

Dolomite Mine Application in Pensacola, FL

North Florida Rock, a mining company in Pensacola, FL, was hired to extract dolomite ore from a privately owned section of land. Dolomite is a carbonate rock formation found all over the world that is widely used in road paving.

The open pit mine was excavated down about 100-feet from the surface. It included roadways to allow access to different types of service vehicles, and to allow front-end bucket loaders to scrape the sides of the pit, allowing the rock and dolomite to collect on the ground. Once enough rock was scraped from the sides, it was then carried by heavy equipment to a cleaning station, which was an intricate conveyor belt system that would clean the dolomite from the rock as it passed through each process.



Crews used the surrounding dirt to keep the suction hose secure while the pump was operating. The distance from this platform to the surface was approximately 100-feet.

As the rock was scraped from the surface, small waterfalls of natural ground water would literally “leak” out of the side of the pit. These small waterfalls would cause mud and soft ground, and a safety hazard for the front-end loader. As these waterfalls were found, they were directed down the sides of the pit using PVC pipe, down into the center of the pit, which was excavated to act as a retention pond for the heavy rains, and the natural water. At times, the retention pond was filled to capacity, causing delays in the mining operation.

Rather than relying on an external water source to provide water for the cleaning station, management at North Florida Rock were curious to see if a high pressure pump would be able to supply the water from the retention pond – 100-feet up to the cleaning station. They put a call in to Thompson Pump’s Pensacola Service Center, as referenced to them by another customer.

Thompson Pump provided a 6-inch Dry Prime Solids Handling High Pressure Jet Pump with the Enviroprime® Compressor-Assisted Priming System. The pump was capable of providing 2,550-gallons per minute, or 153,000-gallons per hour, at a shut-off head of 195-feet at 84-psi, which was well above North Florida Rock’s requirements. The Enviroprime® Compressor-Assisted Priming System allowed the pump to maintain its prime as it was used during the operation. Thompson also supplied 1,000-feet of pipe to direct the retention pond water to the washing area, and PVC pipe to direct the naturally flowing water to the retention pond.

The pump was more than capable of doing the job, and the crews didn’t have to compensate with extra equipment. It provided reliable service, and a cost-effective way to handle two jobs at once.



After the dolomite ore was scraped from the rock, water began to flow naturally from the ground (above left). The white bands of rock in the picture above left show the dolomite. Using PVC pipe the natural water was directed into a retention pond. The water was to be re-used to clean the dolomite from the rock.



The water was discharged up a service road to the left (not shown). On the surface an intricate conveyor belt system was used to clean the dolomite using the pressurized water from the High Pressure Pump 100-feet below.