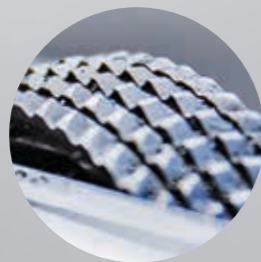


CONVEYANCE SOLUTIONS

Welltec



LOWER COST
REDUCED CAPEX,
HIGHER PRODUCTION –
ABSOLUTELY.



welltec®

SERVICE OFFERINGS BEST IN CLASS

CONVEYANCE SOLUTIONS

Higher recovery comes from better ideas and better control of assets. Steady cash flow requires steady production. Yet in the face of a naturally occurring decline curve, most operators still wait until a well is shut-in before investing in an intervention. Regularly scheduled maintenance with lightweight, reliable services will result in higher recovery over the life of the well and promote a more stable cash flow.

The Well Tractor® provides the intervention platform from which to accomplish the necessary work to keep a well's production optimized. It overcomes the challenges inherently found when working in highly deviated and horizontal wellbores; quickly conveying the required tools and equipment into the deepest parts of the well.

Currently Welltec® provides conveyance solutions on e-line and coiled tubing in all types of wells and environments including open hole and high temperature.

EXPLORE YOUR OPTIONS!



TOOLS FOR CONVEYANCE SOLUTIONS



WELL TRACTOR®

THE WELL TRACTOR®

The **Well Tractor®** was regarded as a revolution in the industry when it was introduced to the market in the 1990s. This is because it enables operators to extend the reach of traditional e-line, which is considered one of the most cost-effective and successful applications in the field of well interventions.

The standard tool is an e-line deployed, self-propelled, robotic device that overcomes the limitations of traditional e-line operations because it can reach the toe of a deviated or horizontal well. In fact, the Well Tractor® can carry out

operations throughout the entire length of the wellbore, regardless of the deviation and extension of the well.

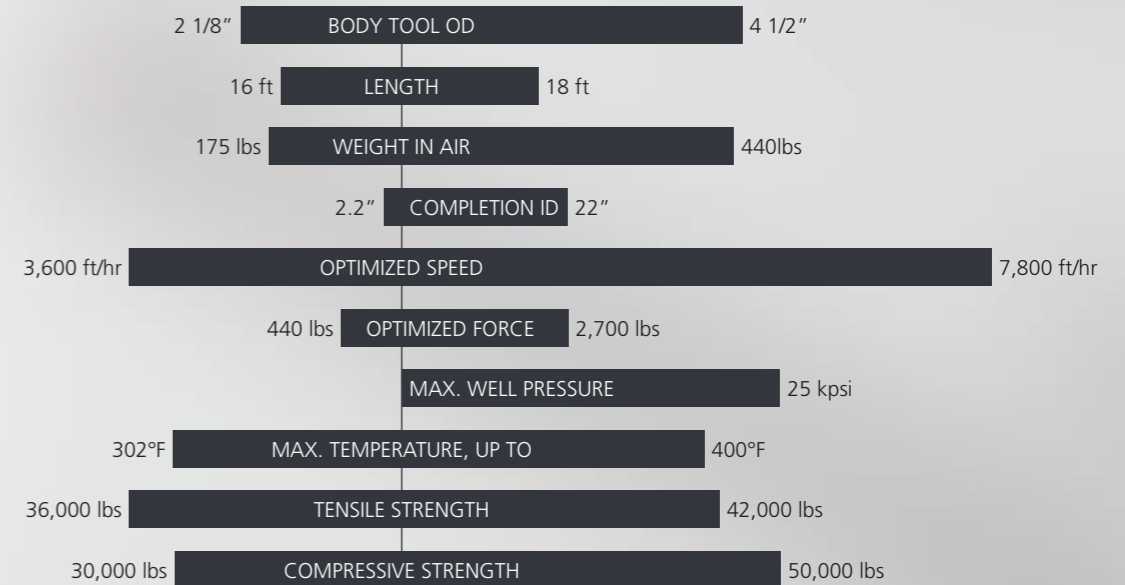
In open hole (OH) wells the Well Tractor® can apply the force required to push large toolstrings as well as navigate past washouts.

The Well Tractor® is fully combinable with all of Welltec's other service offerings, as well as with the majority of other e-line tools in the market. It is currently available in 2 1/8", 2 1/2", 3 1/8" and 4 1/2" diameters.

Types of jobs

- OH and CH logging
- Clean-out solutions
- Perforating
- Milling solutions
- Fluid sampling
- Mechanical solutions
- Pipe recovery
- Fishing
- SAGD ranging
- Depth determination
- Seismic measuring

SPECIFICATIONS FOR THE WELL TRACTOR®



TOOLS FOR CONVEYANCE SOLUTIONS



WELL TRACTOR® NG

THE WELL TRACTOR® NG

The latest development of conveyance tools from Welltec®. Building on nearly 20 years of tractor experience, Welltec® has incorporated that knowledge into improving the performance of our standard size offerings. This lets us offer faster, stronger and more reliable products that truly make an impact.

This next generation platform incorporates an all new electronic/hydraulic design, which provides increased reliability. Simultaneously, the use of new materials has improved specifications

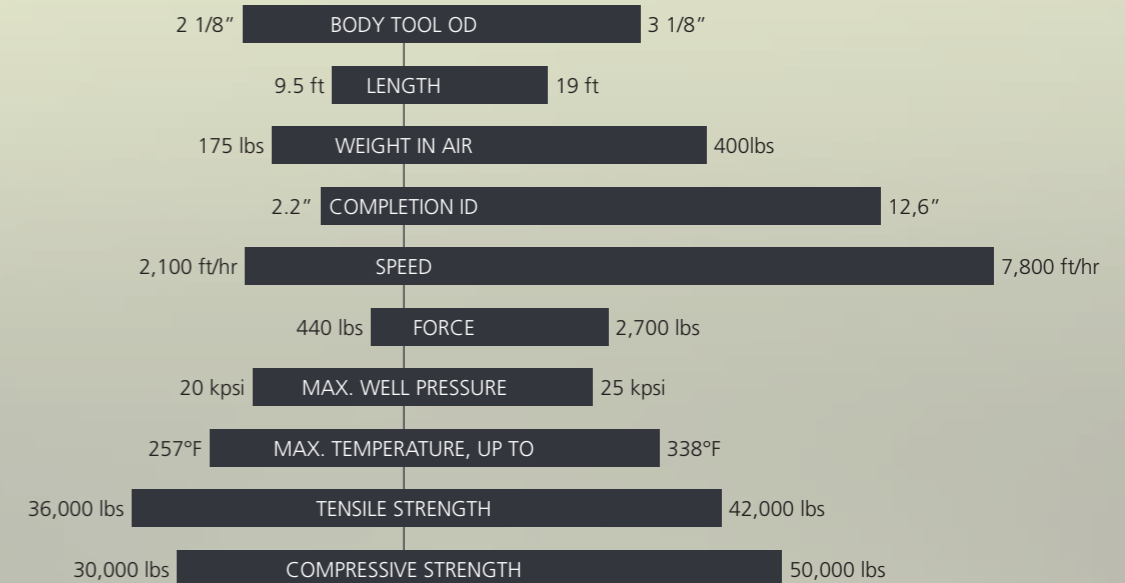
and delivers increased speed and force. So while it may look the same on the outside, its total performance demonstrates that it is all new on the inside.

The **Well Tractor® NG™** is fully combinable with all of Welltec's other service offerings, as well as with the majority of other e-line tools on the market. It is currently available in 2 1/8" and 3 1/8" diameters.

Types of jobs

- Clean-out solutions
- Perforating
- Milling solutions
- Fluid sampling
- Mechanical solutions
- Pipe recovery
- Fishing
- SAGD ranging
- Depth determination
- Seismic measuring

SPECIFICATIONS FOR THE WELL TRACTOR® NG



CAPITALIZING ON TWO DECADES
OF E-LINE CONVEYANCE SOLUTIONS,
WELLTEC® HAS DEVELOPED AND RUN
THE FIRST 2 1/2" OD WELL TRACTOR®



TOOLS FOR CONVEYANCE SOLUTIONS



CT WELL TRACTOR®

COILED TUBING WELL TRACTOR®

The **Coiled Tubing (CT) Well Tractor®** is Welltec's fluid-driven conveyance solution designed to extend the lateral reach of coiled tubing in horizontal, deviated and extended wells. It overcomes well-known CT issues such as excessive friction, limited reach and buckling which can prevent forward progress in the wellbore.

Applying the CT Well Tractor® in tandem configurations can double the downhole power applied. This enables access to extreme, extended reach

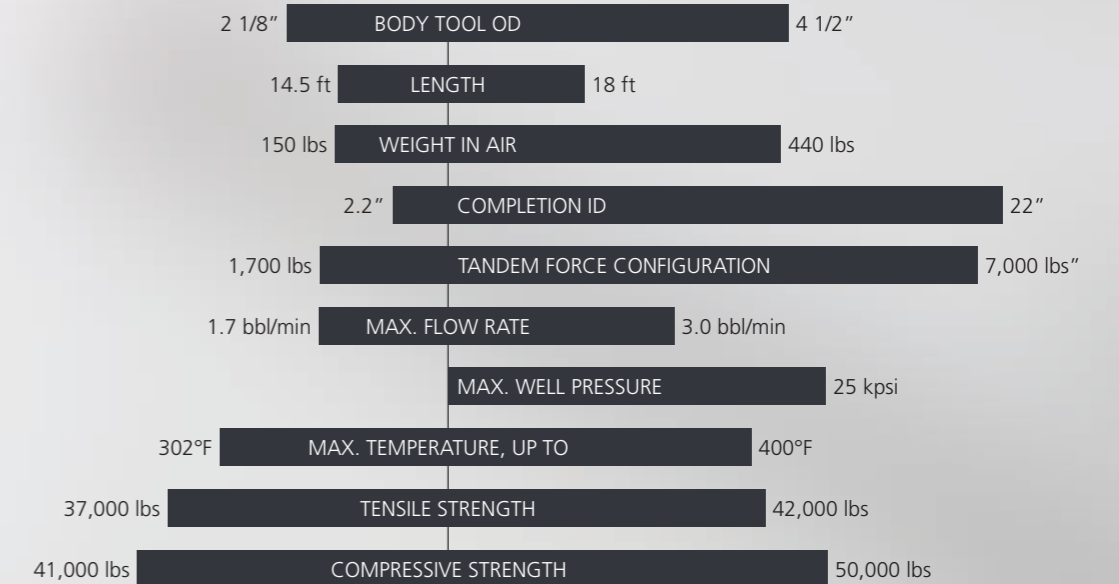
wellbores as well as past wash-outs in open hole sections of the wellbore. Using the CT Well Tractor® can extend the reach of CT and subsequently the depth at which operations, including primary stimulations, can be accomplished.

The CT Well Tractor® is currently available in 2 1/2", 2 1/8", 3 1/8" and 4 1/2" with the option of either through flow (TF) or top vented (TV) based on the application.

Types of jobs

- Milling solutions
- Fracturing
- Clean-out solutions
- Stimulations
- Mechanical solutions
- OH & CH logging
- Perforating
- Displacing mud
- Washing
- Spotting pills

SPECIFICATIONS FOR COILED TUBING WELL TRACTOR®



ADVANTAGES IN ALL TYPES OF WELLS

GOING THE DISTANCE

Welltec's robotic conveyance solutions facilitate a step change in the technique of deploying logging tools into horizontal and highly deviated wells without the use of drill pipe or coiled tubing.

This cutting edge technology has established Welltec® as a world leader in the development of cost-effective and value creating conveyance solutions.

HSE BENEFITS

By their very nature, Well Tractors mitigate risks associated with environmental impacts. They have proven to be a key change agent in the quest towards zero emissions and discharges due to their light weight.

Using Well Tractors comes with the added bonus of reduced operational hazards and risks. Operations require fewer people and a lower number of lifts. In some cases, the need for explosives can even be eliminated. On locations with limited space, such as small off-shore platforms, between deck work, and Light Intervention Vessels, Welltec's short and lightweight conveyance solutions offer improved logistics and reduced safety risks.

The rapid uptake by the industry of this conveyance method clearly demonstrates operators' recognition of the benefits that come from using Welltec's conveyance solutions.

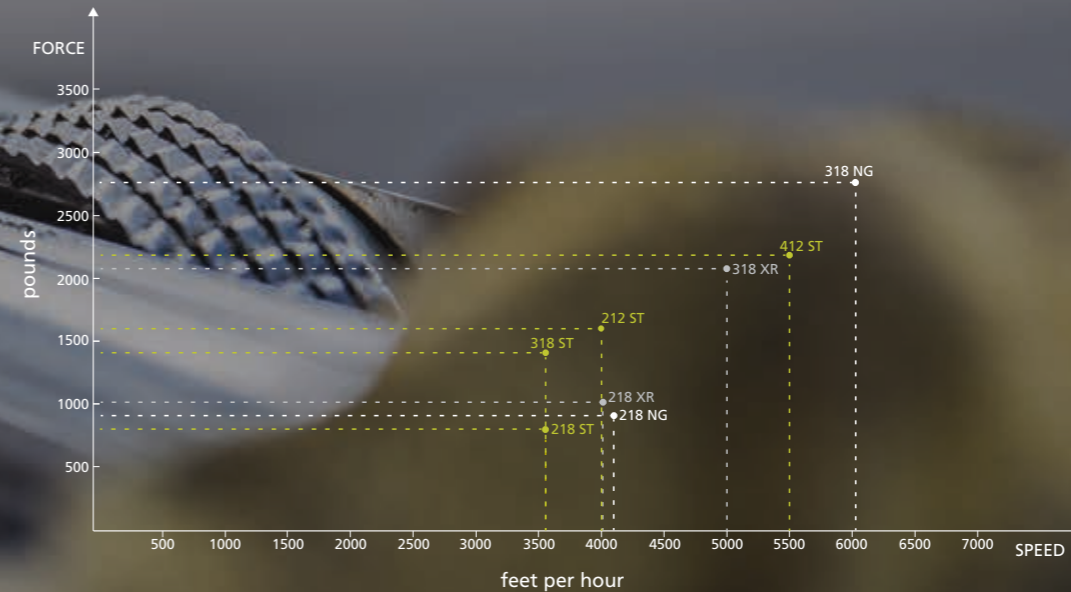
FEATURES

- Passive fail-safe system
- Modular
- Surface read-out
- Logging while tractoring
- Wide range of sizes

BENEFITS

- Prevents stuck tools
- High speed vs. high force
- Configurable
- Maximum efficiency
- Optimal data acquisition
- OH or CH applications
- Large range of IDs

PERFORMANCE ENVELOPE.
STANDARD VS WELL TRACTOR® NG



_THE LARGEST
PORTFOLIO OF TOOLS
_THE MOST RELIABLE
PERFORMANCE
_**20** YEARS OF
INNOVATION.

TOOLS FOR CONVEYANCE SOLUTIONS



WellLIT™

WellLIT™

The **Welltec® Lateral Intervention Tool (WellLIT™)** is the industry's first e-line tool that provides reliable, efficient, rigless access into laterals from the main wellbore. Developed in conjunction with Saudi Aramco, the tool can detect the sidetrack window, direct the toolstring into the lateral and provide real-time, diagnostic feedback that the lateral has been entered successfully. Now you can gain insight into the performance of the discrete laterals, increasing your knowledge for better well and reservoir management. Imagine what you'll discover!

Benefits

- Re-enter sidetracks consistently and efficiently without a rig on e-line or e-coil
- Enhance production from laterals and subsequently the entire well
- Build a better reservoir model with complete information
- Reduce the time and cost of lateral interventions
- Mobilize quickly with smaller sets of equipment and fewer personnel

Applications

- Detect and access laterals in deviated or horizontal wells
- Use any 3rd party toolstring to diagnose reservoir sections which were previously inaccessible
- Convey on e-coil to enable clean-out or stimulation of laterals

SPECIFICATIONS FOR WellLIT™

BODY TOOL OD	2 1/8"
LENGTH	32 ft
WEIGHT IN AIR	220 lbs
COMPLETION ID	2.2" - 8.5"
MIN DEVIATION REQUIRED	30 Degrees
MAX. WELL PRESSURE	20 kpsi
MAX. TEMP. UP TO	257°F
TENSILE STRENGTH	36,000 lbs
COMPRESSIVE STRENGTH	30,000 lbs

TOOLS FOR CONVEYANCE SOLUTIONS



WELL TRACTOR® SLICKLINE POWERED ON BATTERY

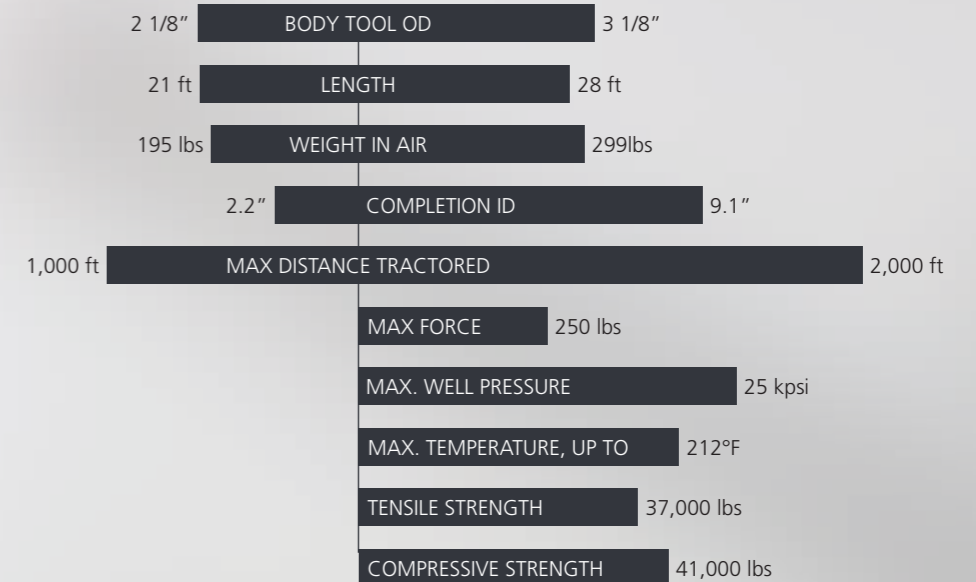
The **Well Tractor® Slickline** is the natural evolution of 20 years of development. Based upon the successful, existing Well Tractor®, it operates on battery power versus power supplied via conventional electric line. This self-propelled, robotic tool is designed to extend the reach available on slickline alone. It is currently available in 2 1/8", but can also incorporate a larger, 3 1/8" OD battery to increase the operational distance. The Well Tractor® SL provides a rugged and reliable conveyance solution for slickline applications. It is programmed at surface and can deliver a single or multiple passes in the well during operation. This

makes it possible to take advantage of the small footprint and cost effectiveness of a slickline spread while extending its reach in the well. The Well Tractor® SL is made of NACE compliant materials, allowing it to be deployed in harsh environments. Operationally, the Well Tractor® SL can deliver conveyance in wells with inner diameters from 2.2" to 9.1", making it a versatile solution for most deviated and horizontal sections. Hence it is ideal for increasing the effectiveness of running memory logging tools or other slickline services which benefit from conveyance beyond what gravity can deliver. Longer distances means more data and more value from the operation.

Types of jobs

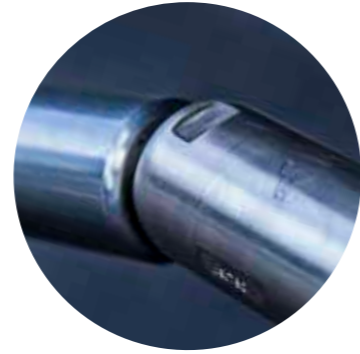
- Memory tool deployment
- Gauge runs
- Depth determination
- Bailing
- Impression blocks
- Non explosive mechanical services
- Any slickline service

SPECIFICATIONS WELL TRACTOR® SLICKLINE POWERED ON BATTERY



CASE STORIES

FOR CONVEYANCE SOLUTIONS



WITH PROVEN RESULTS IN A WIDE VARIETY OF ENVIRONMENTS AND THE ABILITY TO TAILOR SOLUTIONS TO YOUR NEEDS, WELLTEC® OFFERS A FAST, EFFICIENT OPTION FOR ENABLING INITIAL PRODUCTION OR RETURNING WELLS TO FULL POTENTIAL AS ILLUSTRATED BY THE FOLLOWING CASE STORIES.

ENABLING ACCESS FOR INCREASED RECOVERY

Saudi Aramco, a partner in the development of the WellLIT, required a solution that would allow them to repeatedly access slim hole multilaterals in order to improve production logging. Previously only the motherbore could be logged, yielding somewhat imprecise information about the wellbore and reservoir. With the development of the Welltec® Lateral Intervention Tool (WellLIT™) it became possible to deploy toolstrings into multi-laterals, reliably and efficiently. During a series of operations on multiple wells, the WellLIT™ delivered just what it was designed to do. It provided Saudi Aramco an opportunity to evaluate each lateral, gaining more insight and information about the reservoir and lateral sections.

CON.ON.SA.15.01.V1

REDUCED RIG-UP HEIGHT REQUIRES WELL TRACTOR® CR

Safety was paramount for an operator offshore Norway who needed to pull a deep-set plug in a well with > 90 degree deviation. The available rig-up height was only 52 ft, requiring a very short toolstring in order to avoid having to leave the swab valve open during the operation. The Well Tractor® CR, compact rig-up, measures only 11 ft short in the required configuration for this job. Combining high speeds with the force required to deploy the toolstring to TD, the job was quickly accomplished. Welltec's ability to deliver this new, shorter conveyance technology enabled the operator to accomplish his objectives while simultaneously adhering to the highest safety standards.

MEC.WS.OFF.NO.14.07.V1



HIGH TEMPERATURE PERFORATING IN EAST TEXAS

Located in the Haynesville Shale on the border of Texas and Louisiana, an operator was preparing the toe stage of an extended lateral, cased hole, high temperature well for fracture stimulation. The Well Tractor® was used to convey the perforating gun through several restrictions in the 7,300 ft lateral section to a total depth of 22,082 feet. Once correlated on depth it was successfully detonated and the toolstring pulled out of the hole. A max recording temperature strip recorded ~ 385 degree F during this run. As soon as the tools and crew were free they were dispatched across the border to Louisiana for the same operator where they efficiently completed another successful operation.

CON.ON.US.13.06.V1

CONVEYING OPEN HOLE SAMPLING TOOLSTRING

Offshore Angola, it was very critical for the operator to obtain accurate pressure measurements and fluid samples from a particular formation just below the 9 5/8" casing shoe. Deviation at this depth in this exploration well was ~ 90 degrees. The operator chose the 412 Well Tractor to convey this heavy, e-line, open hole sampling toolstring to the correct depth. "Welltec's Well Tractor® and the sampling tool have been combined for the first time for us to achieve open hole samples in a very challenging well trajectory (300 m horizontal in cased hole) allowing to save circa 2 days of rig time by deploying tractor to convey the toolstring instead of the TLC method." – Well Operations Team Leader

CON.ON.AF.14.02.V1



WELL TRACTOR® SETS NEW WORLD RECORDS FOR HORIZONTAL LOGGING

A customer in the Middle East needed to acquire production logs from horizontal wells in a reservoir with extreme lateral lengths, many of more than 20,000 ft. In late 2016, Welltec® and channel e-line partner were given the opportunity to acquire flowing production log (PLT) data over lateral length of ~ 19,500 ft in well with TD of ~ 27,500 ft. With the well on production of ~ 4,500 bbl/day, the Well Tractor® successfully conveyed the 136 ft toolstring to TD while acquiring PLT data in real time on the down pass as well as up pass. With this operation Welltec® made the longest single pass overall distance tracted with 22,951 ft (6,996 m) and longest single pass distance of 19,500 ft (5,943 m) tracted in a horizontal section.

JUAE16923

NEW WORLD RECORD 46,801 FT TRACTORED IN ONE RUN IN OPEN HOLE

When an operator in Yemen needed to perform a logging operation in an open hole well with an inclination of 81.54° they called on Welltec® for a reliable solution that would enable them to reach target depth. This particular well has 3,087 ft (941 m) of challenging horizontal open hole to log. As Coiled Tubing (CT) was not available in Yemen, and Slickline was not suitable for this operation, the Well Tractor® 218 was selected for the job in a tandem configuration for open hole PLT logging. The toolstring was tracted 46,801 ft (14,265.3 m) before concluding the operation. In addition, it was the first e-line, tractor-based open hole logging in Yemen and customer's first horizontal PLT in the basement reservoir.

CON.ON.AF.13.05.V1

MORE CASE STORIES CAN BE FOUND AT
WWW.WELLTEC.COM/CONVEYANCE_SOLUTIONS



11 STAGE THROUGH PATCH TRACTORING WITH ZERO NPT

After successfully conveying calipers and logging tools in the Eagle Ford Shale, Welltec's tractors were requested to remain on standby on location in case they would be needed again. That turned out to be a good plan. The operator experienced some off depth perforations and had to set a patch in the horizontal section to isolate them. However, while attempting the subsequent, lower stage perforation the operator was not able to pump the plug and guns through the patch, which had an ID of 3.6". With the frac crew on location, time was a costly factor to consider when planning how to finish the remaining 11 stages. After CT had drilled out the prematurely set plug, Welltec's e-line tractors were put to use as the efficient, expedient solution.

CON.ON.US.14.03.V1

INCREASED EFFICIENCY IN EXTREME WELL ENVIRONMENT

In this well, Saudi Aramco needed to test the casing integrity and perform a perforation. Because of the environment, 310°F (154°C), 91° horizontal well, standard wireline conveyance was not an option. Since the well was designed as a multi-stage frac project, pump down logging wasn't feasible and coiled tubing (CT) was deemed to be too time consuming. A Well Tractor® would, however, overcome all these challenges while also offering accurate depth control, improved log quality and lower costs. Because of the recent advances in DC electronics the Well Tractor® proved able to execute the job under the extreme well conditions. The Well Tractor® worked flawlessly despite the high temperatures, high well deviation and a 18,725 ft extended reach section.

CON.ON.SA.15.01.V1

SPE PAPERS ON CONVEYANCE SOLUTIONS

SPE – 173645 Combined Distributed Temp and Acoustic Sensing with Production Logging for Improved Horizontal Well Evaluations by Brian Schwanitz, Daniel Gomez, Welltec; Kevin Banks, SPE; Bryan Hemard, SPE; Inversion; Wade Wilson, SPE, Eagle Reservoir. Presented at the SPE/ICoTA Coiled Tubing & Well Intervention Conference & Exhibition held in The Woodlands, Texas, USA, 2015.

SPE – 177388 Hostile Environment Electric Line Well Interventions Optimize Operations in Kazakhstan by Mike Etuhoko, SPE, KPO; Massimo Viti, KPO; Sergey Zmeyevskiy, KPO; Arman Izbassov, KPO; Yerdos Bersugurov, KPO; Peter Hutson, KPO; Muratbek Aibazarov, KPO & Dave Clayton, SPE, Welltec®. Presented at SPE Annual Caspian Technical Conference & Exhibition held in Baku, Azerbaijan, 2015.

SPE – 175260 Successful Utilization of E-line Tractor in Horizontal, High Pressure and High Temperature Gas Wells by Muhammad Hamad Al-Buali and Abdullah Abdulmohsin Al-Mulhim, Saudi Aramco; Neeraj Sethi, Halliburton; Hani Hatem Sagr, Welltec; and Jose Solano, Halliburton. Presented at Kuwait Oil & Gas show and conference held in Mishref, Kuwait, 2015

SPE – 168242 Using E-line Conveyance in Multi-Stage Fracturing to Optimize Efficiency: A Case from Bakken ND by Rex Mann, Victor Schiavi, Rick Bukowski, SPE, Welltec. Presented at the SPE/ICoTA Coiled Tubing & Well Intervention Conference & Exhibition held in The Woodlands, Texas, USA, 2014.

SPE – 168243 Electric Line Tractor-Based Conveyance in High Temperature Wells: A Collection of Local Case Stories by Matt Peoples, Tim Hammill, Olivier Alferez and Gary Murrill, Welltec®. This paper was presented at the SPE/ICoTA Coiled Tubing & Well Intervention Conference & Exhibition held in The Woodlands, Texas, USA, 2014.

IPTC – 17386 World's First Tandem 2.125-inch Coiled Tubing Tractor for ESP Open Hole Completions by James Arukhe, Laurie Duthie, Saleh Al-Ghamdi, and Hamad Almarri, Saudi Aramco Brian Sidle and Hader Al-Khamees, Welltec®. Presented at the International Petroleum Technology Conference held in Doha, Qatar, 2014.

SPE – 169506 Optimizing Efficiency in Horizontal, Multi-Stage Fracturing Operations Through Eline Conveyance – Case Study from the Bakken by Rex Mann and Rick Bukowski, SPE, Welltec®. Presented at the SPE Western North American and Rocky Mountain Joint Regional Meeting held in Denver, Colorado, USA, 2014.

SPWLA – 1640 Open Hole, High Angle Tractor Conveyance: A Collection Of Case Stories by Brian Schwanitz & Sameera Al-Shabibi, Welltec®. Ahmed Saber Abdel Aziz (ADCO) Presented at the SPWLA 55th Annual Logging Symposium held in Abu Dhabi, United Arab Emirates, 2014.

AND THIS IS JUST THE BEGINNING...
AS WE CONTINUE TO TRANSFORM THE INDUSTRY, SO THAT IT BECOMES
SAFER AND MORE SUSTAINABLE, WHILE PROVIDING HIGHER RECOVERY

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