Cumulatively, Case Foundation Company and CETCO have encountered and solved a number of substantial challenges during 2009 work for the Arizona Department of Transportation (ADOT). Over 200 large diameter shafts with depths ranging in the hundreds of feet had been drilled for substantial roadways.

**CHALLENGE:**
Drilling in complex geology while maintaining fluid levels.

Shallow ground water in combination with unstable formations made it impossible to drill using conventional dry methods. Unlike dry drilling methods, wet holes rely on a combination of factors to maintain the stability of the excavation. Of these factors, SHORE PAC polymer slurry is the most critical in maintaining hole integrity. In order to have an adequate supply of slurry, Case Foundation had to mix, recycle, house and distribute roughly 6.9 million gallons of Shore Pac polymer slurry collectively.

**PROJECT DETAILS**
Loop 202 Widening,
Loop 303 Construction
Safford Bridge Replacement,
Interstate 10 Interchange

**LOCATION**
Tempe, Mesa, Phoenix, Peoria,
Safford and Marana, AZ

**PRODUCTS USED**
SAND SEALANT/MULTI-SEAL™
SHORE PAC®
Drilling Slurry and Additives,
SLURRY BUSTER™ DRY
Slurry Engineering Services
SHORE PAC® polymer slurry system confidence

SOLUTION:
During the drilling process, SHORE PAC polymer slurry was a critical factor in maintaining excavation stability and promoting auger spoil loading. The high cohesive properties of Shore Pac helped to bind excavated soil and gravel for increased stabilization and rapid spoil removal.

Due to the difficult geology of the region, numerous zones of porous and unstable material existed within the strata. When Case Foundation encountered these problem zones they were successfully able to prevent fluid loss and collapse by adding SAND SEALANT/MULTI-SEAL™ directly at the hole.