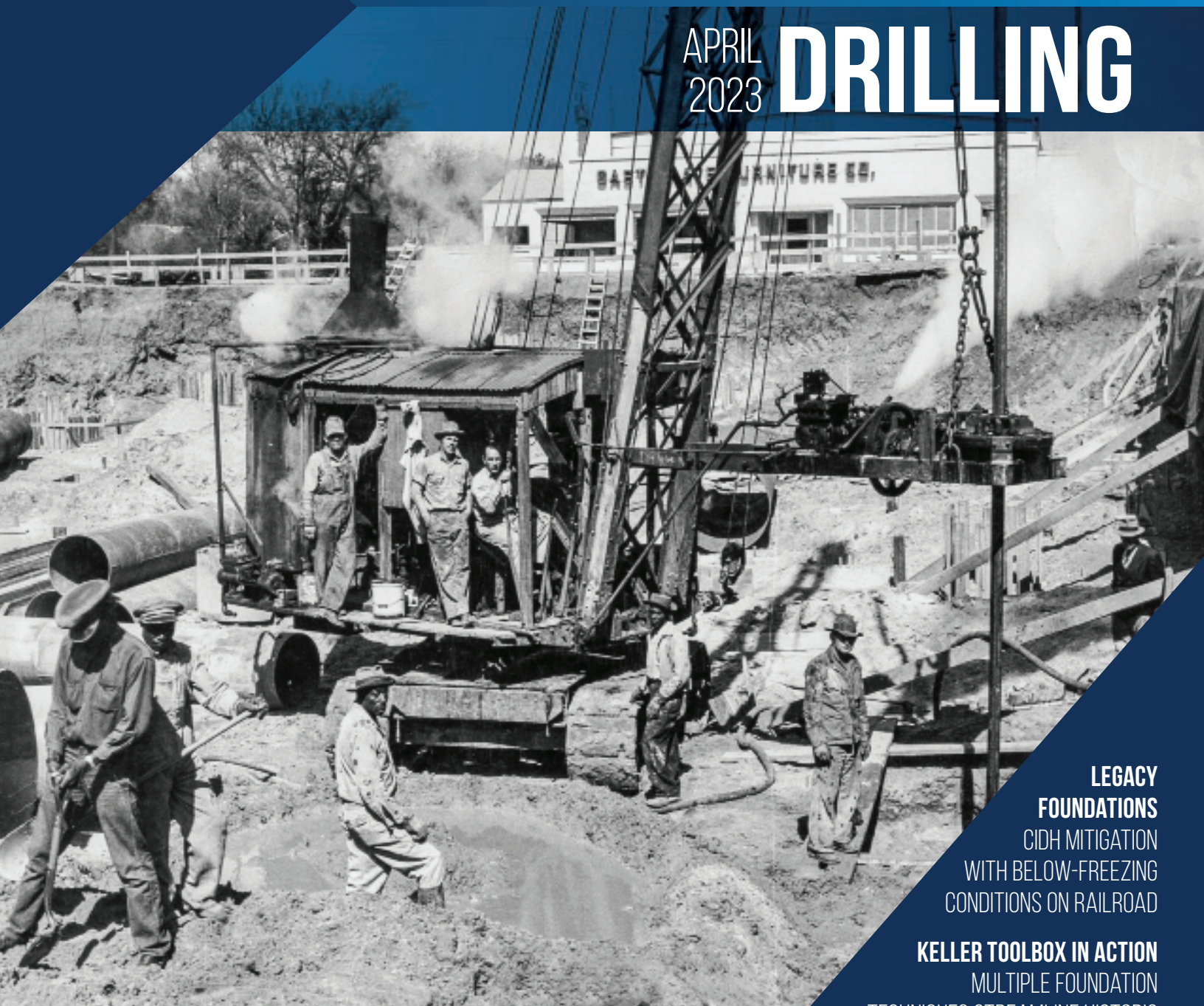


WATSON'S 100-YEAR ANNIVERSARY: AN AMERICAN-MADE SUCCESS STORY

FOUNDATION

APRIL
2023

DRILLING



LEGACY FOUNDATIONS

CIDH MITIGATION
WITH BELOW-FREEZING
CONDITIONS ON RAILROAD

KELLER TOOLBOX IN ACTION

MULTIPLE FOUNDATION
TECHNIQUES STREAMLINE HISTORIC
MEDICAL CENTER EXPANSION

R.W. HARRIS, INC.

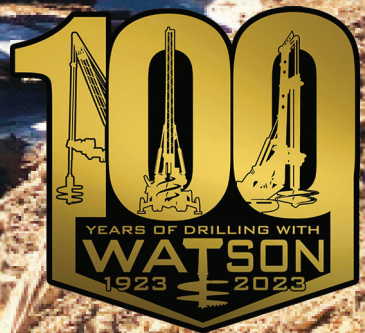
THE ALANIK HOTEL'S TEMPESTUOUS BEGINNING

2023 SUMMER MEETING PREVIEW

ADSC

THE INTERNATIONAL ASSOCIATION OF FOUNDATION DRILLING

24 WATSON DRILL RIGS: AN AMERICAN-MADE SUCCESS STORY



Watson Drill Rigs

AN AMERICAN-MADE

SUCCESS STORY

BY PEGGY HAGERTY DUFFY, ADSC EXECUTIVE DIRECTOR,
WITH DOUG WATSON, PRESIDENT, CEO

Nature versus nurture. Psychologists have debated for years whether a person's abilities and tendencies are innate or learned. The Watson family story would no doubt provide fodder for a lively debate between the two camps. Have four generations simply demonstrated the mechanical abilities coded into their genes, or did a long history of problem-solving skills and mechanical innovation create a concentrated learning environment for the people living in it?





▲ First Watson truck mounted drill crane on the books in 1940 for \$3,421.

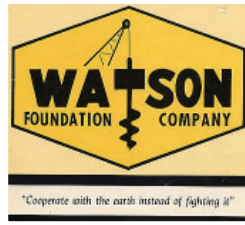
THE EARLY YEARS

Verne Watson was born in 1896 and grew into an adult in an era when jobs weren't handed out, and no safety nets were available for those who didn't find work. After his service in the Navy during WWI, Verne lived in Fort Worth, Texas, in the middle of oil country. As a 27-year-old husband, his resourcefulness emerged quickly when he established the Fort Worth House Moving Company in 1923. He built a pole truck and trailers out of materials he had at hand, hired a crew (including his brother, Paul), and began moving houses and other structures around the Fort Worth area. Construction methods and materials at the time made house moving more economical than building new homes, so there was sufficient need for the company to become successful, even through the coming great depression. At the time, "Being successful meant being able to survive," says David Watson, Verne's grandson.

Verne's mechanical abilities were immediately apparent as he expanded into moving... everything. He first modified his pole truck to accommodate larger loads, then

manufactured cranes and chassis to achieve greater capacities. Fort Worth House Moving Company secured jobs lifting heavy loads, erecting machinery and structures, and moving equipment from one location to another. In general, the company performed all sorts of what was known as millwright work, which requires a wide spectrum of mechanical knowledge, creativity, and a good dose of resourcefulness. Verne once even figured his way out of a challenge by moving a giant oil tank using blocks of ice.

Throughout the early growth of the company, Verne's priority was taking care of his family. He and his wife, Ruth, had one son, Jack, who was born in 1922. Verne's hard work provided for Ruth and Jack, and Jack showed an interest in the family business at an early age. He spent long hours with his dad at their new shop facility, which was only a few blocks from the house, and Jack was a frequent visitor to the company's many project sites. His parents fostered this interest by sending him to North Texas Agricultural



▲ Verne Watson and the 1970 Model 800 Hydraulic Rotary.

“Verne had a reputation as a hard worker, but his generosity and kind spirit were even better known than his work ethic.”



▲ Similar powerline challenges of house moving and drilling holes c1935.

College, (which ultimately became the University of Texas at Arlington), where he majored in aeronautical engineering.

Verne's family loyalties weren't limited just to his wife and son. His mother had made him promise as a young man to always take care of his brother, and he was true to his word. Fatefully, he made Paul an equal partner in the business, and later he found a place for one of Paul's children who was interested in being part of the company. Verne had a reputation as a hard worker, but his generosity and kind spirit were even better known than his work ethic. (Although in hindsight, being 49% generous instead of 50% would have been ok with his descendants.)

Fort Worth House Moving Company stopped moving houses

in the 1930s as other forms of work became more profitable. Verne expanded the business significantly during World War II, particularly in conjunction with several aircraft manufacturers. One contract was with Convair, a predecessor to General Dynamics. Fort Worth House Moving became a major player in the millwright business in Fort Worth and the surrounding area.

Starting with their first job in 1923, Fort Worth House Moving Company was both a contractor and an equipment manufacturer. They constantly adapted their own equipment to fit the parameters of the jobs they were hired to execute. Verne Watson did not differentiate between contracting and manufacturing in his business, he simply did what had to be done to meet his customers' needs. This versatility was a

valuable asset and would prove to be a defining trait of the business.

Jack followed many of the men in the country into World War II, where he served for three years as a bomber pilot and flight instructor. Upon his return, he had nowhere to live with his new bride, Mary E. Barlow, "Meb." The son of a house mover and a millwright didn't have the same constraints as other servicemen returning to a housing shortage. Verne's house had a detached double garage, so the company simply lifted the roof, constructed a second floor, and the young couple had a place to live. Such was the appropriate and auspicious beginning of Jack's industrious era with the company.

For a man who reportedly loved a slide rule and continued to tinker with airplanes long after his



▲ Model 10000 (double stack of 5000s).



▲ Early truck mounted crane attachment c1952.

military days, the family business was perfect. Jack also painted and engaged in gunsmithing, demonstrating the creative ability so critical for real innovation.

CHANGES WERE COMING

Because the company's activities involved heavy lifting and rigging, soon the erstwhile house movers were setting steel girders for the Texas Department of Transportation for a bridge over the Colorado River. Most foundation systems were constructed on driven piles at the time, but a new type of drilled and cast foundation was gaining recognition. Verne had observed numerous complications in lifting and adjusting the girders on driven piles that changed in elevation, so they wasted no time in considering drilled shafts as an alternate foundation system for the bridge. In 1940, Verne mounted an engine and transmission out of an old Buick to a custom-built crane, connected a modified rear differential of a truck, and stabbed an oilfield kelly bar through the middle. Thus, the first Watson drill rig was born. Alongside it was a sister rig built on a 1920s Bucyrus Erie steam shovel (cover). After experimenting with various tools and drilling methods, design improvements were made to create a fleet of drill attachments mounted to Watson-made cranes.

“Reinforced concrete shafts proved to be perfect foundations for Texas geology, and soon the Watsons were installing shafts routinely.”



▲ 1959 Western Electric Plant, Oklahoma - 1200 60' cased piles in 90 days (Pre OSHA).

Jack's engineering mind was quick to find a means to prove the capacity of drilled shaft foundations. In an early job, he added reaction piles to a constructed shaft and load-tested a 20-inch shaft 10 feet deep. Subsequent in-house load testing demonstrated capacities of up to 300 tons. Load testing was also conducted in conjunction with the Texas Department of Transportation and was instrumental in the validation of drilled shafts as an acceptable foundation in Texas.

Reinforced concrete shafts proved to be perfect foundations for Texas geology, and soon the Watsons were installing shafts routinely. Fort Worth House Moving Company became the

Watson Foundation Company and the foundation drilling business quickly expanded to jobs throughout the United States. Watson opened offices in Atlanta, Georgia, and Denver, Colorado. Soon the manufacturing and contracting sides of the company became more distinct as the equipment developed into more complex machinery. By this time, the organization was operating with two primary activities: drilled shaft contracting and drill rig manufacturing.

Meb and Jack's family expanded quickly as the company did, with three children, John, David, and Catherine born between 1946 and 1952. David, like his dad, began hanging around the shop as a very young man. He remembers his dad's single-mindedness and penchant for chasing an idea for a new piece of equipment with an unswerving intensity. Along the way, the Watson family's work ethic was front and center; David never knew any other option than working hard to deliver a quality job to fulfill the client's needs.

The success of drilled shaft foundations became known internationally, and demand for equipment grew. Many U.S. foundation contractors were reluctant to buy equipment from a competitor, so Watson set its sights on overseas markets. In the 1960s, Watson began delivering crane attachments to England, France, Italy, Mexico, and Malaysia, among other countries. Two such rigs were sold to an Italian company called CCCF in 1966 and were later observed by a man named Davide Trevisani, founder of Trevi, then a pile-driving contractor who similarly built its own rigs. Three years later, Watson's European salesman, Dick Kelly, cussed Jack for going around him and selling a 5000 to another Italian contractor. Jack protested and as it turns out, the rig was not a 5000 but a brand-new RT-3 mechanical crane attachment made by Trevi's newly formed manufacturing division, Soilmec.

As sales increased, Watson's pursuit of contracting jobs decreased and Watson became primarily a manufacturer. An important advancement came about in 1967 when Watson sold its first "mobile" rigs, the truck and track-mounted 1000, in the U.S. and Canada. This marked the beginning of sales to former competitors. Many of the earlier customers were, and are, prominent in the drilled shaft industry today, such as ADSC's Past President, Stan Anderson, Anderson Drilling, (now Keller), Lakeside, California. Stan, who is well known for his machine design proclivities, still visits Watson's Fort Worth facility every few years and parks his RV on "the hill" where every Watson rig is drill tested.



▲ 1968 Rig Advertisements for first models ever sold. ▼



Jack was still fascinated with modifying the equipment to do a better job. He listened to clients and often engaged in elaborate design and testing exercises to create a piece of equipment to address a very specific and

singular situation, including the prototyping of two CFA rigs and a tieback rig in the 70s, as well as what might well have been the first hydraulic rotary rig. His need to understand the capabilities of the drilling equipment was

so strong that he once drilled a shaft into rock, lowered himself into it, and had an operator drill an adjacent hole so he could watch the auger cut rock from inside the rock!

DAVID BECOMES INVOLVED

In 1968, David returned to Watson from the University of Texas at Austin, where he was an engineering major. Along with his new bride, Meredith, David also brought back experience with the inner workings of the Watson operations that he had gained as a teen. Summers spent at the company working in the field as a swamper and in the office in the engineering department helped him to jump right in. And so, another hard-working Watson joined the family business full-time while also starting his own family with the birth of their first child, Carolyn in 1969.

The fledgling nature of the drilled shaft industry was a boon for companies that had a foot in the door, such as Watson. But the industry was unorganized, and infighting was rampant. According to David, "The contractors fought with each other constantly, tearing down any advances in the market. Everyone was concerned with how big their piece of the pie was but not how to make the pie bigger." In 1971, a raucous bunch of Texas drillers finally set aside their differences long enough to collaborate in the creation of the Association of Drilled Shaft Contractors. The ADSC immediately served to unify the contractors and manufacturers, allowing real advances in market share and innovation to take place. Jack was a founding member and an early supporter

of the value of the ADSC, for which he served as the first President. Jack and his venerable compatriots' efforts helped put drilled shafts ahead of driven piles as a preferred foundation element and forged the way for the Association we know today.

Because Watson made significant strides in the invention of new and effective drill rigs throughout the 1960s and early 1970s, their productivity made them an

attractive target for others who would capitalize on their long years of research and client development. Two particularly crafty individuals (Buster Baggett and Jack Dietrich) approached Watson in the early 1970s and offered to act as their exclusive sales representatives. Known as Stratadrill, they were given offices within the Watson facility. The arrangement was a partnership but effectively served to separate the Watsons from their burgeoning



▲ 1978 3000 on Foremost Commander for air drilling in Saudi Arabia.



▲ 1977 2000 for ADSC member Mahaffey Drilling, another 4th generation company.

client base by shifting responsibility for sales away and leaving the Watsons to manufacturing. This would turn out to be a perilous but valuable lesson learned.

“Jack was happy, because he loved design and engineering and was less interested in sales and finance,” David observes. Due to Stratadrill’s self-serving strategies and Jack’s desire to build prototypes, the result was decreased cash flow which negatively impacted the once-healthy business. The financial bind reached a turning point in 1973 when Watson’s longstanding bank changed ownership and was quickly persuaded by Stratadrill leaders to call the note on Watson and consolidate the companies under Stratadrill, who were in possession of the rig orders and intended to build the rigs themselves. Watson was kicked out of its own factory, but its loyal employees helped save the day when half the workforce quit on the new Stratadrill management. Realizing they could not pull the takeover off, they went to plan B and copied all of Watson’s drawings, later attempting to start their own manufacturing company. Ultimately, a judge removed Stratadrill and the bank from the equation, and Watson was left to pick up the pieces. A successful patent infringement lawsuit later led to Stratadrill’s ultimate demise. Ever true to his family, Verne had the foresight to save the crucial company phone number during the battle by installing himself in the Expressway Motel next door and transferring the number, thus securing the connection to the customers. Certainly, men who were accustomed to moving oil tanks using blocks of ice could

not be beaten with a short-term financial setback.

These problems at Watson may have occurred relatively early in David’s career, but he had a strikingly familiar incentive to restore the family business. In 1973, David and Meredith had just given birth to their second child, a son, Doug. David was cut from the same cloth as his grandfather, Verne, and he knew he had to help save the company to take care of his family.

David jumped into the formidable challenge of rebuilding with both feet. Having experienced the fallout of the attempted takeover firsthand, it made an indelible impression. The staff had been depleted to 20 employees, a chasm existed between the Watsons and their old clients, and cash was still tight. Rebuilding was slow, but the company reclaimed its clients and Watson learned the valuable lesson of always maintaining direct, dedicated relationships with customers. David worked hard to put his knowledge and experience to good use, most notably in the area of customer service and support, for which Watson became well known. In time, the business disruption and lean times seemed to develop

as drivers for the Watsons, who refocused on building tough drill rigs for hard working-customers.

John Monroe joined the company in 1984, and in his 26 years there, proved essential to its growth. His customer-focused approach was exactly what the company needed. John moved to Sales Manager and furthered the customer-focused culture. Combined with David’s knowledge of the products and passion for customer service, he and John made a dynamic business team forging long-lasting relationships across the industry and selling lots of rigs. The Watson operation was evolving, and this time the developments were positive.

A NEW DIRECTION

While the company gained momentum, so did another conflict. A philosophical divide was developing between Verne’s side of the family and Paul’s, which were all second-generation and minimally involved. In 1984, Paul’s son, Raymond, decided to move from passive shareholder to active Controller and Board Member after he retired from a career in the food industry. He and his brother, Duke, now held two of

“

Watson learned the valuable lesson of always maintaining direct, dedicated relationships with customers. David worked hard to put his knowledge and experience to good use, most notably in the area of customer service and support, for which Watson became well known.

”



▲ Malcolmm Drilling's 1993 3100CM with "crane type hoists."



▲ Prototype 3110 built for Longfellow Drilling in 2002.

the four board positions, and none of their side of the family appeared to be particularly interested in the future of the business. It became evident that their preferred course of action was to cash in their half by making the company an attractive target for acquisition. Jack and David were devoted to the vision that made Verne such a pioneer in the 1920s, but family loyalty on both sides now resulted in a stalemate. Thirty years later, Doug could recall the defeated look on his father's face as David tried to explain what a Board of Directors was to an 11-year-old Doug.

Perseverance became the name of the game for David, Jack, and, John. They were proud of the family business, knew its potential, and wanted to make better drill rigs for their customers, many of whom they could name as friends. The family division generated tensions within the business throughout the 1980s and 1990s. David didn't let the ownership stalemate limit his pursuits, and he gained new clients and solidified existing ones. He concentrated on knowing his clients and understanding their equipment needs as business owners. He drove the idea of customer service and listening to customer needs deep into the company's culture which proved to be fundamental to Watson's continued success. Jack continued to design, responding to the input collected by David and John such as the 3100, made specifically to compete against the Hughes LDH. Despite the differing objectives of the family, the business leveraged the strong

economy of the 1990s to grow beyond all previous levels, gaining market share and expanding into the oilfield with effective “rathole” rigs prompted by the peculiar customization requests of one Junior Harris. Even though the two sides of the family disagreed on most things, (even to the point of Raymond demanding an ROI be done on a popular gadget called a “fax machine,”) they both knew that the good health of the company was still the key to any successful outcome.

ENTER GENERATION IV

David’s son Doug followed in his father’s footsteps, visiting the shop on the weekends and studying drilling equipment from a child’s perspective. He announced that he intended to join the family business during his kindergarten graduation, and he even drew an elaborate drill rig design in second grade. He attended engineering school at the University of Massachusetts before returning to Texas to earn his master’s in mechanical engineering at the University of Texas, Austin. He wisely decided to work for several years in an unrelated manufacturing field for a company acclaimed for having cultivated a productive and positive working environment for employees. Doug absorbed and stored the information, determined to bring the employee-oriented culture to Watson. Doug officially became the fourth generation of Watson in 2002. Fortunately, Doug did not have to face the family stalemate long as his presence gave his father the needed leverage to negotiate a buyout of Duke and Raymond. The dramatic benefit of a common, rather than divided, vision was immediately apparent.

The entire company appreciated the newly positive environment and forward progress was exponential.

Doug wasted no time putting his design abilities (and years of observation) to work to create the first American version of a European-style drill rig. The “skunk works” project took less

than a year and the “Model 4400” was introduced at the 2004 ADSC Expo held in Orlando, Florida, much to the surprise of European competition. It was a culmination of Doug’s thoughts on drill rig innovation and simplification, combined with a year’s worth of direct feedback from operators he personally interviewed in the field.



▲ Jack Watson inspecting his grandson's new rig design 2004 prior to shipment to Orlando, Florida.



▲ Bill Maher attempting to bury an Eagles jersey on the 50 yardline of new Cowboys Stadium in 2008.



▲ Watching other exhibitors set up in Orlando, Florida after prototype 4400 set up in two hours.



▲ Doug, David, and Jack at 2004 ADSC Expo in Orlando, Florida.

In addition to new designs, including three patents, Doug has brought his own slant to the business, by working to preserve what has made Watson's rigs and its loyal culture successful while also incorporating better manufacturing and new drilling methods. By studying drilling equipment as part of the job site as a whole he, too, has shown a creative side that is innate in true innovators. He has built on the solid relationships his dad has established with clients by supplementing David's knowledge of the client's business with a greater understanding of the demands customers are facing with job site logistics and scheduling concerns. With a strong dose of his grandfather's desire to create solutions and a focus on innovating the fundamental elements of drill rigs, he has brought a new angle to designing and selling drill rigs.

WATSON AND SOILMEC JOIN FORCES

Jack was becoming less involved but came to work every day and still contributed to design discussions, mainly by critiquing Doug's design work, until his passing in 2006. Doug and David continued to work and build the business with a shared vision while Doug and his new wife Trish began building the next generation with the birth of their son Parker, in 2007. Shortly thereafter, Watson's success and reputation caught the attention once again of the Trevisani family, owners of Soilmec, an Italian equipment manufacturer. Discussions ensued, and both companies believed a partnership

would help the two businesses increase their market share internationally. The 80-percent stock purchase by Soilmec was formalized in January 2009.

With both companies being family run and the essential agreement that the Watsons would continue to manage the company operations, Soilmec and Watson maintained a good working relationship for the next seven years, leveraging business and technical experience on both sides to increase market share. There were some complications with product line overlap, but general operations progressed. Doug and David maintained the customer-focused orientation that helped build the company while reassuring customers that

Watson was still Watson. Doug had been increasingly taking on the top management role since the partnership began and officially

“Doug and David maintained the customer-focused orientation that helped build the company while reassuring customers that Watson was still Watson.”

become the CEO in 2015. Watson enjoyed a successful stretch alongside Soilmec starting with the recovery from the great recession to some of the strongest years in the company's history.

A SERIES OF FORTUNATE EVENTS

Unfortunately (or perhaps fortunately for Watson as it turns out), tough markets in 2017 and 2018 threw multiple wrenches in the works of both renowned family businesses, but ultimately led to very different outcomes. For the publicly owned TreviGroup, a forced restructuring brought new management to Soilmec/Trevi and the departure of the Trevisani family. The essential cooperation and trust that had been built between the two families were gone. The new management



▲ Employees, customers, and friends around the new Cat based 7300 at the 2021 ADSC Expo in Dallas, Texas.

had enough issues of their own and did not like the power structure that was intentionally set up to allow balanced control of Watson. Ironically, Watson's poor performance the prior two years, combined with TreviGroup's cashflow crunch and an unexpected hiccup by the Italian restructuring court in Forlì set the stage for Doug to make a buyback offer and on December 12th, 2019, Watson was once again 100 percent owned by Watson. Equally important, for the first time in history, Watson was held solely by family members directly involved in driving its enduring success, Doug and David. It is quite possible that a glass or two was raised on the occasion.

Heaving a huge sigh of relief and with the chance to work without distractions and constraints, the crew at Watson forged straight ahead into developing new hydraulic models ...and promptly fell headlong into the jaws of the global pandemic. Having enjoyed just four months of their newfound freedom, customers began postponing orders, materials were delayed, and the world went into lockdown. David Watson spent long hours debating internally over whether he would rather battle a virus or a hostile takeover. By the beginning of 2021, though, orders had resumed, and the backlog began to grow to its highest level ever. Watson had survived yet another major threat and was ready to take on whatever the world threw at it next.

Like everything in life, the business has continued to change, even in the short time since 2019. Drill rig rental has

increasingly altered the market, and Watson's operation has adapted. The production line turns out everything from the ever-productive 2500 mechanical rigs, to the industry standard hydraulic 1100 truck-mounted

utility rig, to the European-style CAT based 7300. A full line of excavator-mounted rigs is included in the offerings, along with the same willingness to customize machines to adapt to every driller's needs. Innovating on the essentials of drilling while producing tougher, faster, simpler rigs remain the design focus.

A CENTURY IN BUSINESS

The latest fortunate event has been 100 years in the making. 2023 marks the 100-year anniversary of the fourth-generation, family-owned, U.S. manufacturing business. This club is small but esteemed. The challenges of manufacturing

“ Watson had survived yet another major threat and was ready to take on whatever the world threw at it next. ”



▲ Doug personally removes the TreviGroup sign from the building in 2019.



▲ Up and coming 5th generation of Watsons.

in the United States remain significant but Watson is resolute in being one of the few drill rig manufacturers *actually* made in America. Sales Manager Tony Kraut and his sales team continue to forge long-lasting customer relationships across North America. Veteran employees and talented new hires are bringing improvements to engineering, service, production, and quality. Doug, David, and their devoted workforce are mapping out the next steps for this American-Made success story, and it appears they will have help from Gen 5 in the not-too-distant future.

Doug's son Parker, who also aspires to become an engineer, started earning his stripes from the ground up by counting parts last summer in the Texas heat (and not complaining.) His younger sister, Maddie, has announced her intention to become the youngest employee in 2023, also with her eyes set on engineering. Their younger sister, Sarah, currently proclaims she will be an author but perhaps her first summer job might soon be chronicling the next chapter of Watson's history (or perhaps finally writing the "uncut" version...once she is old enough to hear those stories!)

Regardless of what fate blows across the Texas plains, it is certain that Watson will remain a deep foundational element in the drilling industry. This company has personified what makes the deep foundation community so unique – resilience, fortitude, and ingenuity. Here's a toast to another 100 years!



▲ David, Parker, and Doug Watson celebrating the new era at the 2021 Expo in Dallas, Texas.