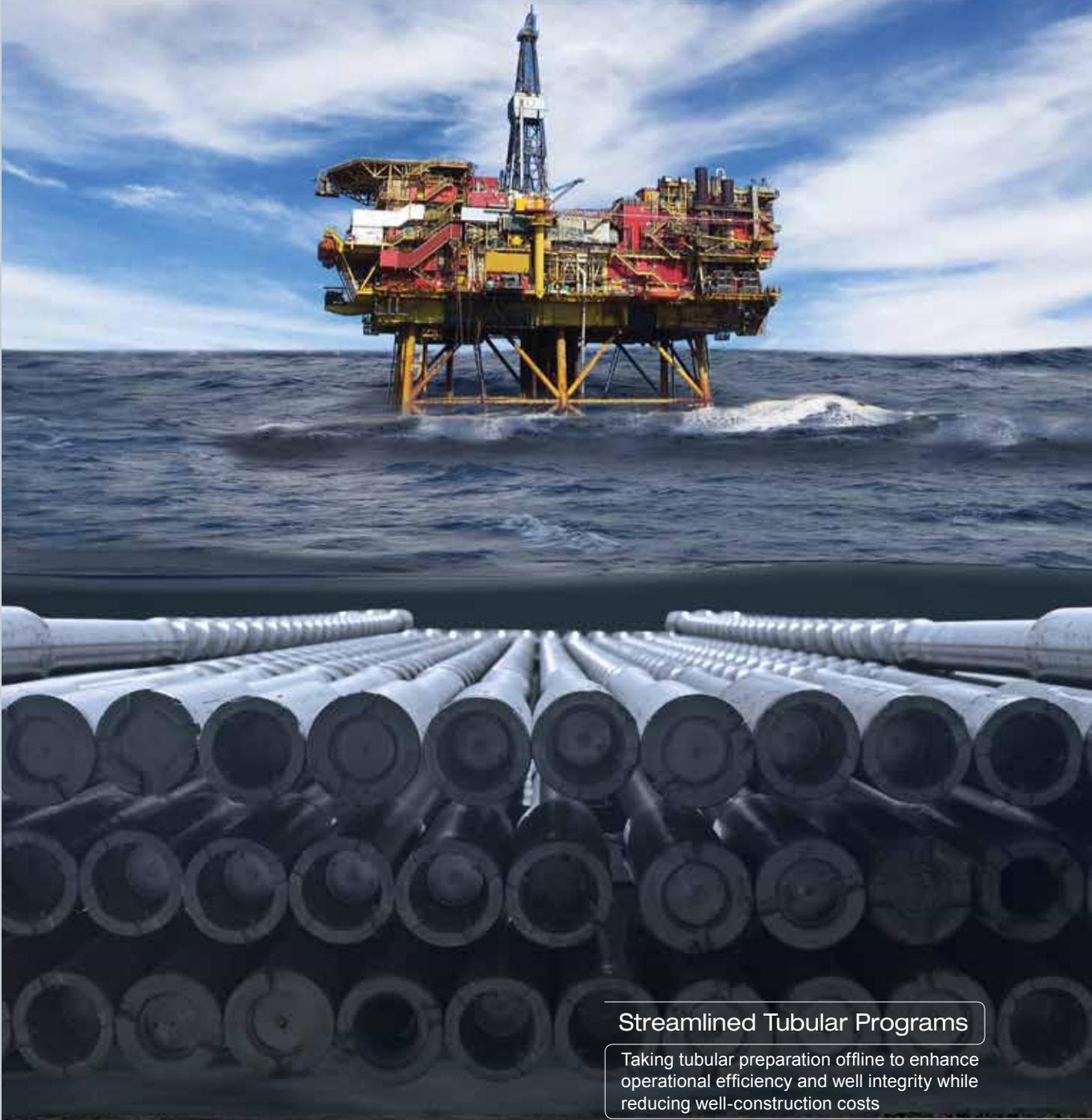




**Weatherford®**

Tubular Management Services



**Streamlined Tubular Programs**

Taking tubular preparation offline to enhance operational efficiency and well integrity while reducing well-construction costs

# Tubular care from pipe yard to wellsite

The handling of tubulars is one of the largest contributors to well costs. With over five decades of experience, we're the world's largest tubular running company and developers of industry-leading mechanized rig technology with a proven track record for enhancing rig safety and efficiency. Our tubular management services improve tubular programs by addressing operator needs for cost reduction and quality connections.



**Weatherford's tubular management services and offline tubular-handling systems can deliver high-integrity double or triple joints to your rig—ready to run.**

○  
**Our services include:**

- ⋮  
● Logistical planning
- ⋮  
● Receiving in the pipe yard/Pipe storage
- ⋮  
● Pipe preparation (with cleaning, drifting, storage and inspection)



# Tubular management services from tubular running experts

By extending our tubular running services further upstream, we can eliminate much of the logistics and costs associated with your tubular programs to reduce personnel and infrastructure needs.

We leverage our comprehensive understanding of rig-floor operations to provide you vital well-construction advantages. As a one-source provider of both tubular management and tubular running services, we can improve consistency and integrity in how tubing is handled, controlled and run.

Tailoring to the specific needs of onshore and offshore projects in both remote locations and mature infrastructures, we deliver tubular programs with greater efficiencies and wellsite performance.

Weatherford can streamline the preparation and management of your tubulars to deliver rig-ready solutions to your wellsite.

## Managing your costs and ensuring well integrity with quality connections



- Pipe makeup (for casing, tubing and drillpipe)
  - Joint makeup in doubles or triples, tallying, quick-response (QR) barcoding, connection monitoring and testing, accessory installation, completion and assembly, thread lubrication

- Wellsite planning
  - Inventory management, delivery and storage, returns management, packing and transportation

- Rig-ready pipe, ready to run

# Move tubular preparations out of the critical path to improve well-construction operations

Casing, tubing and drillpipe makeup, breakout and other preparatory operations constitute a significant chunk of well-construction costs. There has been a major push towards streamlining and creating performance-driven infrastructures to reduce this expense.

Enhanced offline operations reduce infrastructure and tubular running costs and minimize openhole time and costs associated with wellbore conditioning. Drilling flat time is also significantly diminished. Our tubular management services deliver these advantages with offline facilities and cost-effective management of all tubular goods while upholding quality, safety and environmental standards.



This ComCAM onshore bucking system makes up 5 1/2-inch drillpipe in triple-joint stands, delivering a savings of nearly US\$1.5 million in a 10-well onshore project in Asia.



## Save time and money on-the-double

Ready-to-run double or triple stands of tubulars delivered to your rig can cut running times in half or better. Instead of shipping single joints to a location, we can supply pipe in doubles to run in the well. Wellsite locations equipped with horizontal offline operations can also make up and lay out doubles or triples, greatly increasing efficiency and run times around tubular operations.

## You'll make all the right connections

We believe in the significance of all connections—from the first to the last. Connection-integrity control begins during the OCTG planning and preparation stages. And connection integrity is further ensured using the industry's best bucking units and torque-monitoring technology. Our makeup capabilities reduce chances of failure and costly well repairs.

## Safer makeup operations, hands down

By significantly reducing pipe handling and preparation requirements at the wellsite, we can focus on ensuring tubular-preparation requirements are met in a controlled environment. Making up pipe onshore allows for safer handling of pipe joints, and additionally reduces the amount of rotary-table activity on the rig floor. Our hands-free makeup systems further reduce risk exposure.

## Drill more wells for your money

Weatherford's tubular management services help reduce overall well costs with single-source efficiency and delivery. And with our robust tubular running and rig-floor experience, we have a better understanding of your operational needs. We've been there. We can reduce environmental impact, avoid costly delays and optimize safety and economy around the rotary table.

**We help you focus on what you do best so you can drill more wells for your money.**



# Offline tubular technology with rotary table DNA

Weatherford's oilfield-bucking and TPC (torque process control) systems feature technology proven in the world's most demanding wellsite applications.

Our offline tubular makeup and breakout equipment incorporates leading-edge technology for quality-critical, rig-floor operations. Quality is every bit as critical in your off-site operations. And overall quality is reinforced with complete compatibility between off-site and on-site tubular running technology.

The industry's best bucking unit and connection-makeup technologies ensure connection integrity and compliance with connection makeup parameters for API and premium-thread tubing, casing, production riser and drillpipe in double or triple lengths. We can handle any type of pipe including makeup and breakout of chrome tubulars with nonmarking gripping.

## Reduce NPT with detailed pipe-connection data at your fingertips

The stand ID, a unique identifier assigned to the pipe in the TPC system, is barcoded directly on the pipe using a 2D data matrix. Even if half the barcode is removed from the pipe, it can still be scanned to access data. Critical information such as torque, length, drift and tally is readily accessible in the TPC system—whether the pipe is at the bucking facility, on the rig or downhole.

Pipe-connection data is recorded for the stands we make up offline and merged with data from connections we make up on the rig. As the casing strings are run, the TPC system automatically creates a seamless report of the entire operation. One source of connection data increases efficiencies and eliminates costly, time-intensive research among multiple sources.



**Oilfield bucking units: Safe, efficient, reliable**

**Off-site handling and bucking systems and torque/turn recording systems enable makeup and breakout of API and premium-thread tubing, casing and drillpipe in double or triple lengths.**

This technology assures compliance with connection makeup parameters for connection integrity. All of our expertise and advancements in vertical tubular makeup are reflected in our horizontal makeup systems. Quality is in our DNA.

**ComCAM rotational makeup/breakout units** feature instant reversal from makeup to breakout for greater speed.

The TPCPro advanced computer analysis monitors torque curves and provides automated control of power tightening to ensure makeup within 2% of the actual torque value.

Modular customizability and powerful accessories enable ComCAM systems to be configured for special purposes, including subassembly makeup of downhole equipment.

Unit	Size (in.)	Maximum Passing OD (in.)	Maximum Torque (ft-lbf, N·m)
ComCAM-15/160-H	15	15-1/8	160,000 <sup>a</sup> 216,931
ComCAM-20/160-H	20	21-1/2	160,000 <sup>a</sup> 216,931
ComCAM-26/200-H	30	30	200,000 271,164

<sup>a</sup>Optional 80,000 ft-lbf (108,464 N·m) fully rotating

# Add up all the advantages of tubular management services

## **Ready-to-run tubulars**

save valuable rig time and reduce drilling flat time with run times up to 100% faster

## **Taking makeup and breakout functions off-site**

lowers your risk exposure and overhead costs

## **High-integrity connections**

made in a controlled environment reduce connection rejection (and costs) at the rotary table and enhance production-string integrity for the field lifespan

## **Peace of mind**

knowing that your tubular management services are backed by the company running your pipe

## **Single-source services**

from the pipe yard to the rotary table increases efficiency and reduces the costs and headaches of managing multiple vendors, so you can focus your resources on what you do best

## **Comprehensive inventory storage**

and management and tubular planning services increase efficiency and relieve you of these time-intensive tasks

## **Reduce openhole time and costs**

associated with wellbore conditioning

## **Drill more wells for your money**

**These and many other advantages are yours with Weatherford's tubular management services. Put the industry's leading tubular running expertise and technology in your corner.**



# Industry-leading tubular running services built on quality and innovation

## Many industry firsts include:

- Fully integrated control systems with rig-drilling controls and zone-management systems to enhance safety and critical-path efficiency
- Modular rig mechanization systems adaptable to any environment—from land rigs to fifth-generation submersibles for deep water
- Universal remotely controlled system, making modular rig equipment more compatible
- Stabberless® system that eliminates one of the most dangerous jobs on the rig
- OverDrive™ casing-running and drilling system, providing top-drive makeup and drilling-with-casing (DwC™) performance

Our oilfield bucking units, JAMPro™ torque-monitoring system and other tubular handling breakthroughs all carry on our tradition of quality performance. It's in our DNA.

## Total capability from pipe yard to rotary table to TD

- Tubular management services
- Tubular running services
- Total Depth® services

We'll do whatever it takes to help you meet your AFE and well-integrity objectives.

Nobody else can deliver the tubular running expertise and technology that Weatherford offers.

We can streamline tubular selection and improve supply chain efficiency to reduce costs, accelerate production and mitigate risks.

Nobody else does so much to help you get your casing to TD safely and efficiently, all while optimizing well architecture. Our *Total Depth* services make it happen with multidisciplinary well-construction engineering expertise and advanced technologies.

# Tubular management services in action



Your off-site facility is supported by Weatherford's worldwide network and tubular management services, supplying everything from casing and pipe yard services, inventory management, pipe preparation and wellsite delivery.

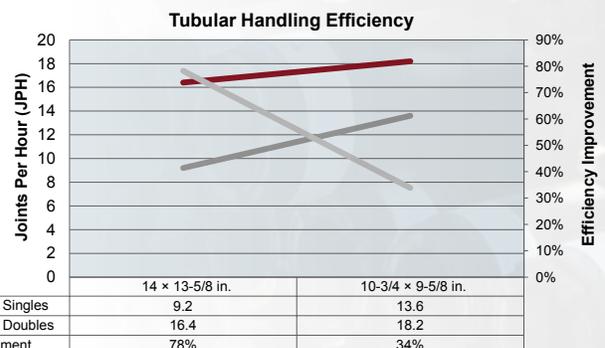
## REAL RESULTS

### Tubular Management Services Save Operator US\$5.8 Million Rig Time

On an extended deepwater exploratory program in the Gulf of Mexico, Weatherford tubular management services prepared casing strings and transported them to a dockside location where they were bucked into doubles.

The first string of casing shipped to the rig was 17,000 ft (5,182 m) of 14 by 13-5/8 in. The string was run in doubles in 26 hours. This compared to a previous well where a similar 14,000-ft (4,267-m) string run in singles took 41 hours. About 15 hours of semisubmersible rig time valued at US\$1 million per day was saved.

To date, nearly 30 strings have been run with similar efficiency to yield our client a savings of approximately US\$5.8 million.

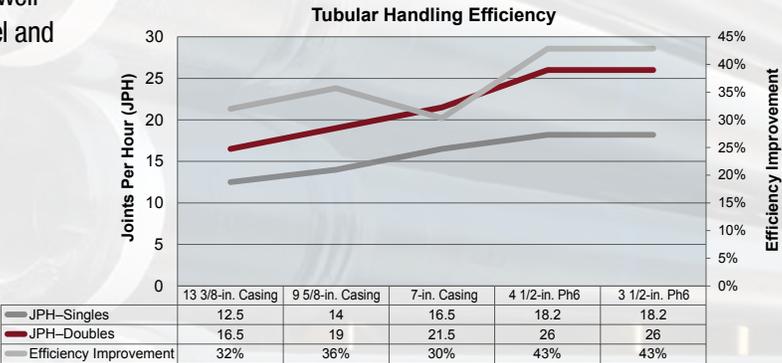




**Portable, Hands-Free Bucking System Saves Operator US\$1.6 Million**

In a 10-well onshore program in Asia, the operator shipped prepared single joints to the rig location for offline bucking. The portable Weatherford system made up doubles of 13 3/8- and 9 5/8-in. casing as well as 4 1/2- and 3 1/2-in. tubing in carbon steel and corrosion-resistant alloys. The system also handled breakout of drillpipe doubles and drilling tool assemblies.

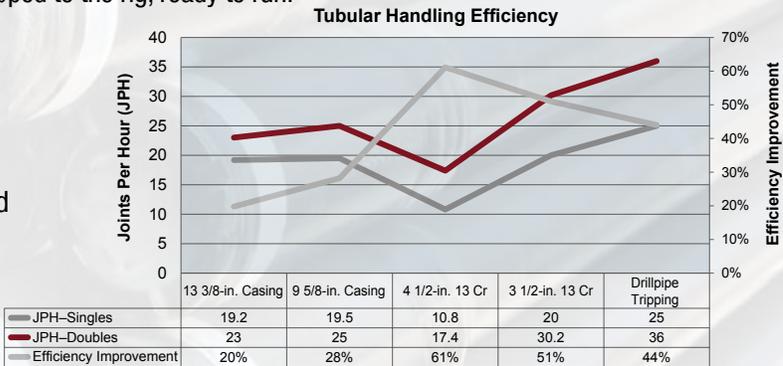
This saved an estimated 22.75 rig days valued at nearly US\$1.5 million.



**Bucking Down Under Saves Over US\$2 Million**

A bucking unit with torque/turn process control systems was sited at an operator's onshore support base to make doubles of three sizes of tubulars: 9-5/8 and 4-1/2 in. After preparation, the tubulars were shipped to the rig, ready to run.

Running doubles saved an average of 4 hours per tubular running operation, or a total of 32 hours, resulting in a savings of more than US\$1.6 million. And preparing the pipe off-site provided an additional savings estimated at US\$400,000.





Tubular Management Services

## Streamlined Tubular Programs

Weatherford's tubular management and offline services come from a world leader in tubular running products and services that enable safe and efficient running of tubulars, minimize wellsite risk and reduce nonproductive time. To learn more about our field-proven technology and services, contact an authorized Weatherford representative or visit [weatherford.com/TRS](http://weatherford.com/TRS).



**Weatherford**<sup>®</sup>

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