



Water Well Solutions

August 30, 2021

Matt Congoran
Village of Romeoville
615 Anderson Drive
Romeoville, IL 60446

RE: Village of Romeoville Well No. 13 Development

Matt:

Water Well Solutions (WWS) is pleased to announce the results of the comprehensive water well rehabilitation performed on Well No. 13. Well No. 13 over the years, it has dramatically declined in production to the point that it was almost unusable and after development, the results have been excellent.

When Well No. 13 was first constructed in 1998, it was test pumped at a rate of 822gpm with a pumping level of 865ft. The original specific capacity was over 5 gallons/minute/ft of drawdown. When the well was last serviced in 2018, test pumping identified that the GPM had dropped to under 400gpm with a pumping level of 1152ft and only 10ft of submergence over the pump. The specific capacity had fallen off to 1 gallon/minute/ft of drawdown which represents a 134% decline in the overall well production.

Based on the loss of capacity of Well No. 13, it was determined that significant rehabilitation/development was necessary to enhance production. This call for development with a combination of bulk explosives, AirBurst® Rehabilitation and over pumping and surging the well with WWS's 500Hp test pumping equipment. Initial results were positive with a significant increase in capacity, however, there was also substantial sand present in the water due to the fracturing of the sandstone with explosives. This was to be expected, but necessary to enhance the well production and WWS proposed a Lamnaflow sand separator to filter out the sand. Lamnaflow was what WWS successfully employed for Well No. 11 to stop the sanding condition present in that well.

After development with AirBurst® and pumping over the course of a month, the sand dropped off from 4,000 ppm to around 25 - 100ppm. The current well capacity is 2.5 gallons/minute/ft of drawdown which is a 150% increase in the well capacity. In addition, over the course of a month pumping the well to waste, not only has the sand content dropped off, but the good news is also the well capacity has continued to increase over time.

WWS used our test pump for the development process so as not to damage the Village of Romeoville's new pumping equipment. However, with the over pumping to develop out the sand over the course of a month, the development generated an additional 60ft of fill in the bottom of the well which now placed the TD at 1400ft. In order to install the Lamnaflow sand separator and have sufficient submergence over the pump, we will need to bail out the fill in order to be able to fit all of the necessary equipment in the well.

The hourly rate for sand bailing is included in our contract for Well No. 13 and we would estimate that it would take an additional \$24,000.00 to \$27,000.00 in labor to bail the well down to approximately 1480ft.

Please let me know if you have any questions or would like to get this work on the schedule.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd E. Kerry". The signature is stylized with a long horizontal stroke extending to the right and a loop at the end.

Todd E. Kerry
Vice President
Water Well Solutions Illinois, LLC