

Peninsula Pointe Development - Boulder County, Colorado

Two existing wells into the Laramie-Fox Hills aquifer were assessed for their suitability to serve as a water supply for a proposed residential development east of Boulder, Colorado. Martin and Wood initially conducted video surveys of the wells, which revealed that the wells were of very crude construction. Subsequent pump testing of the wells confirmed low yield, but additional geologic analysis indicated that the formation was tight at this location. With the combined well production barely meeting initial projected demands, either some form of development of the wells or expensive additional well drilling was required, made more problematic by water rights and site plan constraints.

The novel approach of utilizing explosives to develop fractures around the wells in hopes of improving yield was raised and agreed upon by the owner. For the first well, four small diameter holes were drilled around the well and set with dynamite and

primer cord. While the detonation was spectacular, and some increase in yield was realized, it was recognized that too much of the explosive energy was being lost from the holes. The process for the second well took the step of sealing the surface of each hole after setting the explosives strings. This resulted in a far more significant improvement in well yield, sufficient to provide an adequate supply for the planned development.



Fracturing aquifer formation with dynamite

Denver Wells, LLC - Walestone Wells

The Walestone wells are a group of four older wells of pre-Senate Bill 213 "Pre-213" status located in the north Denver area and possessing valuable ground water rights, but which were in poor condition due to plugging and encrustation over decades of both use and periods of dormancy. Martin and Wood personnel designed and conducted a well rehabilitation program for two of the four wells consisting of clean-out and debris removal, initial video logging, acidation and wire-brushing to remove encrustation, and then pump testing to determine well yields. In both cases, the well yields following treat-

ment showed great improvement, although two treatments were required for the most severely affected of the two wells. The remaining two wells, located inside buildings and presenting particularly significant challenges insofar as access is concerned, were pump tested initially to develop baseline yields. Both have had their pumps removed and have been video-surveyed. The surveys indicated multiple aquifer completion with ramifications for significantly higher potential annual yields from both wells. Both of these remaining two wells will be re-drilled at locations exterior to the buildings to alleviate the access problems.