



Minimize risk in your most critical applications with artificial lift systems enabled by a system lifecycle focus, superior quality, and concierge-level service

PRIMERA premium artificial lift service

As production operations continue moving into more technically complex and remote locations, reliability and uptime are critical. For critical applications, the costs and risks of an unplanned well intervention are too high for anything other than the highest-quality artificial lift systems.

Baker Hughes solution for higher quality, highly reliable electrical submersible pumping (ESP) and surface pumping systems is the PRIMERA™ premium artificial lift service. This holistic, process-driven service helps mitigate risk and maximize economics throughout the lifecycle of your most critical producing asset.

The PRIMERA service was designed explicitly for assets where the costs of deferred production, nonproductive time, and intervention complexity are too high to be left to chance. The service promotes success by leveraging a system lifecycle focus, superior quality, and concierge service.

IMPROVE PRODUCTION AND RELIABILITY WITH A SYSTEMS-BASED FOCUS

Off-the-shelf lift systems rarely deliver the quality that a critical production application needs. That's why the PRIMERA service uses a systems-focused approach to engineer every artificial lift system for each well, throughout its entire lifecycle. This approach helps optimize lift

performance and field reliability through engineering and application reviews, including criticality assessments, checkpoint reviews, and a final engineering system design review.

Systems testing in our state-of-the-art Artificial Lift Research and Technology Center (ALRTC) ensures system quality and performance before field deployment. Our center's testing capabilities exceed standard factory acceptance testing of single components. Fully assembled ESPs are performance-tested in test wells that mimic field operational conditions. At the same time, the capability to simulate long step-out cables and run project specific variable speed drives (VSDs) promotes greater quality assurance from downhole to topsides.

Baker Hughes also offers experts to maintain a systems-based focus throughout a well's lifecycle and looks for ways to improve system performance for greater reliability and uptime.

ENSURE SUPERIOR QUALITY FROM INITIAL DESIGN TO FINISHED PRODUCT

Delivering a lift system with the highest reliability requires ensuring superior quality at each step of the manufacturing process—from raw material selection to

APPLICATIONS

- Offshore wells – both subsea and dry trees
- Deepwater fields
- Midstream and CCUS operations requiring uninterrupted uptime
- Operations with a risk of high intervention costs and significant revenue losses due to deferred production
- Operations using AccessESP™ retrievable ESP system

BENEFITS

- Mitigates risk throughout the critical well lifecycle
- Delivers quality and order execution with checkpoints throughout the process
- Helps ensure greater lift system reliability and uptime to minimize intervention costs

assembly and final testing of the complete system.

The PRIMERA service delivers high-quality lift systems matched to a specific well's requirements. Our three-tiered approach to system manufacturing efficiently manages risk by ensuring that you receive the right technical solution with predictable product deliveries. Tiered options include:

- Tier 3 –the primary level of superior quality, with additional activities beyond core artificial lift quality assurance
- Tier 2– an additional level of superior quality, with additional activities beyond Tier 3 for greater quality assurance
- Tier 1 –the highest level of superior quality, with “zero deviation” quality assurance

The tiered services offer a range of quality activities that exceed Baker Hughes core quality, as well as ISO 9001:2015 standards, and include:

- Documented dimensional inspection
- Documentation package
- Torque makeup
- Positive material identification
- Impeller and rotor mapping
- Engineering design review
- Non-destructive testing
- Hardness testing
- Set-out inspection
- Material traceability
- No use-as-is deviations
- ISO 15551-1 Quality Grades (where applicable)

The PRIMERA service's certified assemblers, technicians, and engineers bring decades of practical, hands-on design, quality assurance, and testing experience to help ensure the highest and most consistent system quality.

Our team of experts have seen it all when it comes to highly complex production applications. This unmatched experience allows them to react quickly and accurately to unplanned issues that may arise during manufacturing and system testing. They bring that experience directly to you by acting as a project partner who offers suggestions and solutions for improving processes and technologies to improve reliability in the field.

GET INDIVIDUALIZED HIGH-LEVEL SUPPORT WITH CUSTOMIZED, CONCIERGE-LEVEL SERVICE

The PRIMERA service includes a full concierge service. This curated, “high-touch” experience guides the customer through the project planning, scheduling, execution, and system qualification processes to ensure that a customized lift solution is delivered on time and at the desired quality.

Each order is treated as a project, and each project is assigned a project manager. The project manager is an industry expert with an average of 10+ years of project management experience who serves as the single point of contact. Our project managers ensure that each step of the process—from initial project scoping and plan development to project execution and final system delivery—is executed efficiently and in line with your expectations. The project manager also coordinates customer visits to the manufacturing facility and the ALRTC test facility to witness key points of the project's execution and personally observe quality-added activities.

The concierge service provides each customer with a premium viewing experience from dedicated “aquarium” rooms. These rooms provide a comfortable, private place to observe the testing of your lift systems.

CONFIRM SYSTEM QUALITY WITH ENHANCED CUSTOMER-FOCUSED TESTING

Covering a total floor space of 82,650 ft² (7,678 m²) and powered by a dedicated 20-MW substation, our ALRTC testing facility helps ensure high-quality service, delivery, and ongoing support with a full range of engineering and testing services.

Our engineering and technology teams leverage these services to drive new product developments and improve existing technology for specific customer lift systems. Our facility's testing capabilities include:

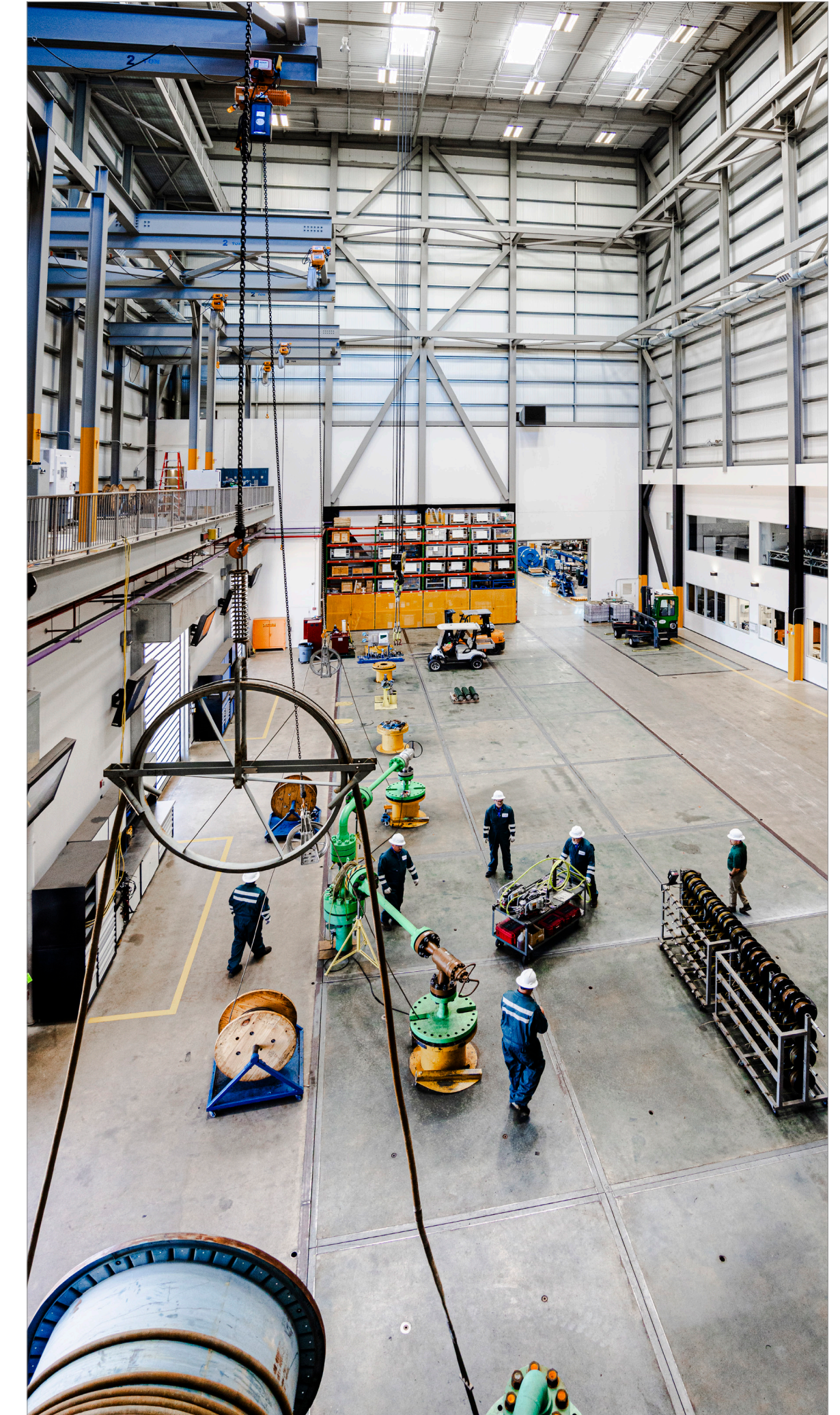
- Motor dyno tests, which verify motor performance at desired load conditions
- Six vertical water wells, with an 855-ft maximum depth and 85-ft hook height, for performing system stack-up tests beyond ESP equipment, ensuring flawless installation of critical completions in the field
- Test loops integrated into vertical wells, for measuring ESP performance at various flow rates and pressures

simulating actual operational conditions that may be experienced in the field

- Enhanced gauging system with accelerometers for continuous monitoring of vibration in multiple locations of ESP equipment during system testing
- Customer VSD compatibility testing, which confirms an ESP's ability to seamlessly connect and operate using existing VSD inputs and commands
- Cable simulation system and capability to fit project specific VSDs, to perform an entire ESP system integration test from downhole to topside

Thanks to these testing capabilities and the full support of our experienced personnel, the PRIMERA service is well equipped to elevate lift technologies to the highest levels of quality and reliability—for the deepest subsea wells to high-volume carbon storage projects onshore.

Contact your Baker Hughes representative today to learn how the PRIMERA premium artificial lift service can deliver the quality and reliability you demand for your most critical applications.



The Artificial Lift Research and Technology Center (ALRTC) in Claremore, Oklahoma, is at the forefront of pushing boundaries in artificial lift driving transformative change to accelerate our customer's shortest-cycle, lowest-carbon barrels possible.

With 82,650 sq. feet of floor space dedicated to research, product development, testing, and advanced manufacturing, the ALRTC features seven vertical test wells, five labs, a full machine shop, weld shop, and torque machine, and an expanded test environment for ISO15551 projects.