



## - M E M O R A N D U M -

**Date:** February 28, 2011  
**To:** City of Fort Worth  
**From:** Eastern Research Group, Inc. (ERG)  
**Re:** Natural Gas Air Quality Study Biweekly Update #9: January 31 – February 16

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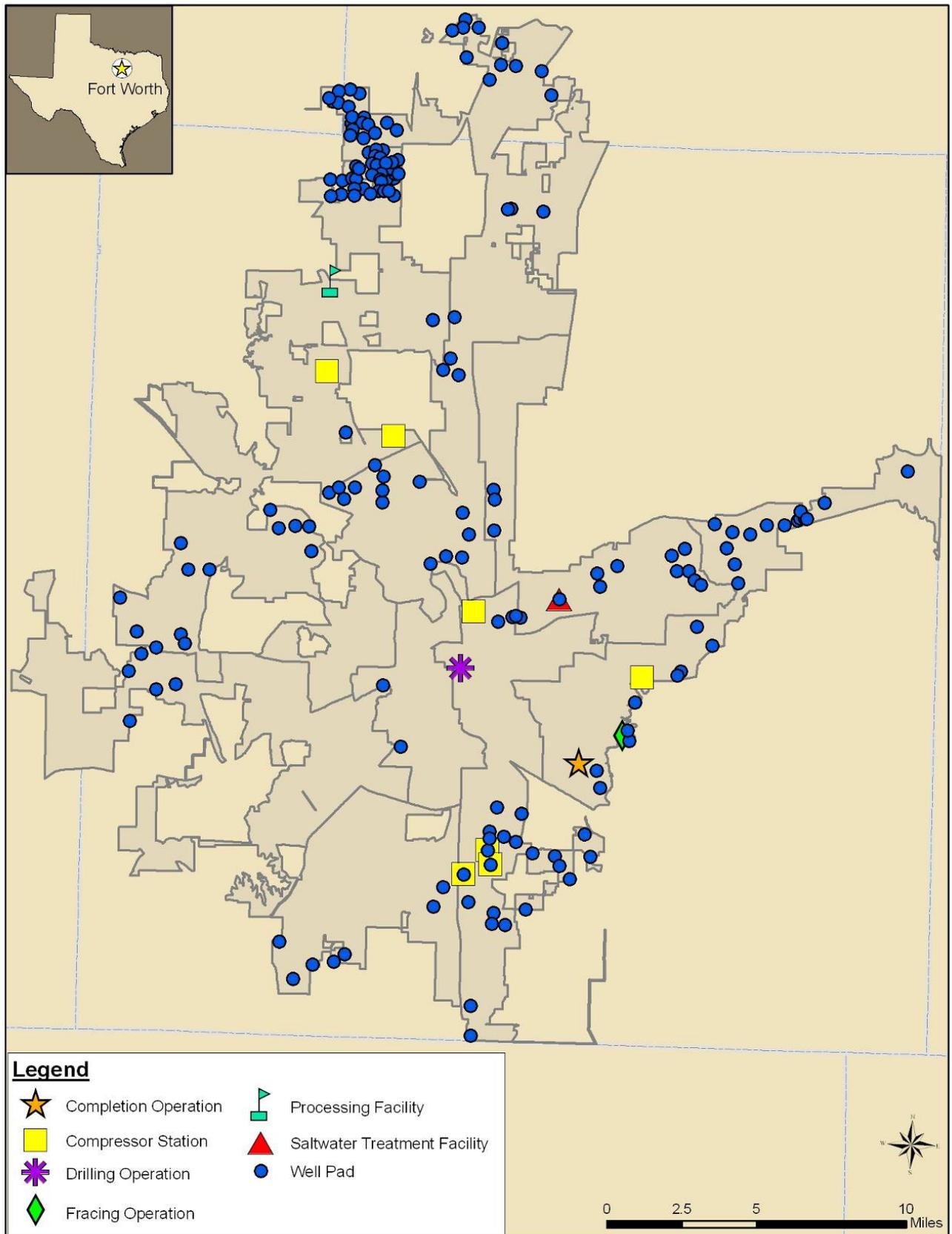
Activity Summary: Between January 31 and February 16, ERG and its subcontractors concluded Phase II of the point source testing field activities for the Natural Gas Air Quality Study. While the ambient air monitoring program concluded on October 31, 2010, and the initial phase of point source testing (Phase I) wrapped up on October 22, 2010, additional point source was conducted in January and February of this year (Phase II). Details on conclusion of the point source emission testing field activities follow.

Point Source Emissions Testing: The emissions testing of point sources resumed on January 4, 2011. This testing was conducted at natural gas well pads and other sites with natural gas processing activity. At each point source tested, field crews used an “infrared camera” (IR camera) to determine which sources have the highest emissions. In addition to using the IR camera, toxic vapor analyzers (TVAs) and HiFlow samplers were used to measure the rate that pollutants are released to the air. Summa Canisters were then used to collect gas samples that will be analyzed at the lab to determine the presence of air toxics such as benzene and toluene.

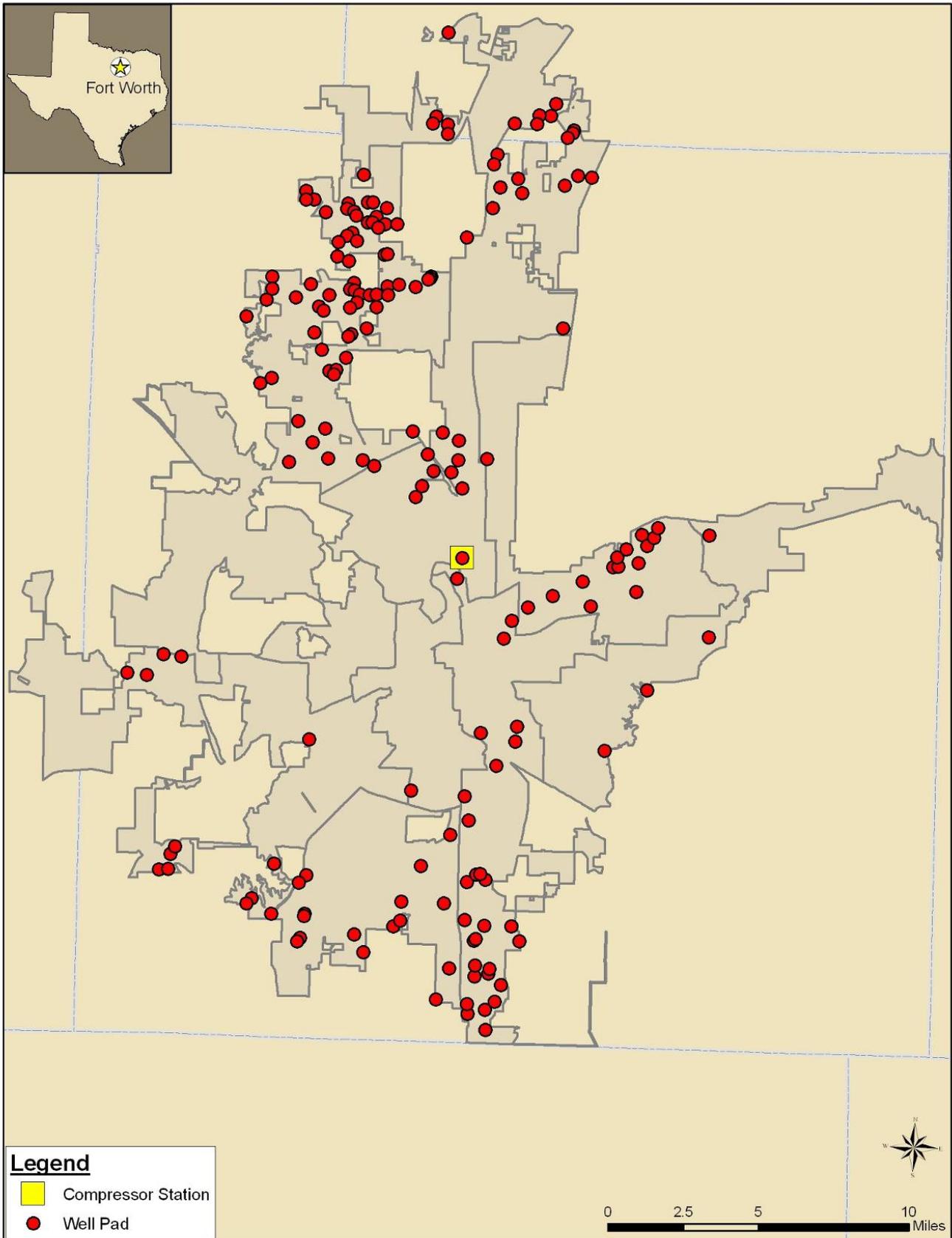
During the week of January 31, the ERG team’s field surveyors visited 19 well pads containing 77 wells, and one compressor station. During the weeks of February 7 and 14, point source testing was concluded as 25 well pads containing 129 individual wells were visited. This last round of visits also included 2 sites that were tested under Phase I and re-tested under Phase II. Across these 45 sites, 26 air samples were collected in Summa Canisters and sent to the laboratory for analysis.

In total, the point source team has visited 375 well pads representing 1,136 wells, 8 compressor stations, a drilling site, an active fracturing site, the Brentwood Saltwater facility, a gas processing plant, and a flowback/well completion site. At these locations, 169 Summa Canister samples have been collected. These samples will be used to estimate emission rates for volatile organic compounds (VOCs) and individual toxic chemicals (like benzene).

Figure 1 below presents a graphical representation of all of the sites that were tested under Phase I, and Figure 2 below presents a graphical representation of all of the sites that were tested under Phase II.



**Figure 1. Phase I Point Source Testing Locations**



**Figure 2. Phase II Point Source Testing Locations**