

Bandera: Small contractor thinks big on safety, innovation

JUDGED ONLY BY its modest 6-rig fleet, most folks would likely identify **Bandera Drilling** as a small drilling contractor. But Bandera doesn't think small when it comes to safety. The Abilene, Texas-based drilling company is a case study in a small contractor thinking big by investing in new technology and equipment to enhance safety and improve operations.

"We're taking it one step at a time," remarked Bandera President **Ray Brazzel**, who, with his wife **Ann**, founded the family-owned company in 1975.

Actually, Bandera is more than one step ahead. For example, the company replaced spinning chains on its 6 rigs nearly two years ago. Five of the rigs run doubles, and the 6th, triples.

"On small rigs, spinning chains probably cause more injuries than anything else," Mr Brazzel explained, arching an eyebrow as he waggles his right forearm, broken in 1962 thanks to a spinning chain.

Instead, all six rigs are equipped with Kelly and pipe spinners and air slips—equipment specifically designed to keep workers' hands and arms safe.

Now, Bandera is working toward eliminating catheads. Many consider this spooling device a ready source for accidents. Late last year, Bandera replaced the cathead spool on one of its rigs with hydraulic winch, hoist and boom line.

"Catheads can cause serious injuries on a rig," said HSE Director **Matt Kreitler**.



Ray and Anne Brazzel (above) founded Bandera Drilling and run it with an eye for innovation. Inset shows HSE Director Matt Kreitler, left, and Drilling Superintendent Ronny Whitehead.

"Instead of taking a chance with an inexperienced hand running a cathead,

we have moved that responsibility to the driller," Mr Brazzel noted.

Further, workers can now use a remote control for lifting operations at, for instance, the v-door or pipe rack, he added. Because the operator can see the load being hoisted, a flagger is no longer needed. Allowing the operator to see for himself and absenting the visual middleman enhances safety.

The next step, Mr Brazzel says, is to remove the cathead altogether.

Fall protection is also a priority. Bandera has installed four self-retracting lifelines on each of its rigs, complete with full body harnesses. SRLs are designed to reel up slack in a fall-protection line, allowing mobility while restricting fall distance. One SRL is stationed at the crown, one on the monkey board and two on the back side of the derrick.

Bandera has also eliminated manriding. While air hoists are sometimes used in this practice, Mr Kreitler points out that they are hardly fool proof. "We don't manride anybody on a winch," he said. "History proves manriding is unsafe."

The combination of SRLs and ladders enable rig hands to perform all functions for which manriding is sometimes employed. Mr Brazzel says that it's Bandera's practice to rethink and reengineer the tasks at hand, rather than try to improve safety of a potentially risky procedure like manriding.



Rig rotation: Bandera stays on top of upgrades and maintenance by regularly rotating rigs out of service for top-to-bottom refurbishment. The company began this practice some 20 years ago as a means to keep its



employees working when rigs were off contract. Bandera thinks big on safety, and has eliminated spinning chains, replaced cathead hoisting with hydraulics, banned manriding, installed drench showers and more.

"I don't know if there's a way to write a policy for manriding," he said.

Bandera's numerous incremental improvements add up to big improvements in overall safety and efficiency, the company says. "What we try to do is look for potential problems and solutions for routine operations," Mr Brazzel said.

For instance, Bandera has nearly eliminated the use of cable clamps on rigs. The problem with the clamps is that they are sometimes used incorrectly or inadequately tightened. The solution Bandera found was simply purchasing cables of specific lengths without clamps. Hearing protection is also a priority. Bandera has installed mufflers on all engines for all rigs. Each rig is also equipped with drench showers and large eyewash facilities.

Bandera strives to make all its rigs as nearly identical as possible. The practical effect of this interchangeability is that a hand can work on any rig in the fleet and be assured that all equipment and features are identical in location and function to any other Bandera rig. "To a hand, one rig is the same as another. This is safer and more efficient," Mr Brazzel said.

When an operator requests a specific modification on a particular rig, if Bandera sees it as an improvement, the company will make the change fleet-wide.

The company stays on top of upgrades and maintenance by regularly rotating rigs in and out of service. There is always a Bandera rig in the company's yard undergoing top-to-bottom maintenance. The company began this practice some 20 years ago as a means to keep its employees working when the bottom fell out of the drilling market.

"Our rigs were all new at that time," Mr Brazzel explained. "We didn't really need to do any maintenance to speak of. But it was important to us to keep our people working and their families provided for. So we'd put them to work in the yard on the rigs."

To this day, rigs rotating into Bandera's yard for regular maintenance enjoy major makeovers. Derricks and substructures are sand blasted to bare metal and re-primed and painted.

Pumps are fully refurbished and so on.

But safety is not just equipment, Ray Brazzel will tell you. The company has developed a comprehensive set of procedures and policies, covering not only a wide array of personnel policies, but also safety and operating procedures for all rig equipment. Hazard communication, hazardous waste, well control, confined-space entry and numerous other topics are also covered.

Bandera Drilling also provides new hires with IADC RIG PASS-accredited safety orientation training.

"Generally, our safety policies are stricter than anybody we work for," Mr Brazzel said.

And that's operators big and small alike. And as large as a customer may be, rest assured that Bandera's ideas are just as big. ■