



## Wellhead Systems

Weatherford builds value into your operations with our global infrastructure, state-of-the-art facilities and a capacity to integrate your wellhead systems with our drilling, production, completion and intervention competencies.

Build efficiency.



## Build

**Value** to reduce costs and nonproductive time.

**Reliability** with field-proven equipment.

**Innovation** with a total systems approach.

**Trust** with complete life-of-well servicing.

**Dependability** from project start to finish.



## Built on....

**Commitment to excellence.** Efficiency starts with ensuring the safety of our personnel and clients. We encourage a culture of excellence through our Enterprise Excellence Process (EEP), which addresses everything from total technical integrity assurance for product/service delivery to continuous process improvement in our day-to-day activities.

**Specialized training.** Weatherford's state-of-the-art training facilities are located in strategic areas worldwide—enabling our global personnel to receive comprehensive training in operations, engineering and manufacturing in both classroom and field settings. Our employees build competency through mentoring from some of the world's leading oilfield experts. Our personnel development program and job performance evaluations encourage efficiency and pride.

**Manufactured quality.** We continually make significant investments in the latest machining technologies as we build quality into our products—from the raw materials to the installed equipment at your site. Our wellhead manufacturing and remanufacturing facilities are strategically located; and we add new facilities and expand existing ones as markets demand. Our quality assurance program is based on API and ISO standards, which ensure superior manufacturing processes, inspection methods, materials testing and product design.

**Accountability.** The Weatherford Performance Tracking System (WPTS) provides tracking for service assignments. Types of data collected include safety, job satisfaction, equipment performance, service-hand performance, service jobs and time measurement hours. The WPTS also seeks to answer the question, "Did the job go according to plan?" This searchable database is an excellent diagnostic tool and enables you to track records of specific equipment and projects as well as access valuable case histories.



Our personnel build competence through classroom and field training, mentoring and our personnel development program. All are measured by verbal and written testing as well as job performance evaluations.



# Capabilities

## Build value.

**Reduce costs and nonproductive time (NPT) with single-source efficiency.** We plan ahead and consider everything that comes before and after the wellhead system. Our diverse wellhead products and related services, coupled with our exclusive and total in-house capabilities, mean our wellhead systems are built to integrate with your drilling, production, completion and intervention operations. That's because we're the only wellhead source with expertise in all these capabilities.



Our systems complement the range of your wellbore requirements and operational environment by:

- providing field-proven products;
- manufacturing quality systems to API and ISO standards;
- improving safety for personnel and the environment;
- reducing NPT;
- reducing rig time;
- simplifying frac processes/methods.

Our broad range of expertise enables efficient and economical wellhead systems for the life of your well—all backed by the vast resources of one of the world's largest oilfield service companies.



## Build reliability.

**High-quality, field-proven, efficient equipment.** Weatherford offers products and services to handle all your surface equipment needs. We have a history of leadership in the development of new, more reliable products and systems that economically support the ever-increasing technological demands of the industry.

In addition to meeting API and ISO standards, we meet client-specific requirements—from simple to highly complex. You can choose from the widest, most thoroughly proven line of surface equipment and services. Every product features high-quality design and engineering, finite-element analysis, precision manufacturing and aftersales service and is backed by Weatherford's strength and reputation.

We engineer and produce reliable, safe and easy-to-maintain equipment with an extended service life:

### Conventional surface wellheads

- Weldless casing heads, casing heads, casing spools and tubing spools with proven straight-bore profiles
- Manual and automatic casing and tubing hangers, including metal-to-metal seals
- Weatherford's gate valves: split-gate, slab-gate and metal-to-metal sealing technology

**Complete wellhead systems:** drill-through, multibowl, unitized and mudline

**Platform wellhead systems,** including a complete selection of trees and wellheads

**Proprietary Drive-Lock™ and Rapid-Lock™ drilling connectors**

**Specialty wellhead systems,** such as the Transformer™ system for faster drilling, completion and production operations, and our steam-assisted gravity drainage (SAGD) wellhead for the higher temperatures of steam-injection operations

**A selection of chokes, manifolds, unions and swivels** to meet all your needs

**Gas-storage systems**



Manifolds, customized to your specifications, are assembled and tested to ensure compliance.





# Technology

## Build innovation.

**Engineered for efficiency.** We custom-engineer systems or adapt existing systems for your specific applications. In a hands-on environment, we engineer, test and refine systems, using the latest technology tested on our own full-size drilling rig.



Steam-assisted gravity  
drainage wellhead system  
(SAGD).

**Total systems approach.** When creating a wellhead engineered for your operation, we integrate our wellhead activities with other Weatherford capabilities such as drilling, offline and online cementation, offline and online fracturing, DDV® downhole deployment valve systems, casing exits and all forms of artificial lift, including electric submersible pumping and capillary (foam) injection. Our wellhead systems provide reliability, build efficiency, reduce costs, improve safety and reduce or eliminate environmental hazards.

A few of our innovations include:

The **SAGD wellhead** meets the tough challenges of heavy-oil applications. Its low-profile design enables concentric landing of multiple strings into one body, reducing overall wellhead height while enabling access to all annuli. The result is greater operational flexibility, efficiency and safety. Special graphoil packing material in the mandrel tubing hanger enables seals to withstand temperatures as low as -75°F (-59°C) and as high as 650°F (343°C).



The **Transformer™ wellhead system** changes the way wellheads handle drilling, completion and production. This revolutionary system enables you to move the rig off faster and rapidly transition from spud to production in hours instead of days. It simplifies the job, improves safety and saves rig time.

**Rapid-Lock™ drilling adapters** turn a two- to three-hour job with a torque hammer into a safe five-minute task with an Allen wrench. These unique connectors feature a radial interference-fit seal that requires only 150 foot-pounds of torque, eliminating the cost, time and danger for crews with heavy-torque hammers; and thereby significantly reducing blowout preventer (BOP) installation time. These connectors are adaptable for use with conventional, multibowl and drill-through technologies.



The *Transformer* system with 10,000-psi frac flange eliminates the need for frac isolation sleeves or tools.



Weatherford's *Rapid-Lock* adaptor locks onto the flush surface of the casing head—eliminating the need for rig hands to be in a dangerous environment below the rig floor to align the BOP and hammer up bolting.



# Aftermarket Services

## Build trust.

**Complete life-of-well servicing.** Our trained, experienced personnel provide efficient aftermarket services in the field or in our shops in compliance with documented procedures, industry standards and API guidelines. In addition, our technicians are available 24 hours a day—providing technical assistance and support for whenever and wherever you may need us.

To lower your overall costs and provide a complete life-of-well service offering, we offer a full spectrum of aftermarket services.

**Field installation, maintenance and service.** Our highly trained certified personnel install your wellhead, as well as conduct routine and scheduled maintenance and service on any wellhead system.

- 24-hour client support
- Field engineering and on-site technical support
- On-site training including installation, operations and maintenance
- Maintenance information: operating condition report, wellsite evaluation and scheduled and unscheduled maintenance
- Hydraulic torque services
- BOP nipple-up and testing
- Frac-stack rentals and installation

**Equipment repair and remanufacturing.** With state-of-the-art facilities strategically located around the world, we can quickly repair and service any OEM's equipment.

- Wellhead repair or remanufacture
- Valve repair or remanufacture
- Choke manifold repair or remanufacture
- Safety system testing or repair

**Client property management.** Our unique client asset management program enables us to receive, track, catalog and store your wellheads for cost-effective inventory management.

- Serialization
- Asset valuation
- Zero inventory plan
- Asset management utilization

**Electronic documentation.** We can provide a complete electronic document trail for each well program.

- Value analysis
- Quotations and/or quote drawings
- Post-well drawings
- Digital photo documentation
- Electronic well files



Aftermarket refurbishment of any OEM equipment to required specifications is another component of our value-to-client services.





## Build dependability.

**Service excellence.** From project start to finish, we align our service performance to your business drivers. Whether the objective is safety, economics, operational efficiency or all of the above, you can depend on Weatherford to deliver the service you need.

**Responsive.** Our experts realize the importance of understanding your project objectives. From the first phone call, we approach every job from a collaborative perspective to meet your operational or environmental challenges.

**Quality.** We take pride and invest in training our field personnel so they have the ability to provide you with high-quality service. With our wellhead facilities strategically located worldwide, we can rapidly insert a fully trained, experienced wellhead team into any of Weatherford's operational centers.

**Fast.** Our highly trained field personnel provide precise, efficient, cost-effective service, which includes wellhead installation, on-site technical support, hydraulic torque services and casing cutoffs. In addition we have the world's largest line of drilling and completion rental tools—making available the equipment you need without the overhead costs.

- Field services
- Wellhead installation
- Field engineering—on-site technical support
- Hydraulic torque services
- Frac-stack rentals and installation
- Field valve lubrication
- Drilling and completion rental tools
- BOP nipple-up and testing
- Casing cutoffs: torch cutting, mechanical cutting, machining and welding



Largest fleet of rental equipment in the world.

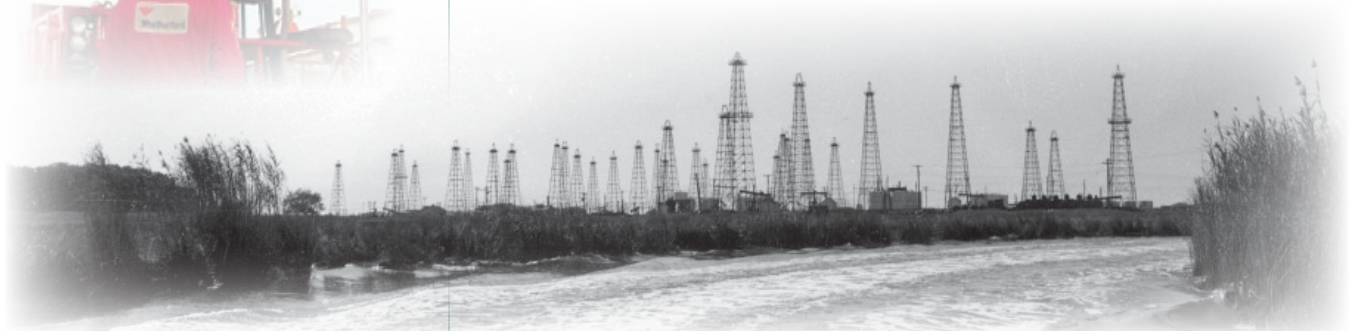


# A history of excellence.

Since the 1930s, Weatherford has strategically acquired companies to broaden the technological expertise of our company. In addition, we have made advances that have created success and growth. Our tradition of excellence is built upon our commitment to safety, error-free performance, and the protection of people, assets and the environment.



- 1934** Well Control Systems begins building well pressure-control equipment in Houston
- 1962** First Christmas tree on a producing well in the Gulf of Mexico
- 1980** First large, composite dual Christmas tree for offshore and onshore production: first unitized wellheads and composite Christmas trees in the Gulf of Thailand
- 1981** First-of-kind API 6A wellheads, gate valves and other 6A products manufactured and installed in Indonesia
- 1982** First true metal-to-metal unitized wellhead system: SMS (surface metal sealing) becomes most widely used unitized system on platforms worldwide
- 1984** First through-bore wellhead system enables tubing to be pulled without tree removal
- 1990** SES (surface elastomer sealing) system introduced
- 1993** Conductor sharing wellhead system enables multiple wells to be drilled through a single conductor
- 1995** Conductor sharing wellhead design wins engineering achievement award
- 1997** KSB straight-bowl wellhead and MSR (metal-to-metal seal) for 10M and 15M gate valve product line introduced
- 1998** Uni-Quick system introduced, adding to successful SMS wellhead system
- 2001** Newpark Wellhead Services acquired; SVT (surface side-valve through-bore) Christmas tree released
- 2003** Kvaerner Oilfield Products and Aker Kvaerner Canada acquired
- 2005** Phinzer plunger-lift sleeves introduced
- 2006** Frac isolation sleeve introduced: Rapid-Lock™ technology introduced to cut connection time and increase safety
- 2007** Wellhead systems introduced revolutionary Transformer™ system
- 2008** SAGD wellhead introduced



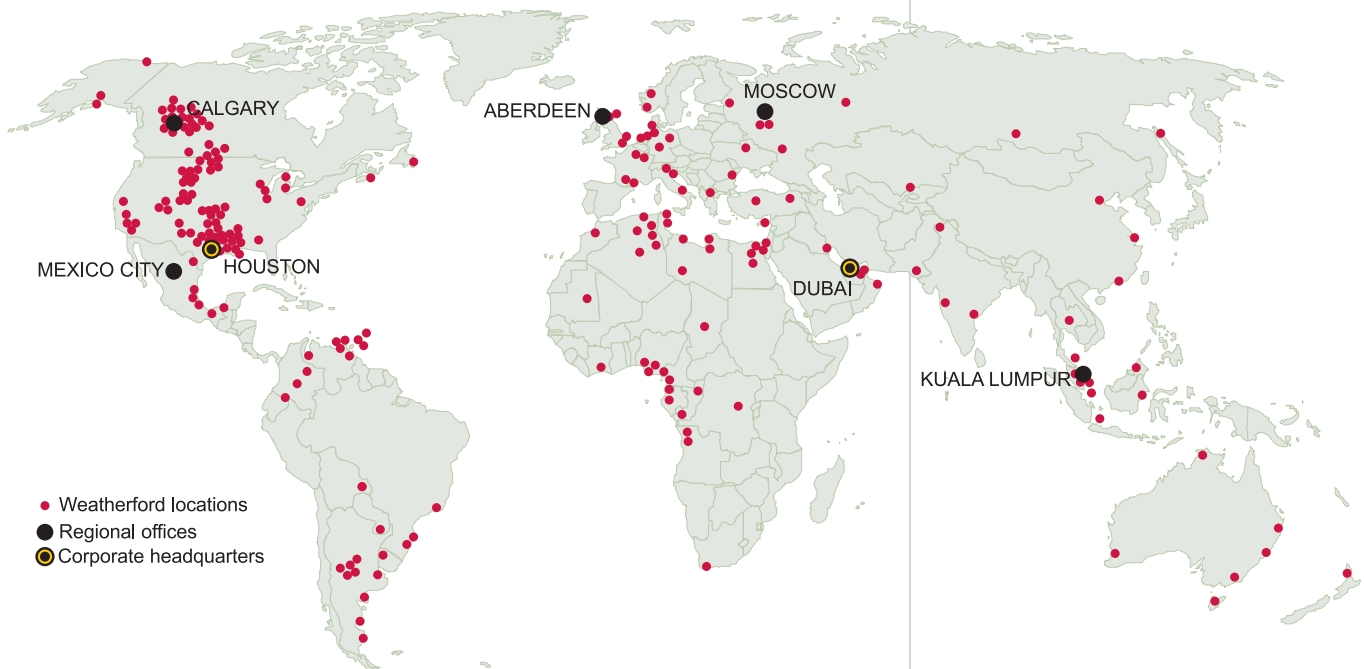
# Local service from a global organization.

Weatherford puts high-level, top-of-the-line, fit-for-purpose wellhead products and services at your doorstep through an established and efficient global infrastructure. We have more locations to serve you than anyone else in the industry. No other wellhead equipment provider offers as many locations so close to your operations.

We recently established wellhead hubs in key operational areas to

- speed turnaround for equipment delivery and service;
- move inventory closer to location;
- reduce on-site inventory requirements and facilitate just-in-time purchasing to mitigate costs and warehousing expenses;
- manage client assets closer to location for easier access and utilization;
- repair and remanufacture closer to location, which saves time and shipping costs.

## Where do you need us to be?



## Wellhead Systems

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Find out how Weatherford can build value into your wellhead system operations by reducing costs and nonproductive time.

Contact your Weatherford representative, or call **1-888-WELHEAD (1-888-935-4323)**.



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