

## Brownfield: Well Integrity Activity



Well Integrity is becoming a growing industry concern. Globally, losses have been estimated at \$1.2 billion/day in lost production directly related to well integrity issues. This does not include the cost of repair or drilling additional wells to ensure sparing capacity for production facilities.

Well integrity as a discipline began evolving in the 1990s as agencies identified the issue and began raising awareness. It was determined that a robust well integrity process covers the entire lifecycle of the well, beginning with well design and carrying through to abandonment. Depending on the hydrocarbon composition, well complexity, regulatory oversight and company approach, there is considerable variance around the globe on how this has been deployed.

For more than 35 years, Wild Well and its subsidiaries have dealt with a wide range of well integrity issues in environments all around the world. We can review the well stock, identify and diagnose the problems, and resolve the issues. Through the Technical Services approach, our well integrity specialists will assist clients in the evaluation of their well integrity issues, developing a forward plan for future success. The specific scope of work will be tailored to meet the client's requirement for the field and can be delivered in phases to meet budgetary concerns. The activity sets for a brownfield will vary based on current field well integrity deployment level, but may include:

**Historical review:** This effort can be a cursory or an in-depth review of the well records and the existing well integrity system.

**Surface well diagnostics:** This activity will generate a complete visual and radiographic investigation of each wellhead. A detailed schematic of the wellhead will be provided for the well files. If desired, wellhead seals, tree and casing valves can be tested and condition verified. Additionally, repairs can be made and a protective coating can be applied for tree, wellhead and surface casing.



**Annular pressure management:** The specialist will develop a specific plan for annulus pressure mitigation/management and associated regulatory reporting requirements.

**Downhole well diagnostics:** Using the client’s existing cased-hole logging contract, the specialist will review diagnostics such as bond logs, corrosion logs, and casing inspection logs, working closely with the client to chart a way forward. Typically, this activity will be conducted as an orchestrated program with the well integrity team and the production team. This is critical to ensure minimal impact to production.

**Compliance:** It is vital to identify system or compliance gaps because these can be used to prioritize the well integrity management system (WIMS) implementation and any required remedial work:

- Conduct gap analysis of current well integrity system
- Verify compliance with regulatory requirements
- Verify new well compliance with international dual-barrier standards and limit future problems by implementing a prudent design

If required, our well integrity specialists can support development and implementation of a well integrity management system (WIMS,) which will incorporate key policies and procedures.

Ultimately, this activity will provide clarity of the well integrity status for the producing and shut-in well stock. This will lead to more efficient operations that include enhanced safety and reduced operational and environmental risks.

For additional information, please contact:

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### Well Integrity Management System

