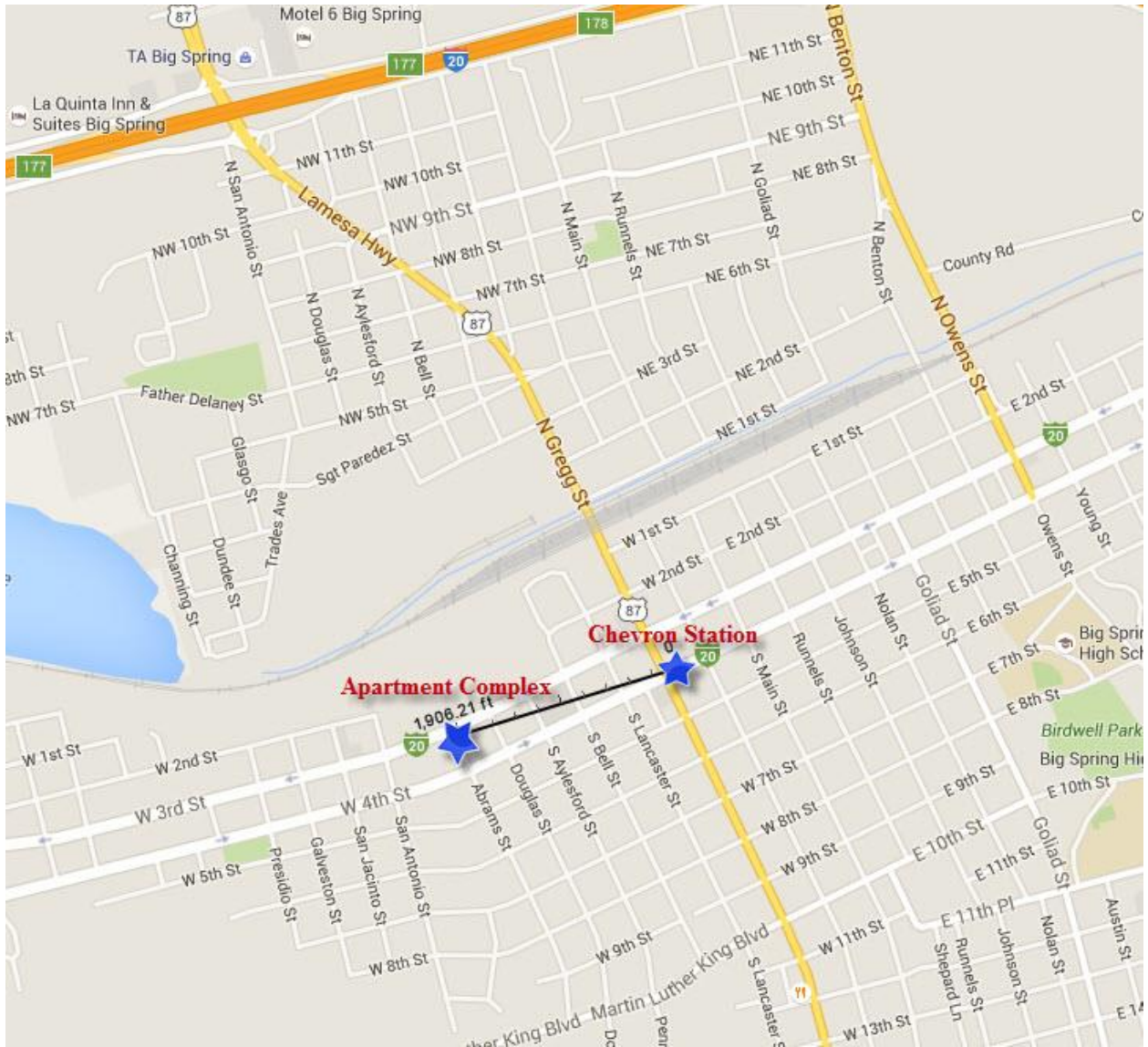


Figure 4 – Map of isolated damage in Big Spring, Texas.



Figure 5 – Damage to Apartment Complex in Big Spring, Texas (Courtesy of David Hennig).



Figure 6 – Damage to Chevron Station in Big Spring, Texas (Courtesy of Laura Murphy).



Figure 7 – Location of the greatest concentration of damage.

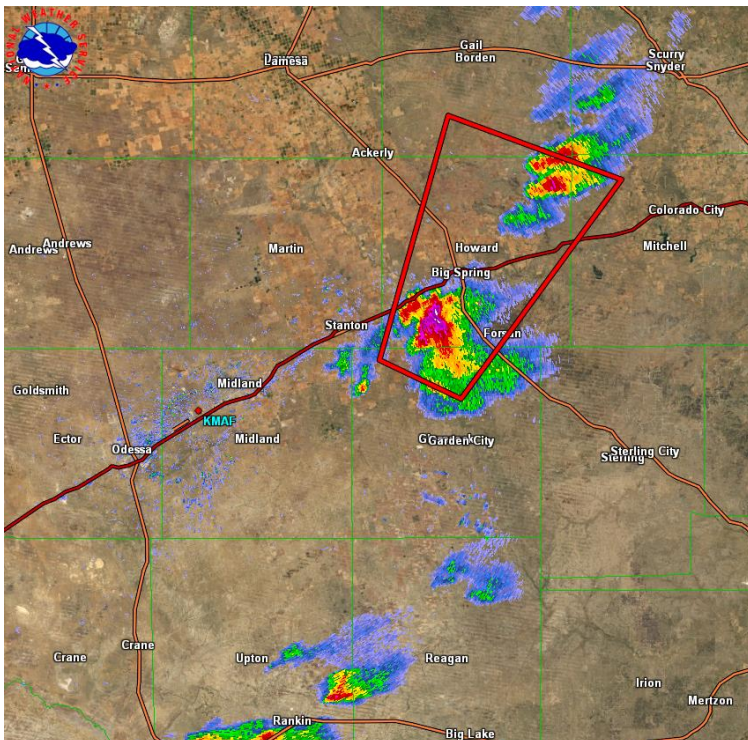


Figure 8 – Radar imagery at 5:57 pm CDT.

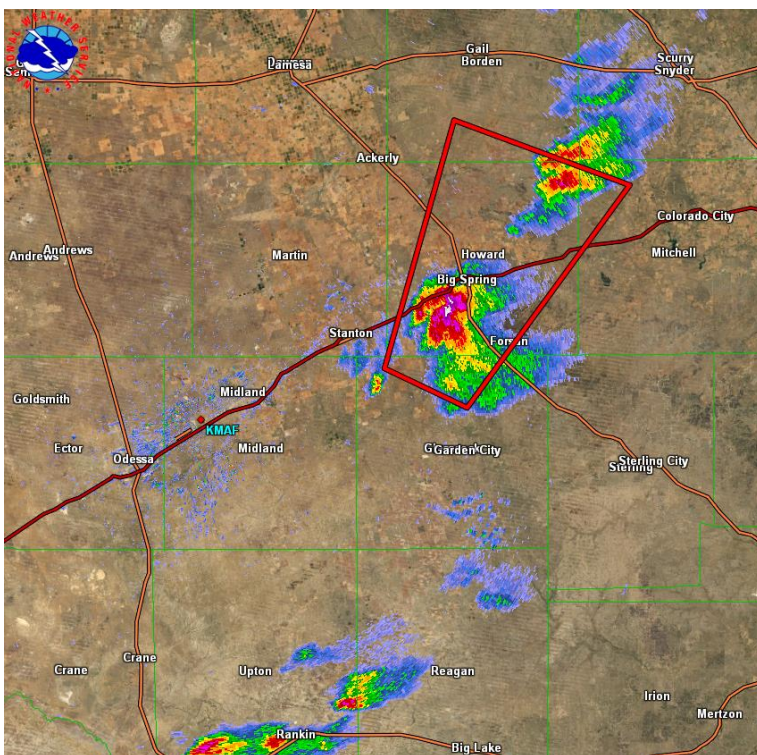


Figure 9 – Radar imagery at 6:01 pm CDT.

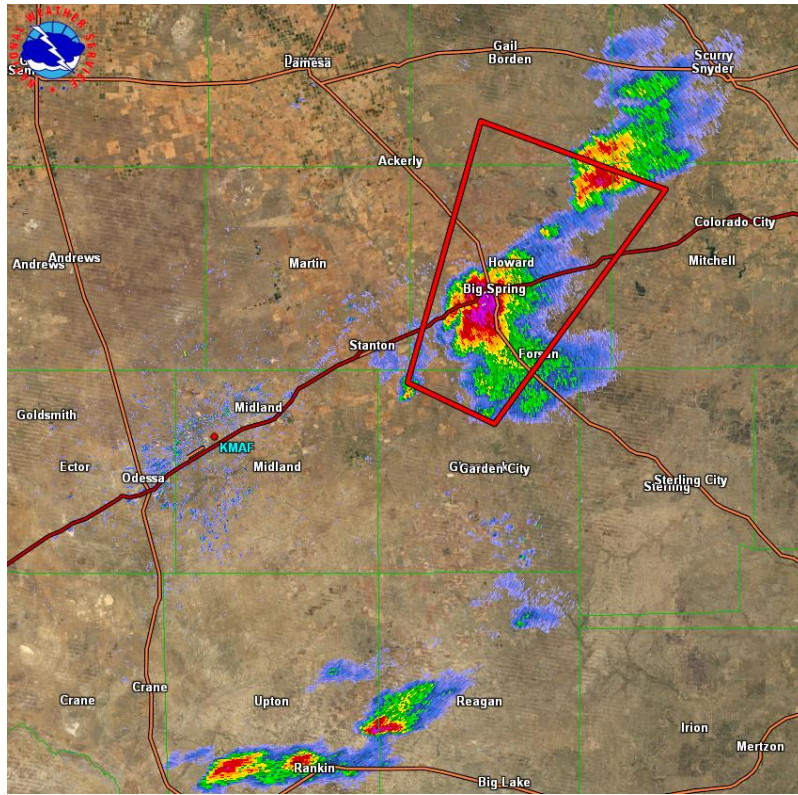


Figure 10 – Radar imagery at 6:05 pm CDT.



Figure 11 – Snapped telephone pole (Courtesy of Mark Strobin).



Figure 12 – Mobile home pushed off its foundation (Courtesy of David Hennig).



Figure 13 – Bent flagpoles (Courtesy of Mark Strobin).



Figure 14 – Overturned large tank (Courtesy of David Hennig).



Figure 15 – Barn with its roof uplifted (Courtesy of David Hennig).