

Thompson Pump Caribbean Starts Off In Style with Wellpoint System in Puerto Rico

Gallery Plaza is a new 23-story condominium complex being constructed in San Juan, Puerto Rico, with a projected grand opening in 2008.

The newly formed Thompson Pump Caribbean, Thompson Pump's Distributor in Puerto Rico, secured the dewatering work to be performed. Working with representatives from Thompson Pump's Corporate Headquarters in Port Orange, Florida, and partnering with the head contractor, Metropolitan Builders S.E., Thompson Pump Caribbean was to provide a wellpoint system for the project. Wellpointing was necessary to remove groundwater on the jobsite for excavation and the eventual installation of the condominium lower levels with elevator access.



An aerial view of the jobsite with the San Juan skyline and Atlantic Ocean in the background.

The wellpoint system started with two Thompson Pump 12" Rotary Wellpoint Pumps to operate the system, with another 12" Rotary Wellpoint Pump as backup. The wellpoint system also included 1,400' of header pipe with three hundred 2" wellpoints with riser pipe to extend the wellpoints 30' under the ground.

As with any wellpoint application, soil conditions were tested. The soil was found to be a silty-sand – a sand with a dense, fine powder residue making self-jetting the wellpoints difficult. In order to overcome the dense soil conditions, the Thompson Pump team also supplied a Thompson Pump 6" High Pressure Jetting Pump, with a casing which would be used to install the wellpoints.

A casing is a long, hollow metal tube, which accepts the wellpoint along with its riser pipe. At the top of the casing is a fitting, which connects to the discharge hose from the Thompson High Pressure Jet Pump. The highly pressurized water, along with the downward push from heavy equipment such as a backhoe, forces the casing into the ground to the desired depth boring a hole. The wellpoint and riser pipe is then inserted into the hole in the casing, and wellpoint sand is then applied between the wellpoint and riser pipe and the remaining area in the hollow portion of the casing.



Crews began excavating as the wellpoint system was in operation.



Two 12" Thompson Pump Rotary Wellpoint Pumps were used on the jobsite to remove the groundwater.

Once the wellpoints and the rest of the wellpoint system was installed and operational, Thompson Pump Caribbean experienced their first obstacle. The Thompson Rotary Wellpoint Pumps were operating perfectly and removed the groundwater at an optimum rate. The Thompson Pump 12" Rotary Wellpoint Pump has a maximum capacity of 3,000-gallons per minute. The groundwater was being directed into a nearby sanitary drain via the discharge pipe from each pump. With the pumps operating efficiently, the team noticed that the sanitary drain was beginning to flood the street and flow back onto the jobsite. The Thompson Pump team redirected the discharge to a nearby storm drain – only to see the groundwater flooding back into the street and the jobsite once again.

As it turns out, rather than having two separate lines, one for sewer and one for storm water – the San Juan storm water system flows into the sanitary sewer line. Also, a part of the storm water system was removed to allow for the installation.

Sheeting around the jobsite to protect the integrity of nearby buildings and roads while the construction and excavation work was being done. When the removed part of the storm water system was replaced, the pumping resumed without any further problems. The pumps will be on the jobsite for about 9 months.