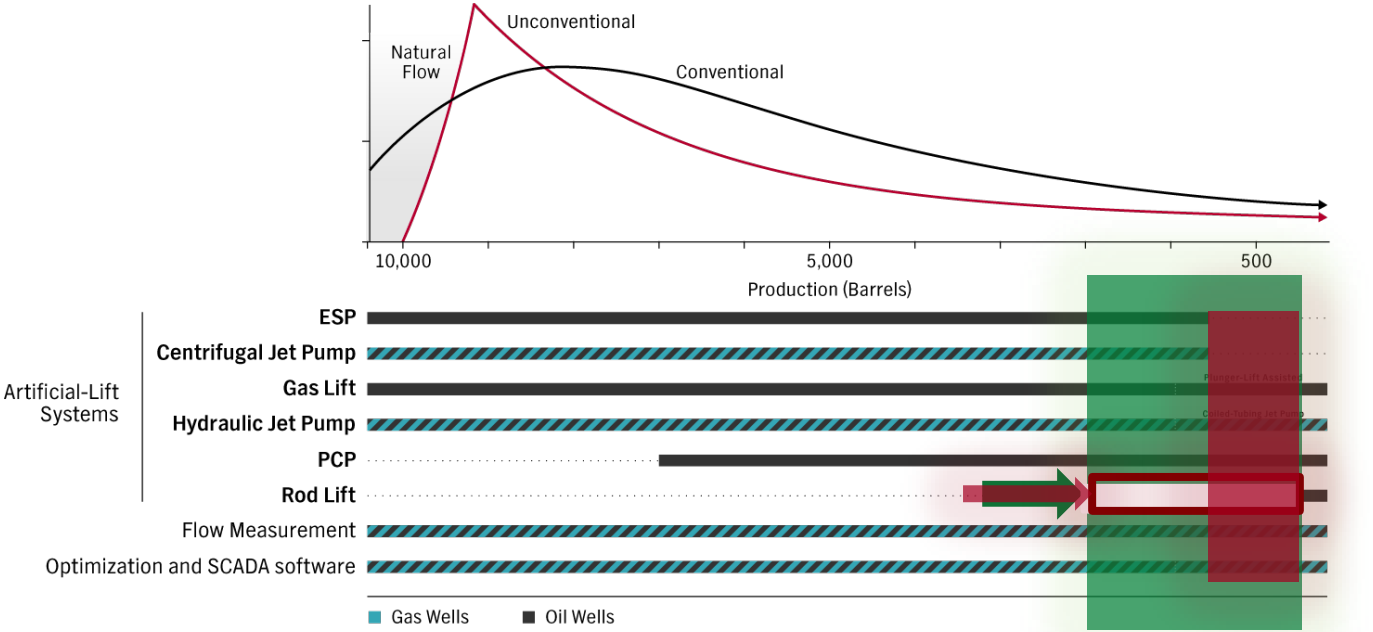
ROTAFLEX®

Long-Stroke Pumping Units

ROD LIFT IS A KEY PART OF OUR HIGH-FLOW SOLUTIONS



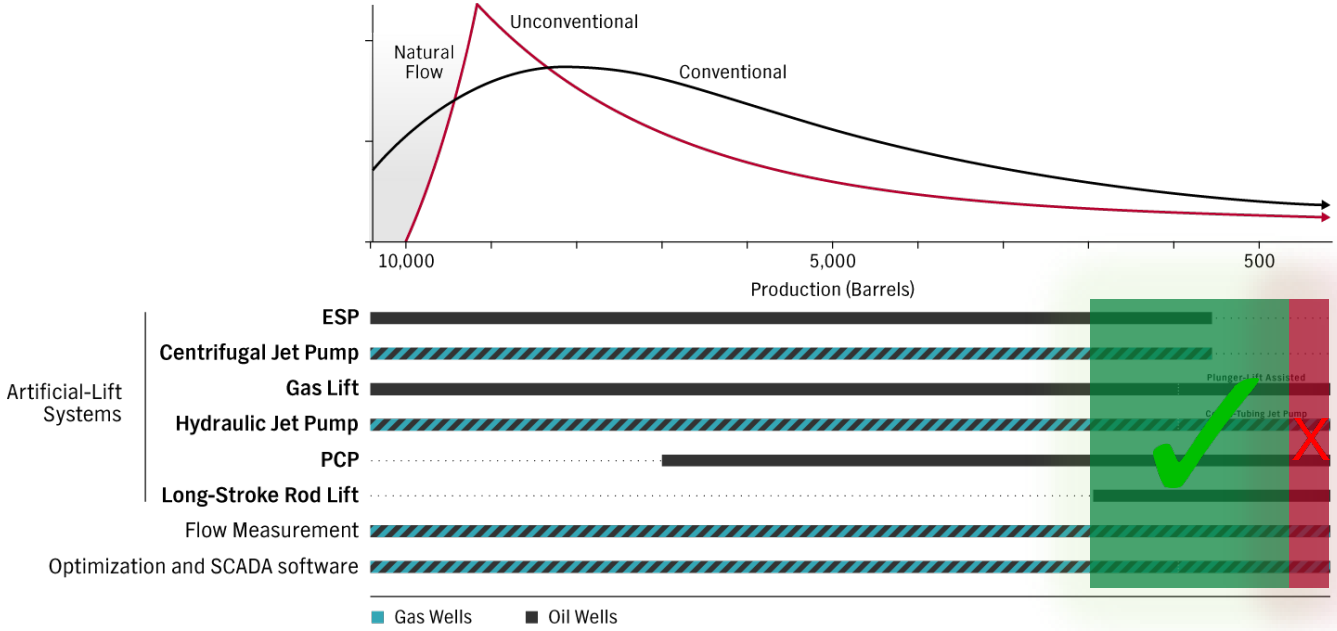
MISCONCEPTION
Rod lift is for end-of-life production

REALITY
Our Rod-lift solutions match the productivity of a small ESP

- Customers can now switch to rod lift now sooner than ever WITHOUT compromising production.

2019

New Opportunity Identified…



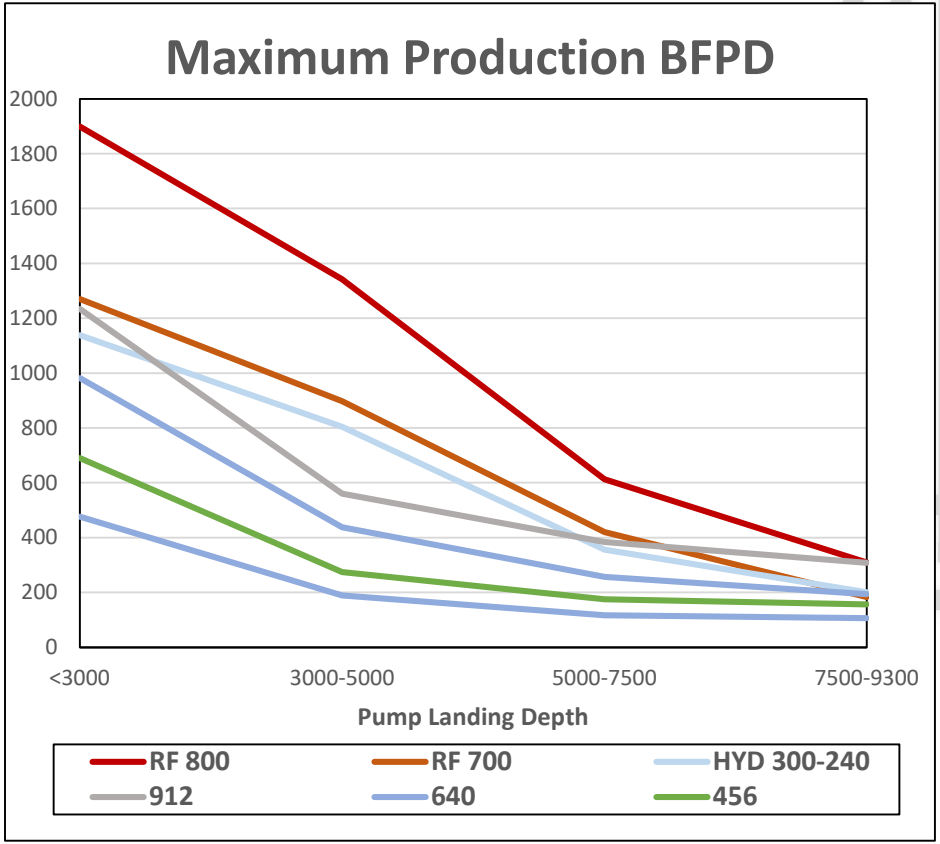
- Customer A (South Texas):
  - "I love the long stroke benefits and increase in production, but my electricity costs get high as the well declines."
- Customer B (MidCon):
  - "I want the Rotaflex benefits, but my wells are too shallow to justify that size of unit."
- Customer D (Permian):
  - I only use size 320, 640, or 912 units because I want the stroke length. My units are not that loaded up at all.

- We now have the ONLY long stroke unit design that is optimal for ALL rod lift well sizes.

2019

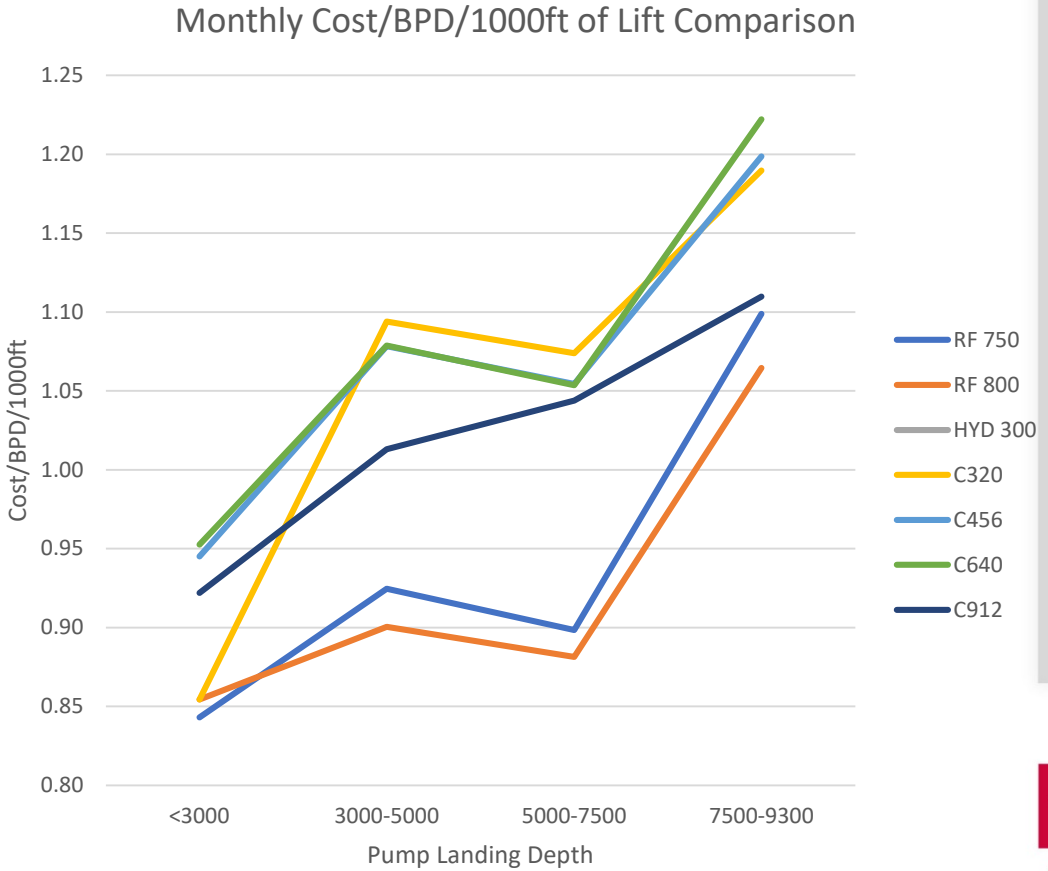
Introducing: Rotaflex 700 & Rotaflex 800

- Rotaflex 700 Specs:
  - Gear Reducer: 250,000 in-lbs
  - Stroke Length: 236”
  - Structural Capacity: 26,400 lbs
- Rotaflex 800 Specs:
  - Gear Reducer: 250,000 in-lbs
  - Stroke Length: 288”
  - Structural Capacity: 30,800 lbs
- Why customers care:
  - 3rd Party, Industry standard software + field results show up to 6X production versus standard beam units



Electrical Question

- Customer: "What about my electricity costs? I am concerned if I increase my production like that, then there is a catch."
- Answer: "We have seen in the field and can show via 3rd party software up to 30% decrease in electrical costs while producing up to 6x what a beam unit can."



2019

THE ULTIMATE ROD-LIFT SYSTEM

TRANSITION
to rod lift 15 to 20% faster

ALTERNATIVE
to large conventional pumping units and ESPs

ELIMINATE
intermediate lift methods in select wells

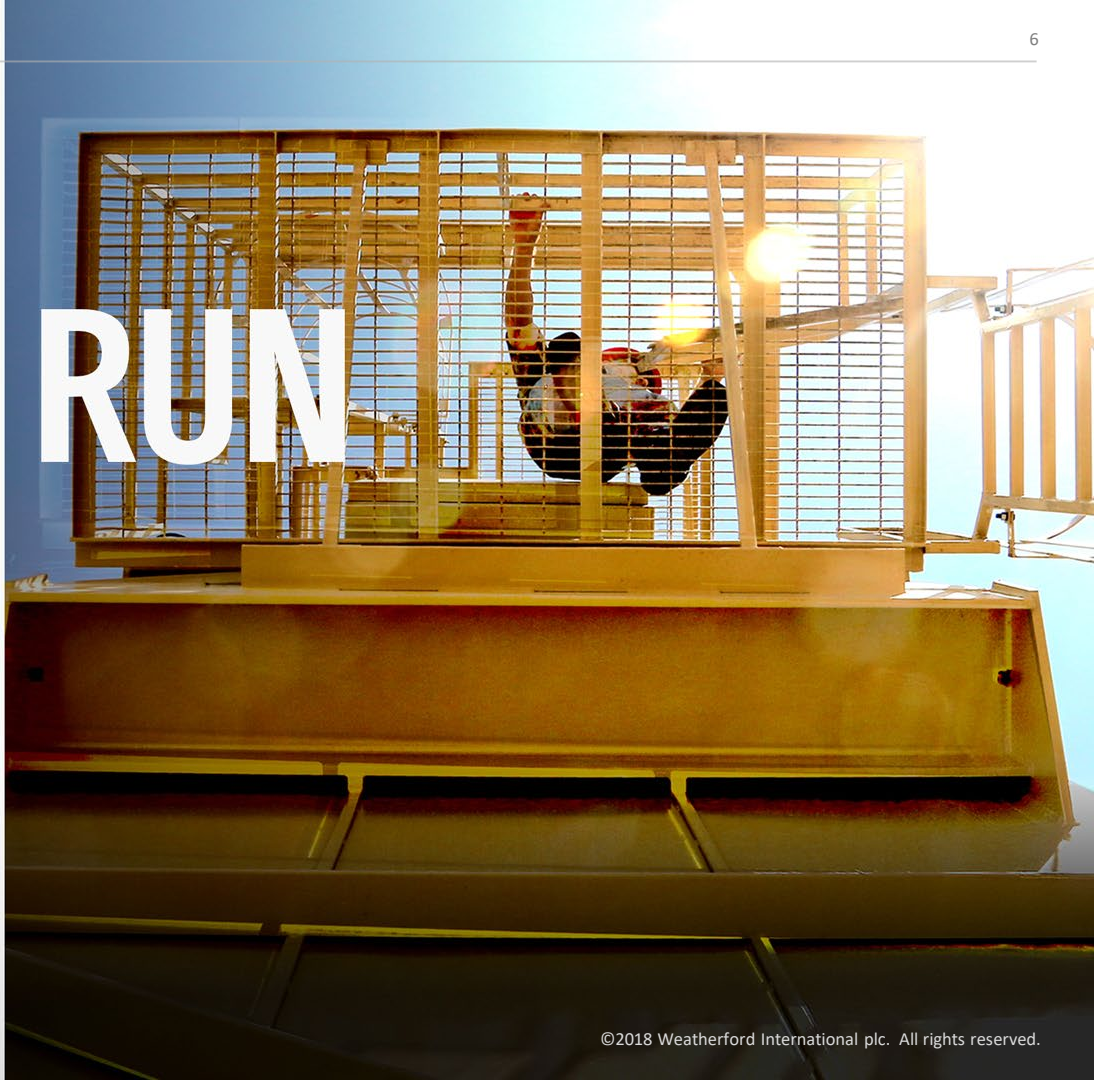
BUILT FOR THE LONG RUN

PROVEN TECHNOLOGY FOR
deep, challenging, and high-volume wells

REDUCES DOWNHOLE-FAILURE FREQUENCY
and associated OPEX

DELIVERS UP TO 30.5 FT (9.3 M)
sucker-rod-pump stroke length

SIMPLE, MECHANICAL DESIGN WITH
low maintenance requirements



APPLICATIONS

High liquid-volume wells

Deviated wells prone to sucker rod and tubing failures

Flumping and gas-slugging wells

Heavy-oil and steam-injection wells

Multi-well pads with limited spacing

Deep wells and High-GLR wells

ROTAFLEX SIZES

Size	700 / 700-EX	950 / 950-EX	1100 / 1100-EX	1150 / 1150-EX	1155 / 1155-EX
Reducer rating	228,000 in-lb (25,761 N-m)	350,000 in-lb (39,545 N-m)	350,000 in-lb (39,545 N-m)	350,000 in-lb (39,545 N-m)	500,000 in-lb (56,492 N-m)
Stroke length	236 in. (5.994 m)	288 in. (7.315 m)	306 in. (7.772 m)	366 in. (9.296 m)	366 in. (9.296 m)
Peak polished-rod load	26,500 lb (12,020 kg)	36,000 lb (16,329 kg)	50,000 lb (22,680 kg)	50,000 lb (22,680 kg)	50,000 lb (22,680 kg)
Sprocket diameter	27.327 in. (694 mm)	33.547 in. (852 mm)	33.547 in. (852 mm)	33.547 in. (852 mm)	36.720 in. (933 mm)
Maximum strokes per minute (SPM) [A]	5.0	4.50	4.30	3.64	3.75
Racetrack avg. SPM	6.0	5.6	5.4	4.6	4.7
Peak straight-way SPM	6.9	6.24	5.96	5.05	5.20

** This is the maximum when operating at a constant speed. Refer to “Race Track Mode” with the use of a variable speed drive (VSD).

REDESIGNED FOR YOUR ASSETS AND CREW

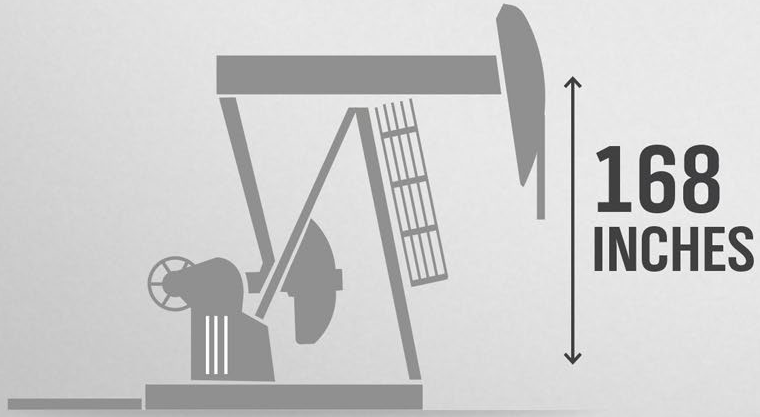
BOOST PRODUCTION WITH FEWER **STROKES**

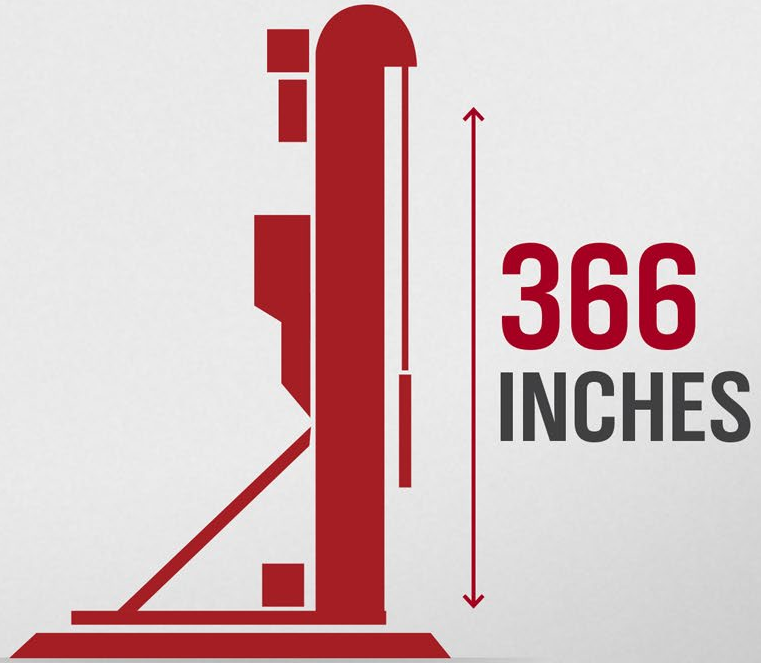
REDUCE YOUR LIFTNG **COSTS**

STREAMLINE YOUR MAINTENANCE **PROGRAM**

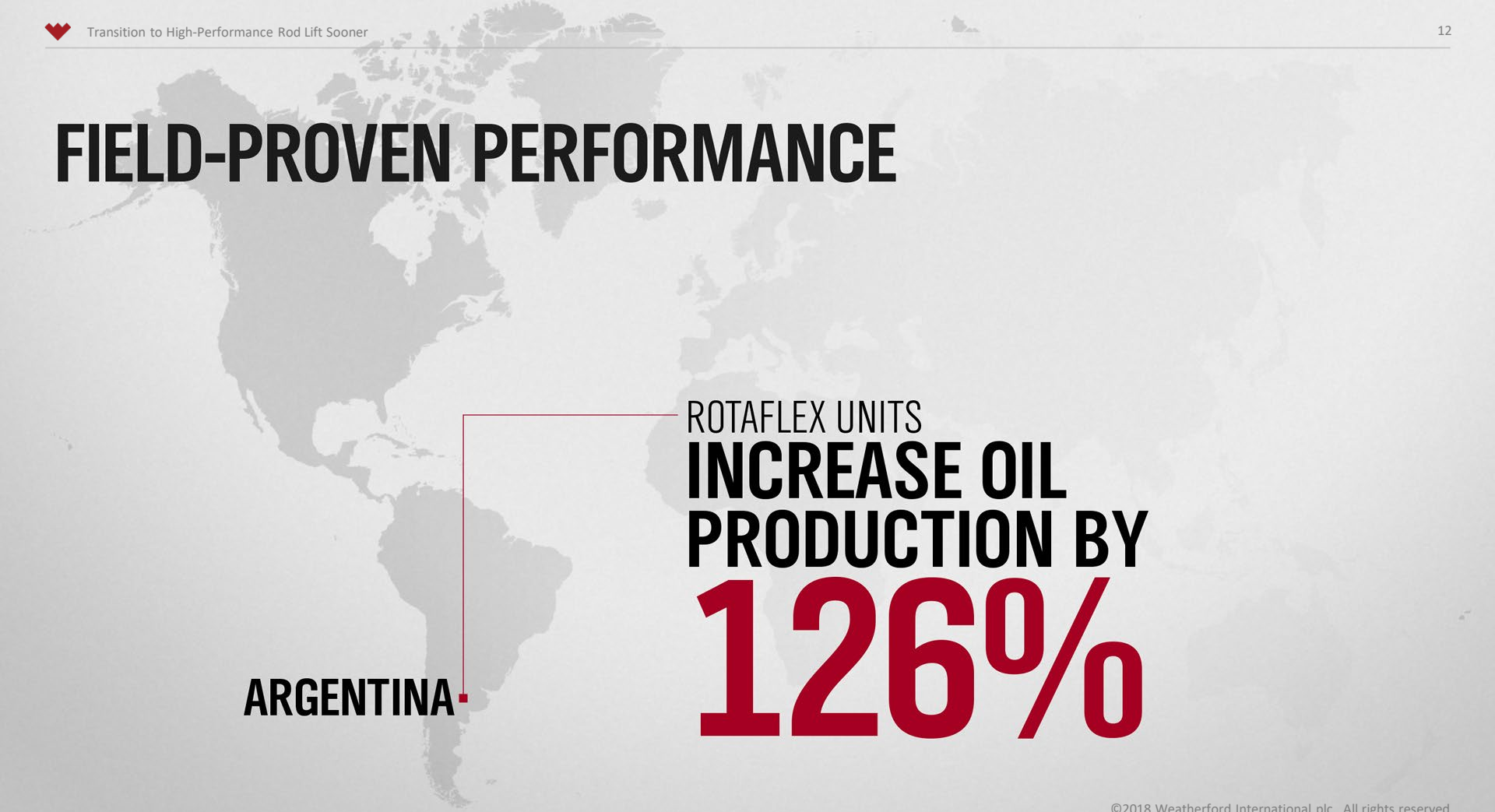
BOOST PRODUCTION WITH FEWER STROKES

INCREASE PRODUCTION
WITH LONGER STROKES





FIELD-PROVEN PERFORMANCE



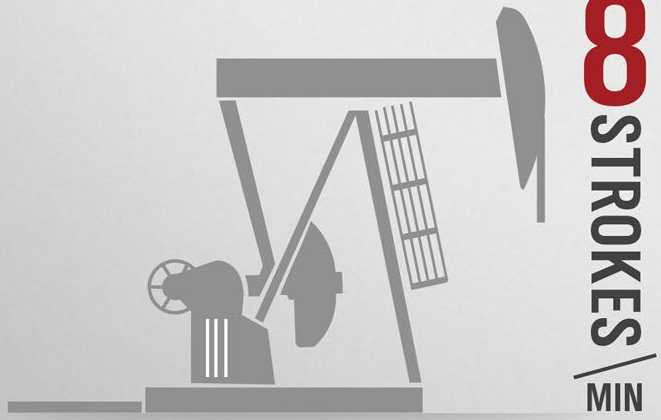
ROTAFLEX UNITS

INCREASE OIL PRODUCTION BY

126%

REDUCE YOUR LIFTNG COSTS

DECREASE STROKE SPEED
AND INCREASE UPTIME



FIELD-PROVEN PERFORMANCE

NORTH DAKOTA

ROTAFLEX UNITS

TRIPLE

AVERAGE RUN TIMES

REAL-WORLD, HIGH-FLOW CHALLENGES

ROD FAILURES EVERY 6 TO 8 MONTHS; excessive tubing wear; stuck pumps

Frequent ESP failures; jet pumps are not right for the asset; **LOSING PRODUCTION AT 1,200 B/D**

2019

CREATING ROTAFLEX BELIEVERS THROUGH VALUE

BOTH CLIENTS NOW INSTALL ROTAFLEX AT EACH OPPORTUNITY

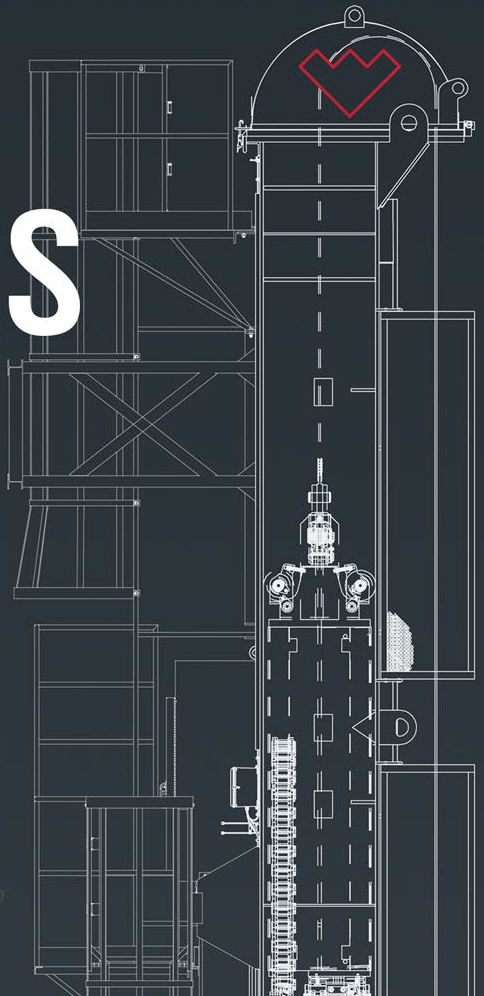
ZERO ROD-PART OF TUBING FAILURES OVER 3 YEARS

CONSISTENT PRODUCTION AT 1,200 B/D
WITH INCREASED UPTIME

2019

STREAMLINE YOUR MAINTENANCE PROGRAM

NEW FEATURES FOR 2018



ACCESSIBILITY
Upgraded ladders, cages, platforms, and tie off points

LUBRICATION
enhancements

REAR ACCESS DOORS
and door hardware

350-SERIES
gear reducer

TOP DRUM
modifications

ROD ROTATOR
trip device

SPEED SENTRY
and load-belt sensors

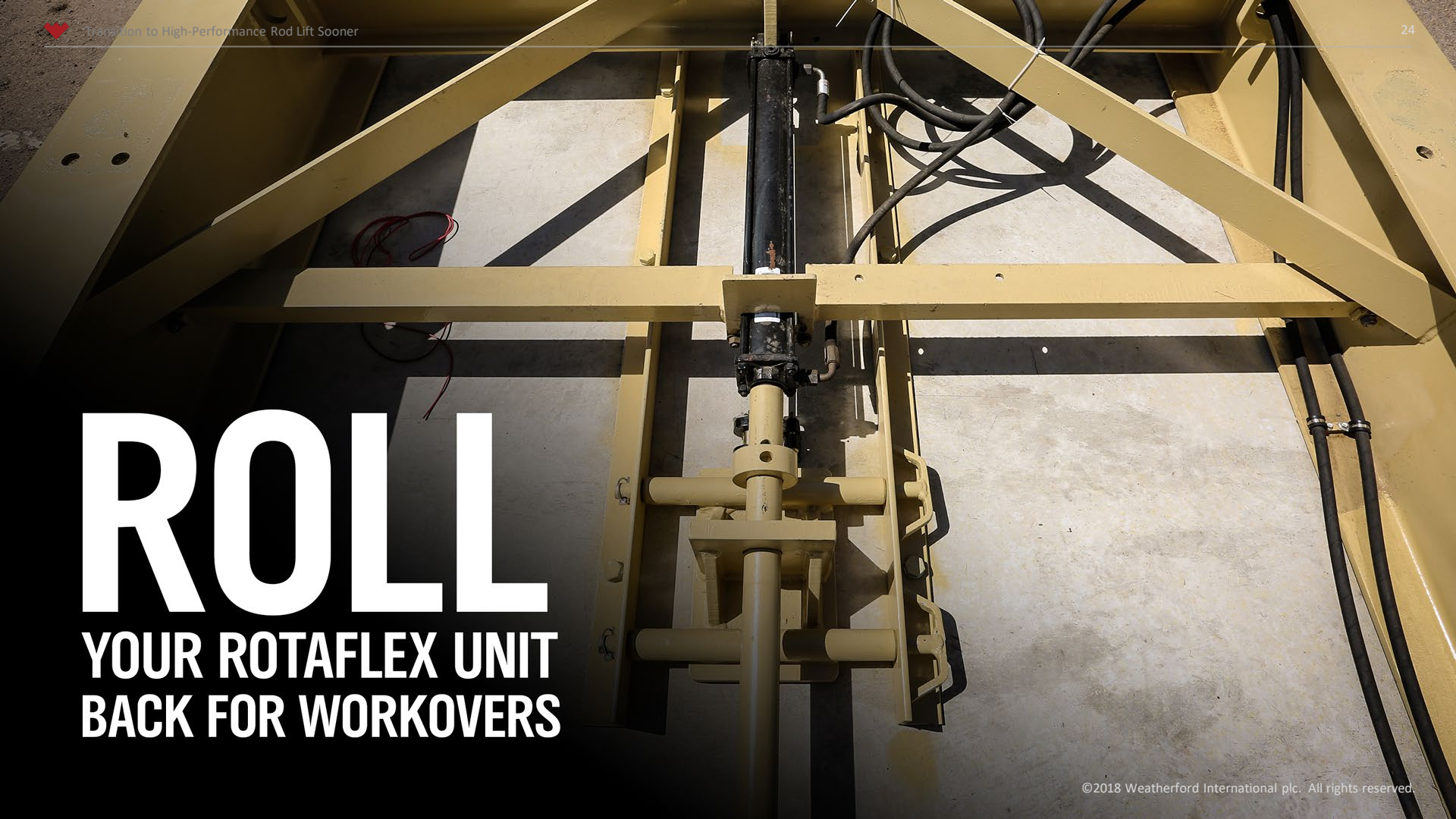
INTEGRATED HYDRAULIC
brake and rollback system

EXPAND ACCESS
FOR YOUR MAINTENANCE CREW

CUT DOWN
ON WEAR AND TEAR

+

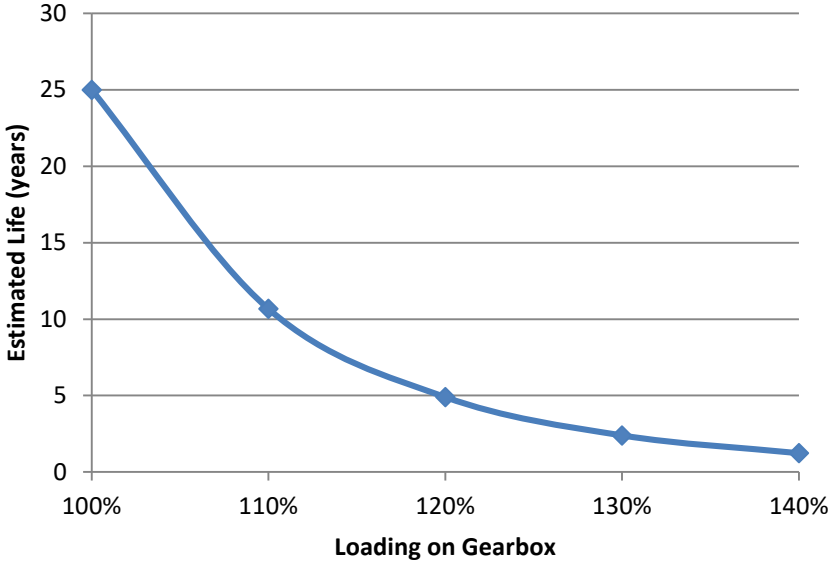
KEEP THE PARTS MOVING WITH A CONTINUOUS OIL BATH



INCREASE
TORQUE CAPACITY BY 8.5 PERCENT

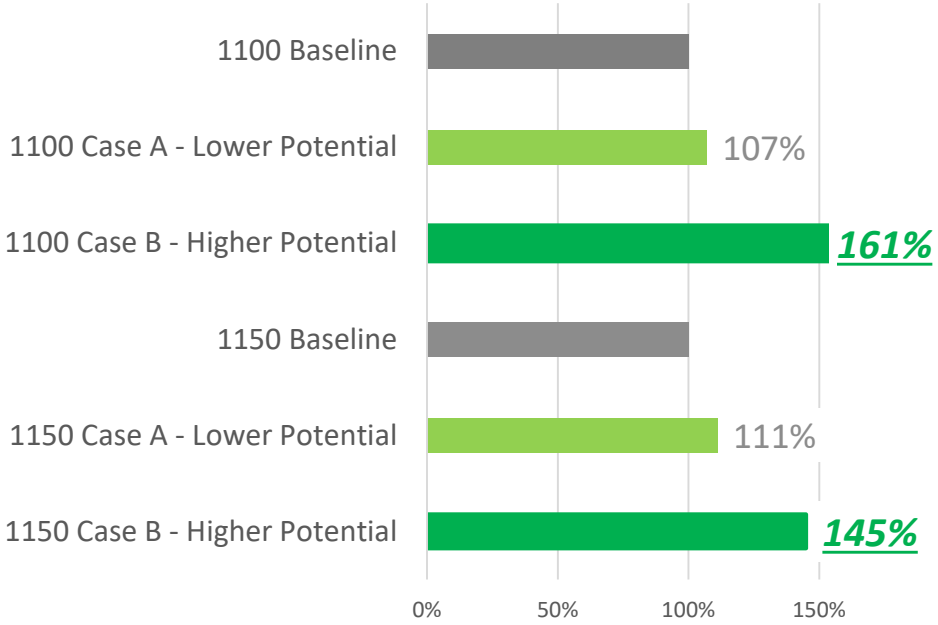
320 vs 350 - Advantages

Calculated Gear Design Life versus Loading for Pitting Resistance



Conclusion 1: the less you load the unit, the better chances of increased longevity the equipment has
Observation 1: if the unit now has 8.5% more load margin on the reducer, then the life increases to…

Results from +30% of Design Cases – 320 to 350



Conclusion 2: 320 reducers can potentially limit higher SPM, whereas a 350 can in some cases allow the well's production to increase by +50%
Observation 2: if the data entails 30% of the designs Weatherford has ran, then there could be even more potential increases available…

EXTEND THE LIFE OF YOUR GEAR BOX

THE SHORTEST PATH TO MORE PROFITABLE PRODUCTION

Weatherford®

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