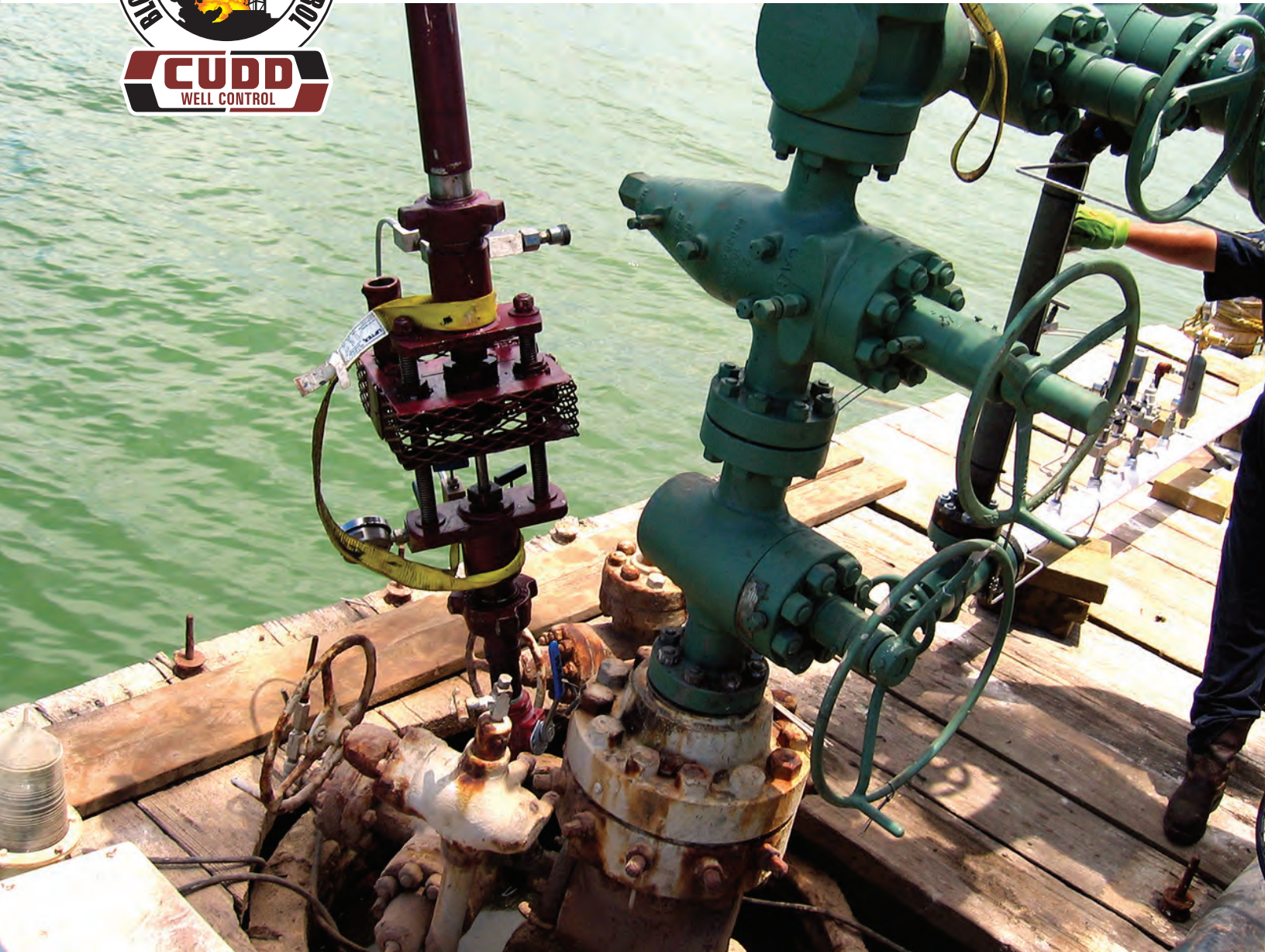




24 HOUR RESPONSE  **1.713.849.2769**  
CUDDWELLCONTROL.COM



## SPECIAL SERVICES

Cudd Well Control is a division of Cudd Pressure Control, Inc.

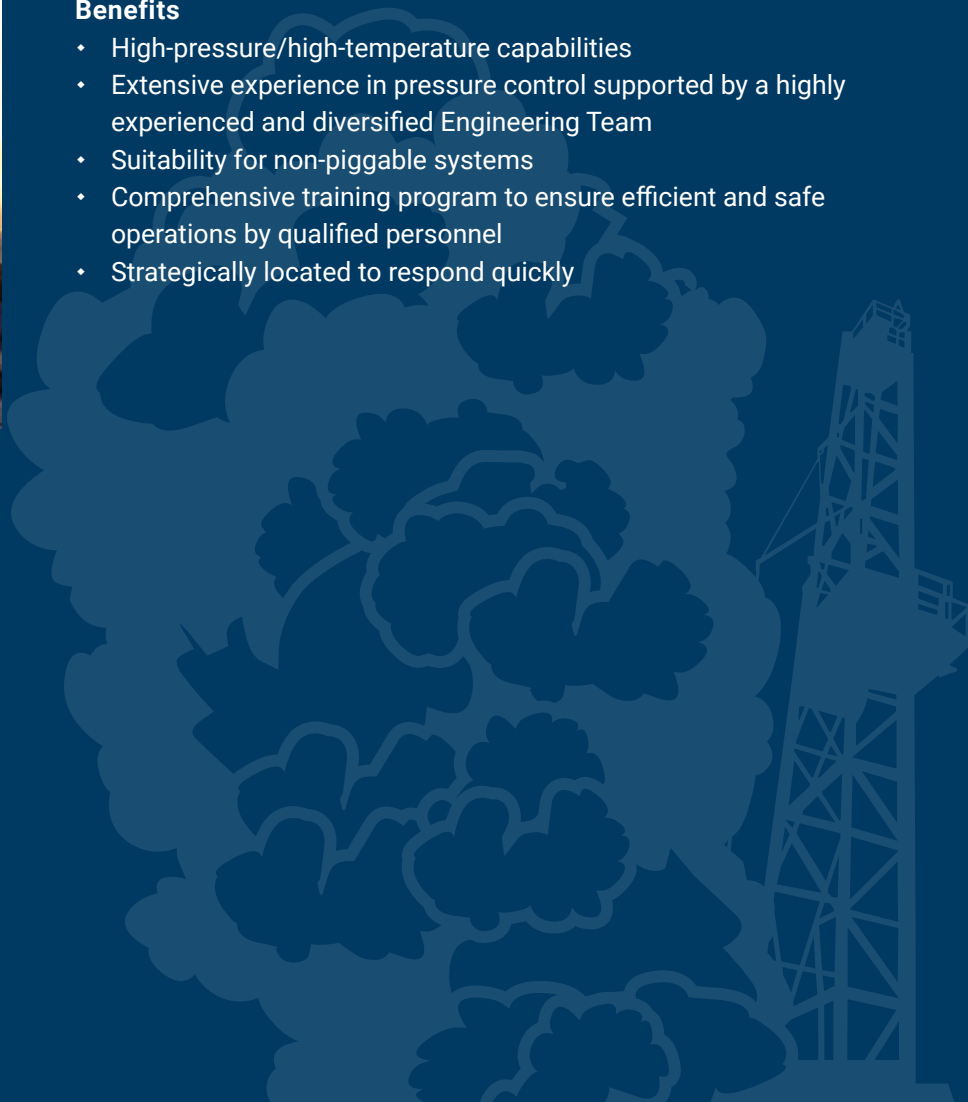
# Engineered Solutions for Complex Pressure Situations



Cudd Well Control (CWC) Special Services delivers custom-engineered solutions to resolve complex pressure situations resulting from equipment failure or trapped pressure. Services involving cold and hot tapping, gate valve drilling, freeze operations, and wellhead removal are available for onshore and offshore subsea well intervention applications. We design all of our Special Services to help operators reduce costs, minimize downtime, and balance environmental concerns with optimal production output.

## Benefits

- High-pressure/high-temperature capabilities
- Extensive experience in pressure control supported by a highly experienced and diversified Engineering Team
- Suitability for non-piggable systems
- Comprehensive training program to ensure efficient and safe operations by qualified personnel
- Strategically located to respond quickly





## Surface Cold and Hot Tap Operations

We perform onshore and offshore cold and hot tapping on lines and vessels containing water, oil, gasses, steam, or other chemicals. Cold and hot tapping involves safely drilling into a pressurized tubular or vessel without discharging contents, allowing a controlled bleed of the trapped pressure.

### Capabilities

- Rated up to 10,000 psi for H<sub>2</sub>S environments
- Tap coiled tubing, production tubing, casing, bull plugs and drill pipe
- Provide an entry to pump fluid conduit for freezing applications
- Entry to pump fluid conduit to perform kill operations
- Leak-proof entry technology
- Drill up to 1 in. diameter (larger sizes available upon request)
- Specialized engineered saddles for unconventional applications



## Subsea Hot Tap Operations

We are the pioneers of subsea hot tap and valve drilling operations, developing a first-of-its-kind subsea well intervention unit designed to reduce costs and minimize the environmental impact. Our remote-operated tool is rated to work at pressures up to 1,000 psi.

### Capabilities

- A unique hydraulic procedure for use in water depths up to 300 ft





## Gate Valve Drilling Operations

Have a pressure control situation that requires a different point of entry? Gate valve drilling offers an effective approach by drilling out an inoperable gate or plug while it's in the closed position. This is performed while maintaining pressure downstream of the gate or valve.

Doing this allows for both accurate monitoring of the pressure and a controlled release of the pressure, providing the opportunity to pump in fluids to freeze or kill the well. We can also drill a gate or TIW valve to its full inner diameter.

For longer reach operations, our pressure-compensated gate valve units can access drilling points several feet away from the unit. Available units deliver up to 15,000-psi pressure ratings in H<sub>2</sub>S service.

### Capabilities

- Full-bore and pilot holes up to 3 in. diameter (larger sizes available)
- Tree scale removal using pump through high-velocity wash nozzles
- Extended reach capabilities up to 30 feet
- Ceramic, stainless steel and calcium-plated drilling
- Leak-proof entry technology
- Able to drill multiple gates on a single wellhead
- Regulated bit speed and applied torque
- Mill sizes range from 1 to 11 inches



# Freeze Operations

We deliver a range of freeze operation applications, using dry ice and cryogenic freeze, with the capacity to freeze all pipe and valve sizes for a secure, reliable plug based on your requirements. Positive pressure tests and engineering calculations are routinely performed during freeze operations to ensure the integrity of the plug for different pressure environments. Our pressure capabilities for freeze operations range up to 15,000 psi.

Pipe freeze plugging is a simple, cost-effective method that allows for critical pipe maintenance and line modification to optimize operations. Successful pipe freezing is accomplished by establishing and maintaining a solid freeze plug throughout the duration of the operation. When in use, the freezing operation can be performed with minimal interference to the project timeline and limited financial impact. Dry ice and liquid nitrogen freezing ensure the isolation of wellheads, valves, and other equipment from subsurface and upstream pressure.

## Capabilities

- BOP (with or without failure)
- Valve (with or without failure)
- Check valve failure
- Plug failure
- Pipeline entry
- Lubricator failure
- Stuck wireline tool
- Lubricator swap
- Repair of BOP and surface valves
- Plug and abandonment (P&A)
- Secondary barrier
- BOP additions



## Wellhead Removal



Our well control experts provide a range of options for wellhead removal services. Our pneumatic casing cutter and hydraulic sand cutter have the ability to cut various sizes of tubing and casing under pressure. The hydraulic nut splitter enables the removal of rusted, immobile studs. The hydraulic flange spreader removes seized flanges.

### Capabilities

- Casing cutting to fit wellhead
- Removal of pressurized casing/tubulars
- Casing cutting on drilling rigs with oil-based mud and flammable fluids



## Wellhead Support Systems

Wellhead support systems from CWC Special Services set the stage for success during some of the most important operations undertaken in the field. The system transfers the induced loads away from the wellhead to the ground while maintaining wellhead and cement bond integrity on older wells. The system can serve as a simple redundancy or can account for incremental preload, individual cylinder leveling, and additional loading, as needed, for the specific application.

Examples of induced loads are hydraulic jack weights, BOP stack weights, and additional hook loads required to perform remedial work. Incremental loading prevents exceeding allowable uplift loads that may be imparted to slip on wellheads. The system's versatility allows for installation around and over obstructions such as cellars, exposed sales lines, and tree valves while maintaining a balanced load.

### Capabilities

- Prevent buckling in cellars
- Ability to hydraulically adjust for soil subsidence and compaction
- Mechanical fail-safe backup
- Systems rated at 200,000 and 400,000 lbs (3:1 SF)



ENGINEERING THE FUTURE OF WELL CONTROL



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