



Managing Costs with Enhanced Construction Workflows



Our customer, one of the largest private operators, is an independent oil and gas company with over 35 years of experience in energy resource operations and procurement.

Headquartered in Midland, TX, the operator, employs over 1,100 valued associates as one of the city's largest private employers. With over 35 years of experience in the Midland Basin it re-focused its development strategy in 2016 on a new horizontal drilling program. Relying on the strength and depth of its resources to execute a horizontal program the customer has reduced drill time, lowered LOE, and hit record production for the company.

Solutions

- ▶ Trimble Machine Control
- ▶ Trimble Business Center
- ▶ Trimble Stratus
- ▶ Trimble WorksManager
- ▶ Trimble WorksOS



Overview

When stepping into his leadership role, the new Construction Division Manager, James, had two main goals. His first goal was to reduce costs and his second was to reduce the time it took to construct a drilling pad.

BUSINESS CHALLENGE

Implement a solution that would allow visualization of the status of any project while gaining visibility into the actual progress and limit guesswork in real-time for the office management team.

- ▶ Managing remote work locations
- ▶ Maintaining a precise schedule to reduce machine costs
- ▶ Make constructing a drilling site faster and cheaper

Embracing a Technology-Led Process

Construction projects at the energy resource company are largely focused on building new drilling sites at various locations throughout the year. Due to the repetitive nature of these projects, the operations management team knew they could be executing new drilling sites more efficiently and profitably. Beyond that, they needed visibility into the actual progress across their projects down to the granular level of individual machine productivity. They needed a productivity solution.

However, this need was not realized until they implemented machine control into their operation and started seeing their machine data flow in. Trimble Machine Control provided accurate, workable data straight from the machines in the field to the office. With that visibility in place, James started to wonder how he could translate that data into timing and cost savings.



Proving Construction Technology

After discovering the power of machine control data across his operation, James knew in order to make a sweeping impact on the bottom line he would need to have more equipment installed with machine control but first needed a way to prove that this was a worthwhile investment.

With that, he decided to run a test. He worked with two teams, one he outfitted with machine control, takeoff, and productivity management software—a full operations management stack. The other team operated as normal with none of this technology in place. The result was staggering. The technology-equipped team saw a decrease in cost to construct the drilling pad and a 43% reduction in time to complete the project.

Benefits

- ▶ Real-time field-to-office site productivity data
- ▶ Improved cost management across projects
- ▶ Enables efficiency across the organization
- ▶ Enhanced visibility of jobsite status for site supervisors
- ▶ Competition created between different crews
- ▶ Delivered the projects on time, reduced budget and avoided costly delays



Real-time Jobsite Data

A common challenge among site supervisors is the lack of visibility that is readily available across typically disconnected systems. Our customer was navigating this challenge and finding that it needed more transparency across its machine control data through to its daily project status and back to vetting that against its takeoff data.

The Midland Basin operator joined a select group of customers in the Trimble WorksOS software introduction program. Once onboard with WorksOS, it saw immediate improvements in visibility.

Empowered Decision-Making

With transparent data flowing across his organization, the team of operators and site supervisors could feel empowered to make smarter on-site decisions and understand the current progress of the project in real-time.

Trimble WorksOS allows our group to access machine control data across our fleet of assets to accurately predict how project changes impact completion schedules. We have used WorksOS to accurately calculate the productivity of each asset and associate that to direct project costs. The ability to integrate this data directly with Trimble Business Center has been key to enhancing our workflow and managing costs across all of our projects.

All of this is done without having to send people to the field to upload files and designs with remote field connections. We could do this because we could monitor the machines real time, next day or at any point in the project. This gave us the confidence to remotely execute the jobs and further limit management job site visits. It also enforced the ability for site supervisors to confidently assess where projects were in real time as well.



Improved Visibility

Above all, the office management team wanted to improve visibility across their projects. Greater visibility meant better data that could be easily communicated across the team to keep projects on time and on budget.

Onboarding With Trimble WorksOS

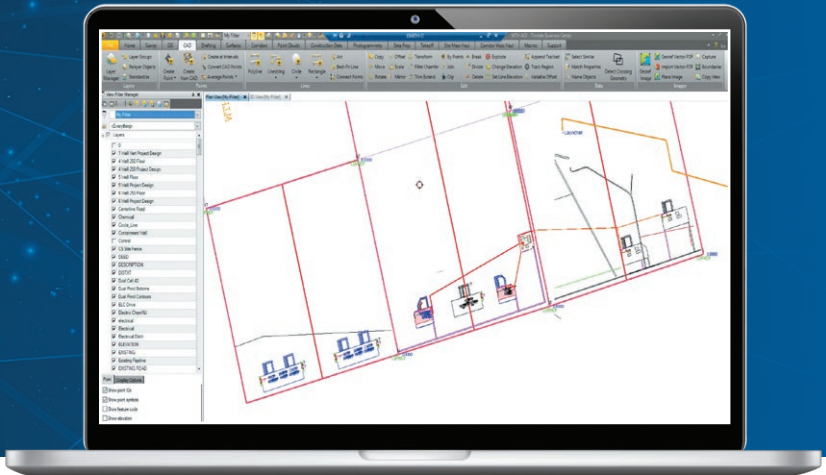
The team had been using a suite of Trimble construction management tools before implementing Trimble WorksOS. With Trimble Business Center housing their takeoff data and Trimble WorksManager communicating that and its Trimble Machine Control data through the cloud to the machines in the field, WorksOS was the natural next-step to understanding productivity data on the jobsite and analyzing progress-to-plan back in the office.



Visualizing where we are within any project was the ultimate goal for our office management team to be able to see actual progress and limit estimations. The live cut/fill map and measured volume movement changed the way that our project and office management tracked budgets and progress.

Without Trimble WorksOS, Trimble WorksManager, Trimble Machine Control and Trimble Business Center, we would not have been able to see exactly what each machine and each project produces on a daily basis. Our operators and site foreman have direct access to this information which creates a competitive environment based on real project progress.

James S. | **Construction Division Manager**



Next-level Project Planning and Preconstruction Design

With Trimble's civil construction software our customer was able to change its planning and preconstruction processes. After proving the power of construction software technology, James turned to its planning and execution divisions to bring their work together using Trimble solutions.

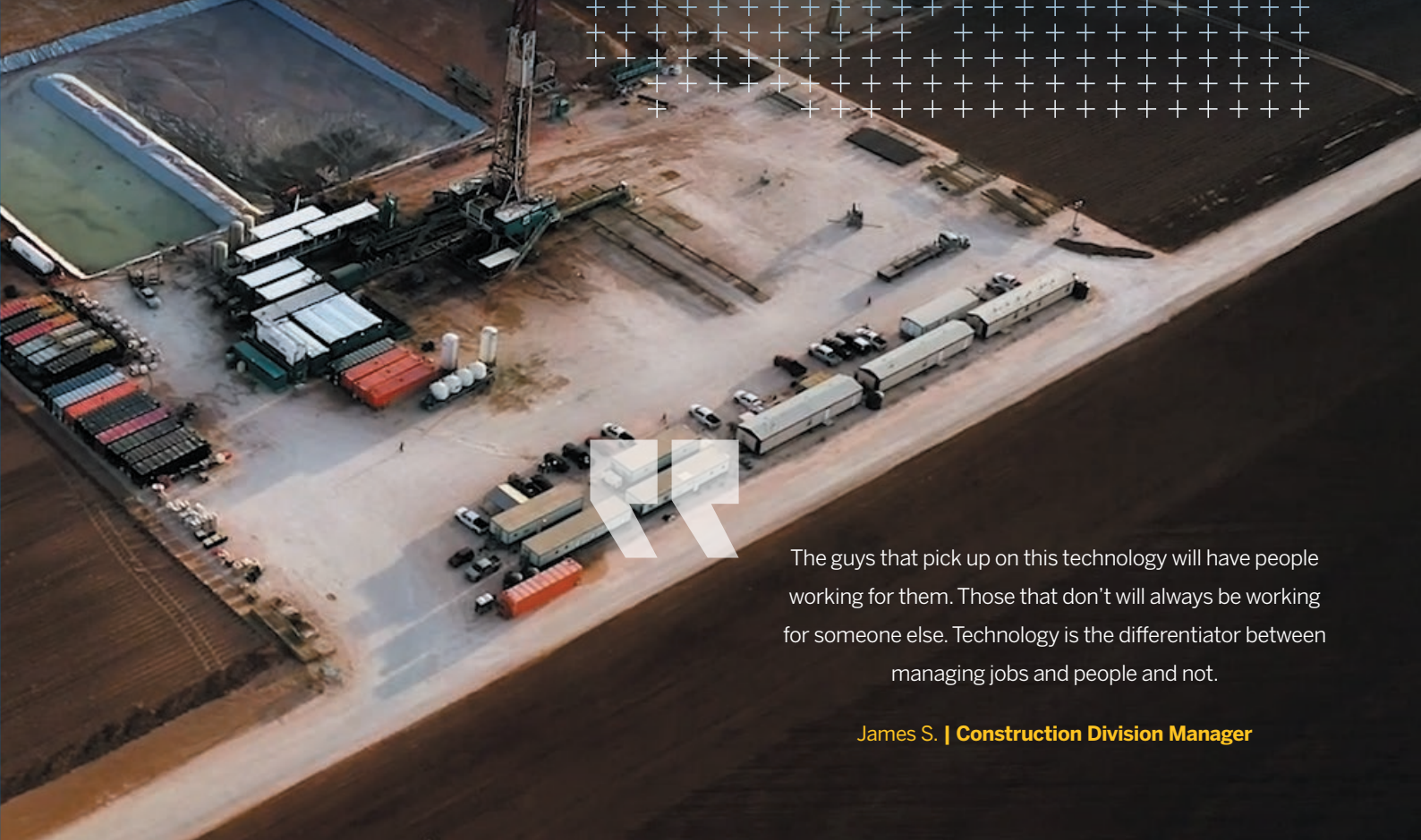
Leveraging Trimble Stratus to capture drone imagery, Trimble Business Center and Google Earth, each unit is planned out and brought together for sharing and visualization across the entire field. This type of visibility and planning, which was accomplished through the work of two engineers, allows the operator to project out 90 years worth of work which is estimated to be around 10,000 wells in the Midland Basin alone. This critical pre-construction design data has been leveraged to save time on pad construction work by optimizing locations within lease areas.

Success with a Connected Construction Workflow

The company's productivity improvement can certainly be attributed to the machine control and software that was implemented, but greater than that was James' commitment to a new process that centers around collecting, translating and actioning data across a construction operation. From day-to-day operations to long-term planning and budget allocation, he committed to a new way of managing his operation and that commitment led to huge cost and time savings for his organization.

Return on Investment

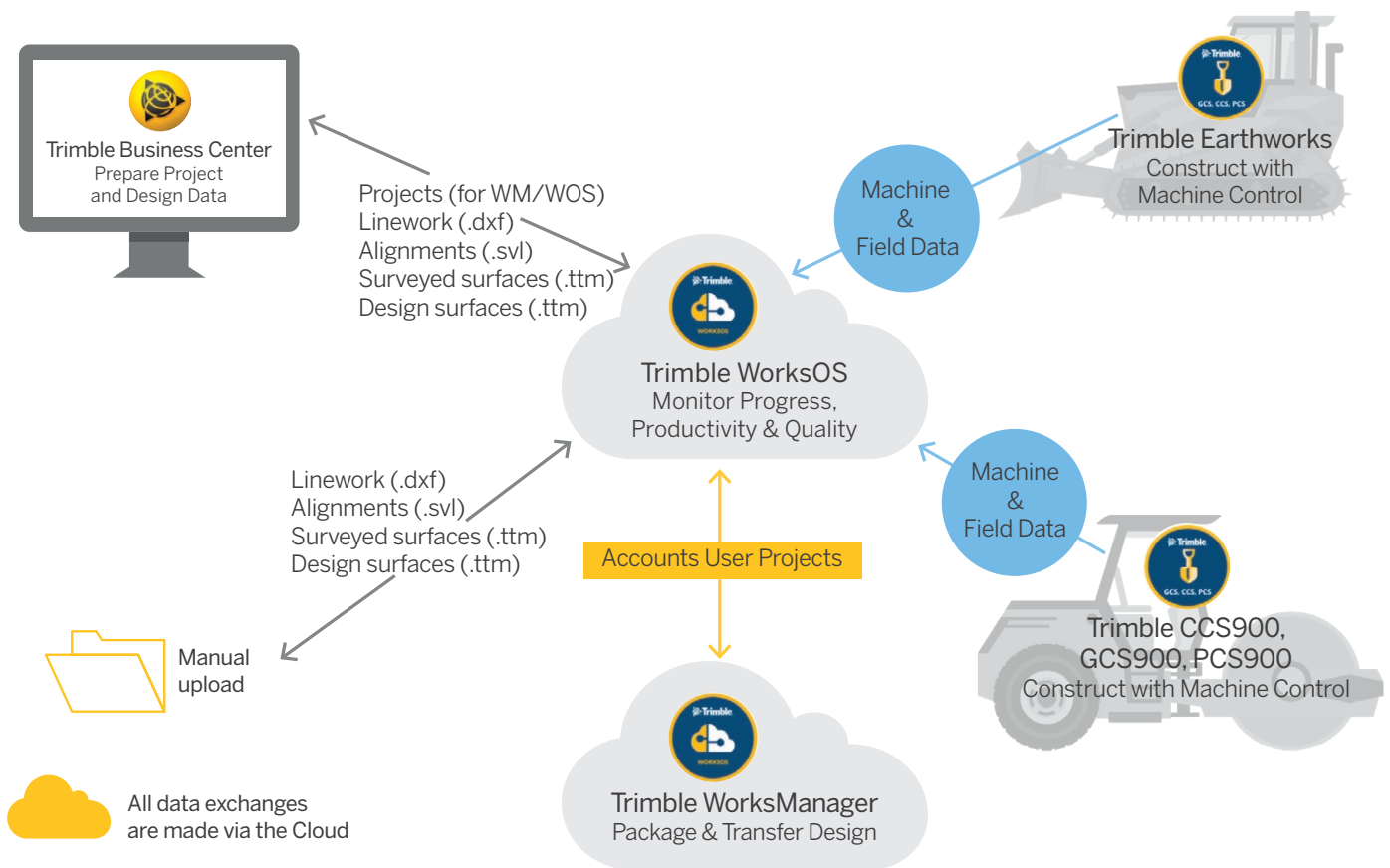
With better planning comes better, smarter construction and the operator has seen that realized in a reduction in total impact of the surface required for drilling. As well as improved efficiencies between pad in the field and reductions in material costs. This translates to a 6x savings in construction costs, totaling billions of dollars saved over the span of 90 years, and millions of dollars saved each year.



The guys that pick up on this technology will have people working for them. Those that don't will always be working for someone else. Technology is the differentiator between managing jobs and people and not.

James S. | Construction Division Manager

CONNECTED CONSTRUCTION WORKFLOW





Trimble: Transforming the Way the World Works

Trimble provides the tools and support to let you integrate planning, design, site positioning, machine control and asset management information throughout the construction life cycle for more efficient operations and higher profits. Contact Trimble or your local dealer today to learn how easy it is to utilize technology that makes significant improvements in project workflow, dramatically increases your production, improves your accuracy and lowers your operating costs.

CIVIL CONSTRUCTION SOFTWARE

10368 Westmoor Drive
Westminster, Colorado 80021 USA
800-361-1249 (Toll Free)
+1-937-245-5154 Phone
constructionsoftware.trimble.com

© 2021, Trimble Inc. All rights reserved. Trimble, the Globe & Triangle logo, are trademarks of Trimble Inc., registered in the United States and in other countries. All other trademarks are the property of their respective owners. PNO22580-1002 (02/21)