Anderson Drilling

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Photos Provided By: Anderson Drilling

If you have a particularly difficult hole to be drilled, Anderson Drilling is the company to call. After more than 55 years in the business, many employees with over 20 years experience with the company and three generations of Anderson ownership, Anderson Drilling is at the top of their industry. Since its beginning in 1945 by Ralph Anderson, Anderson Drilling has grown, developed and proved itself to be at the top of the drilling industry in all areas of business. Now owned by yet another generation, Stanley Anderson, the company has maintained that level of reputation and respect while continuing to seek out new ways to get the old jobs done better. The current 17-acre site in Lakeside, California, where the company began, is the home to the corporate offices, manufacturing facility and equipment yard.

Drilling clay, 19.5-foot diameter, to 50 feet deep to top of lime stone layer.

With expertise in a method for drilling holes called Cast-In-Drilled-Hole Concrete Pile System, for bridge and building foundations, the Anderson name has earned its reputation by completing a vast array of projects on time, with the best equipment available and in the safest manner while taking pride in their innovative methods and problem solving abilities. They have the ability to bid any project with expert estimators who produce timely, professional and consistent quotes. Their reputation, experience, customer service and project completion record are without comparison.

The majority of Anderson Drilling's projects are concentrated in western states including California, Arizona, Colorado, Idaho, Montana, Wyoming, Nevada, Utah, and New Mexico, and range from freeway and bridge shafts to work for major airports and universities. In 1999 Anderson Drilling completed a project particularly significant to the U.S. government and the national defense.

In March of 1999, The Boeing Company broke ground on the first phase of their $1.6 billion contract for the National Missile Defense program. The first step was to install a full scale, but non-functional prototype missile silo. Anderson Drilling was subcontracted by Boeing to drill a final finished hole measuring 14.5 feet in diameter and 80 feet deep, lined with a smooth walled steel casing. The casing was in turn grouted in place with 3000 psi concrete and a 3-foot thick, 3000-psi concrete floor.

Installation of 17.5-foot diameter, 50-foot long casing.

For future system testing and instrumentation purposes, The Boeing Company required that the silo be installed on the property near their facility in Huntsville, Alabama. The site had some challenges, including 50 feet of stiff clay overburden on top of 20,000 to 28,000 psi natural limestone bedrock, complicated by a 5-foot water table on top of the limestone. It was decided that it was necessary to isolate the water from the excavation, before the 33 feet of limestone rock could be core drilled 15.5-foot diameter.

The equipment used for this project wasn't just any ordinary drill. The drilling equipment consisted of a large crane mounted drill, manufactured by Anderson Manufacturing, which is affectionately named after the company founder's wife, Shirley. Shirley, the drill, has 800 HP and produces a Kelly bar torque in excess of 1,000,000 foot-pounds. The power is derived from two 400 HP diesel engines, each sporting five speed power shift transmissions with torque converters. In addition, a rock core drill tool, that measured 15.5 feet in diameter and 12 feet tall and weighing in at 45,000 pounds was used on this project. The air core barrel was so large, that it was fabricated on the job site.

The employees of Anderson Drilling have the years of experience, the knowledge, and top of the line equipment to get the job done, but the process used in the completion of this

project has really set them at the top of their industry. To begin, a multi-plate liner casing measuring 20 feet in diameter and 10 feet long was installed into a 22-foot diameter hole and backfilled with three sack sand slurry, to prevent ground surface caving and help distribute equipment loads during the drilling operations. After this casing installation, the drilling continued at a size of 19-foot diameter to 50 feet deep in order to reach the top of the limestone. Once again, a multi-plate liner casing, 17.5 feet in diameter and 50 feet long, was installed and backfill grouted. This casing also served to prevent the intrusion of water, located on top of the limestone rock, into the excavation.

Once the drilling reached the limestone, the drilling process was converted to a rock coring operation. The air core barrel was advanced at 15.5-foot diameter and could produce 10-foot deep cuts into the rock. The cores were broken off and removed from the excavation. When the excavation deepened to a depth of approximately 83 feet, the 14.5-foot steel smooth wall casing was installed into the excavation. The casing was adjusted to plumb and braced, to remain secure during the concrete backfill operation.

Cementing of the 17.5-foot diameter casing to the top of the limestone layer.

The final step was to install the 3,000-psi concrete into the bottom of the hole until the proper floor elevations were achieved. Once this concrete hardened, the annulus outside the 14.5-foot diameter casing was backfilled with 3,000-psi concrete.

The drilling of missile silos is not called for everyday, but the technology developed and perfected for the National Missile Defense project can be used for other purposes. One important use is the development, creation and maintenance of municipal sewer systems and access shafts for tunnel boring machines. The Anderson Drilling technology allows for open holes to be drilled in a manner that won't disrupt the community and require the rerouting of the traffic—a definite benefit for all parties involved.

Some other clients that Anderson Drilling has completed work for include Arizona Department of Transportation, San Diego State University, California Department of Transportation, McCarran Airport in Las Vegas, Nevada, the Nevada Department of Transportation, Hoover Dam Visitor Center

Parking Structure for the Bureau of Reclamation and the city of San Diego's Qualcomm Stadium. Each and every job is planned, designed and completed on an individual basis with special attention given to the unique aspects of each project. The expertise provided by the staff and crew of Anderson Drilling is what sets this company apart from all the others.

Anderson Drilling places equipment availability and maintenance at the top of their priority list. In addition to their complete inventory of drill equipment parts from complete engines and transmissions to rotary gears and drive belts, which helps to minimize down time. Much of the equipment Anderson Drilling uses on its projects are developed and built by their partner, Anderson Manufacturing. Anderson Manufacturing has produced such equipment as the "Big Stan" drill units and the full-track crawler, hydraulic powered Mini-Max drill rig, "Shirley" the main piece of equipment used on the National Missile Defense project, the high bridge crane attachment, hydraulic casing pulling system, rock air-blowers, core barrels through 15.5 feet in diameter and a self contained concrete hose reel pump…just to name a few. In addition, Anderson Manufacturing is constantly modifying existing and conventional equipment to make them stronger, more durable and practical for the drilling needs of the industry.

15.5-FOOT DIAMETER AIR CORE BARREL AND 15.5-FOOT DIAMETER LIMESTONE CORE.

Anderson Drilling is a family-owned business working with everyone from bridge builders to the United States Government. They take responsibility for the safety of their crew and the people whose lives are touched by their projects. These are not things Anderson Drilling nor its employees take lightly, and their product and services prove it.

for more information

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