7Series Subsea Intervention System
Riserless and Riser-Based

7Series: Second Generation System Enhancements
Wild Well Control offers the industry leading 7Series subsea intervention system, which can be used for services ranging from simple shifting of a sliding sleeve to performing a full plug and abandonment. The new second generation 7Series is lighter and more compact, with additional functionality and flexibility that will further enhance intervention operations. It can be deployed from a traditional semi-submersible or drillship, as well as vessels. The dimension changes in the newest system will allow for easier transportation, offshore mobilization, and installation. With the opportunity to use either a vessel, MODU, or combination of both, the 7Series facilitates a significant enabling environment, where operators can now seriously look to reduce their P&A liabilities in the realms of approximately 50 percent.

7Series Offers Riserless and Riser-based Deployment Functions
The biggest change in the second generation system will be its ability to allow operators to switch "on the fly" between riserless and riser-based deployment functions without resurfacing. The decision to use riserless or riser-based comes down to the operations needed for the well. Some operations cannot be completed using wireline, such as milling out a plug or cleaning out a wellbore with sand. If medium well intervention such as coil tubing is needed, the new generation system allows this flexibility.

System Components
- Pressure Control Head
- Lubricator
- Well Control Package
- Circulation System
- Subsea Shut-in Device (SSD)

7Series Hardware Highlights
- Working pressure up to 10,000 psi
- Dual-redundant control systems
- Redundancy in the environmental and well barriers
- 30-second EQD with dual-disconnect points on all connections
- Shear seal ram can shear almost any toolstring, including 3 1/2-in., 135,000 psi drillpipe
- 7 3/8-in. bore handles the largest crown plug
- Deployment requires only a multiservice vessel
- Unique use of Concentric Circulation System eliminates need for coiled tubing as flow lines
- ROV-driven technology
- SSD allows for open water tubing retrieval operations
P&A of 9 Gulf of Mexico Gas Wells
Under Budget, Well Within Schedule

<table>
<thead>
<tr>
<th>WELL FEATURES</th>
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<tbody>
<tr>
<td>Type: Gas</td>
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<tr>
<td>Tree Type: Horizontal</td>
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<tr>
<td>Water Depth: 7,000 ft</td>
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<td>Vessel: ENSCO 8505</td>
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<tr>
<td>Special Tooling: 7Series, DeepRange P&amp;A Tool, Concentric Circulating System</td>
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<td>Producing Zone Depth: 12,000 – 14,000 ft MD</td>
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<td>MASP: 6,000 psi</td>
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Challenges
- Sub-ambient production zones
- Potential hydrate formations, causing additional complexities
- B, C and D annular isolation required
- Conventional operations call for cutting and pulling casing using a riser

Summary of Operations
- Pulled crown plugs with slickline
- Performed gauge ring runs with slickline
- Set and retrieved subsea tree isolation sleeves with slickline
- Perforated production tubing and production casing with electric line
- Severed tubing with electric line

Achievements
- Unique use of Concentric Circulation System eliminated the need for coiled tubing as flow lines
- Circulated cement plugs in B, C and D annuli
- Completed upper abandonments per BSEE regulations
- Performed entire operation well under budget
- Operation completed well in advance of planned schedule
- Established DeepRange P&A system as a revolutionary deepwater, riserless annular isolation tool

DeepRange P&A Tool
The 7Series involves multiple Wild Well technologies and techniques, including DeepRange, a riserless P&A tool. The DeepRange tool is run in conjunction with the 7Series to allow perforating and circulating plugging material through an outer annulus, rather than perforating and squeezing or cutting and pulling casing. Combining the Wild Well DeepRange and 7Series creates an unparalleled plug and abandonment (P&A) system that delivers a highly cost-effective, regulatory-approved solution in a rigless, riserless package. From pre-operational engineering and planning through the final setting of the cast iron bridge plug, Wild Well carefully guides the P&A process with a wholly in-house approach, which includes subsea well specialists.

Features & Benefits
- Saves operators 50%
- Rigless, riserless operation
- Water depths up to 10,000 ft
- Field-proven, multiannular isolation capabilities
- Does not require casing to be pulled
- Full BSEE APM approval
- Minimally invasive procedure that maintains wellbore integrity
- Durable ControlSEAL resin compound for lasting plug performance