

Permian Basin Artificial Lift Forum
Bush Convention Center
Midland, Texas
2 - 3 November 2021





Hydraulic Units Lifting 1000 BFPD – A Permian Case Study

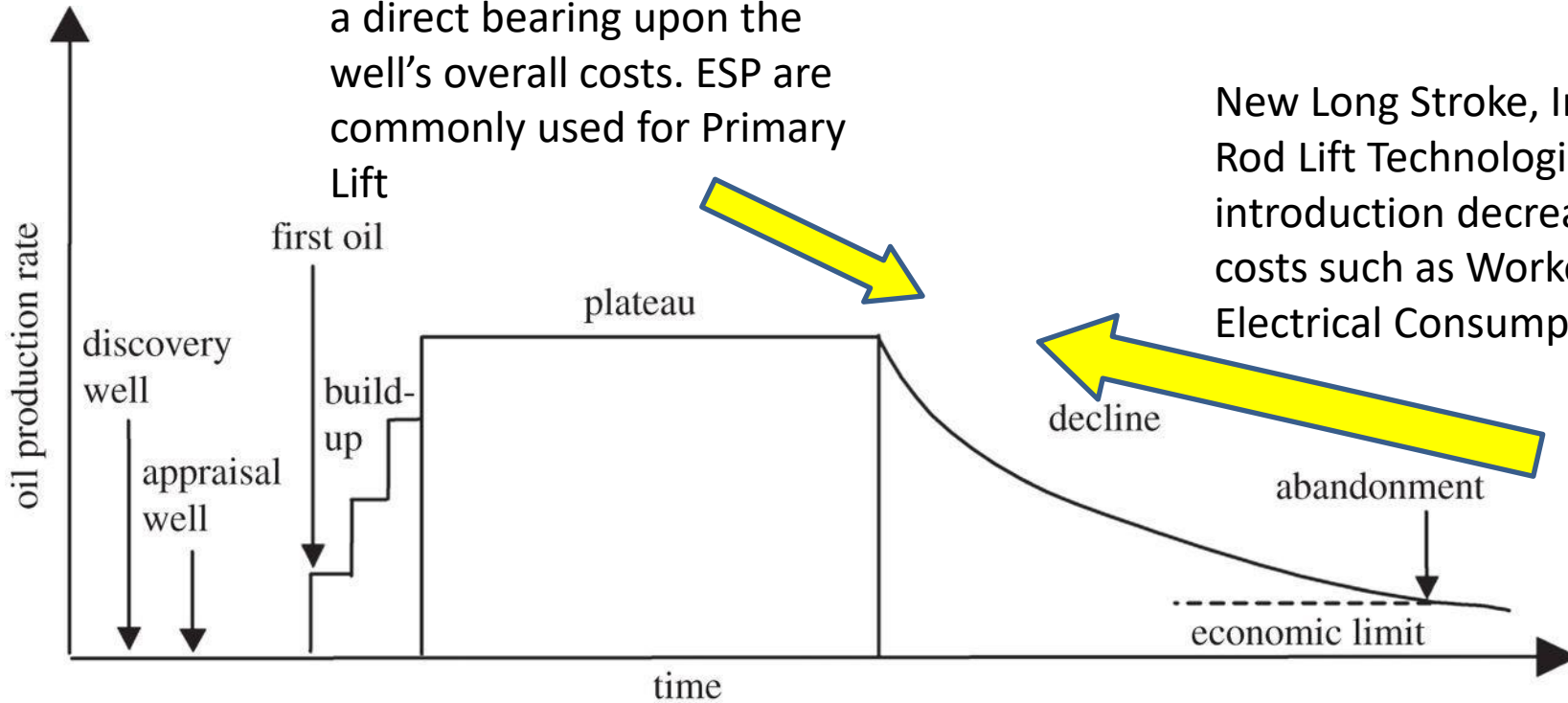
Frederick M. Kemp IV – Riley Exploration Permian, Inc.

Yero B. Hilts – SSi Artificial Lift

Selection of Artificial Lift in New Oil Wells

Riley Exploration Permian – Beaten Path 597-648 1XH

Traditionally, the Selection of the Artificial Method will have a direct bearing upon the well's overall costs. ESP are commonly used for Primary Lift



New Long Stroke, Intelligent Rod Lift Technologies earlier introduction decrease overall costs such as Workovers and Electrical Consumption

Typical Oil Well Profile

Long Stroke, Intelligent Rod Lifting Unit Selection

Riley Exploration Permian – Beaten Path 597-648 1XH

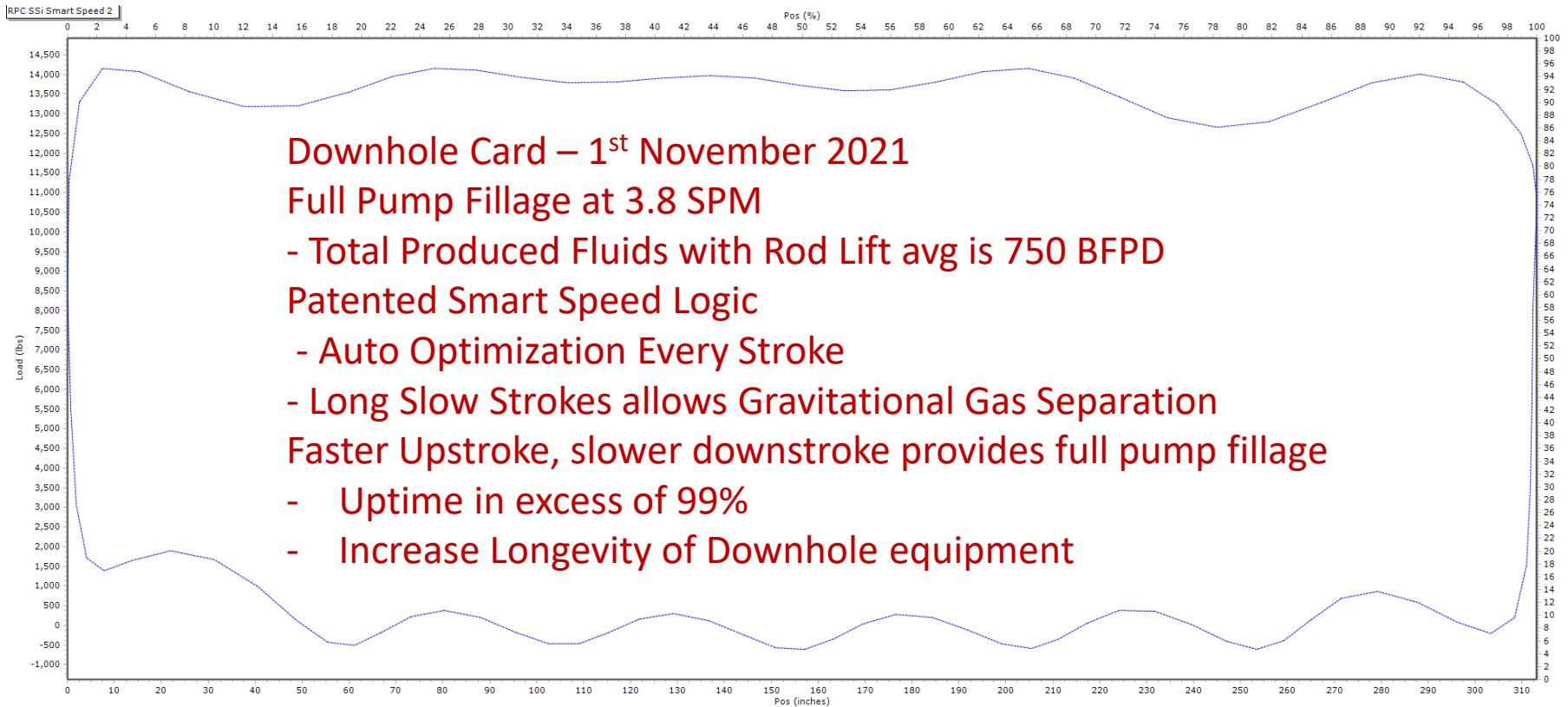


SSi Model 400LS-200-336

- Riley analyzed the market for Rod Lift Solutions
 - Production \geq 1,000 BBls/day
 - Peak Polished Rod Loads of 30,000 Lbs
 - Min Load 6985 Lbs.
 - 2.75 inch Dia. Downhole Pump
 - 1 Inch Dia. Rods
 - Pump Depth 4,750 Foot
 - Unit Installed in Nov 2020
- Lower overall Workover Cost
 - Flushby Units or Workover Rigs
- Opted for the SSi Model 400 LS-200-336
 - Small Footprint – 12 Foot Maximum
 - 336 inch stroke length
 - Independent Up and Downstroke
 - Smart Speed Logic – Auto-Optimization
 - 200 Horse Power with Integral VFD
 - Rod Star showed unit could reach 1000 BBls/Day @3.8 SPM (Not Maximum)
 - Unit has been running at 4.1 SPM

Long Stroke, Intelligent Rod Lifting Unit Selection

Riley Exploration Permian – Beaten Path 597-648 1XH :2



Long Stroke, Intelligent Rod Lifting Unit Selection Riley Exploration Permian – Beaten Path 597-648 1XH

Comparison of Electrical Usage Between Systems

Well #	Model	Avg Production	KW*H per Day	KW*H Per BBI
Beaten Path 1	SSi 440 LS	750 BFPD	440	0.59
Beaten Path 2	C-912	400 BFPD	245	0.61
Beaten Path 25	ESP 1750	800 BFPD	1220	1.52

Over 270% savings on Electrical Usage Per Day
Over 250% savings per Barrel

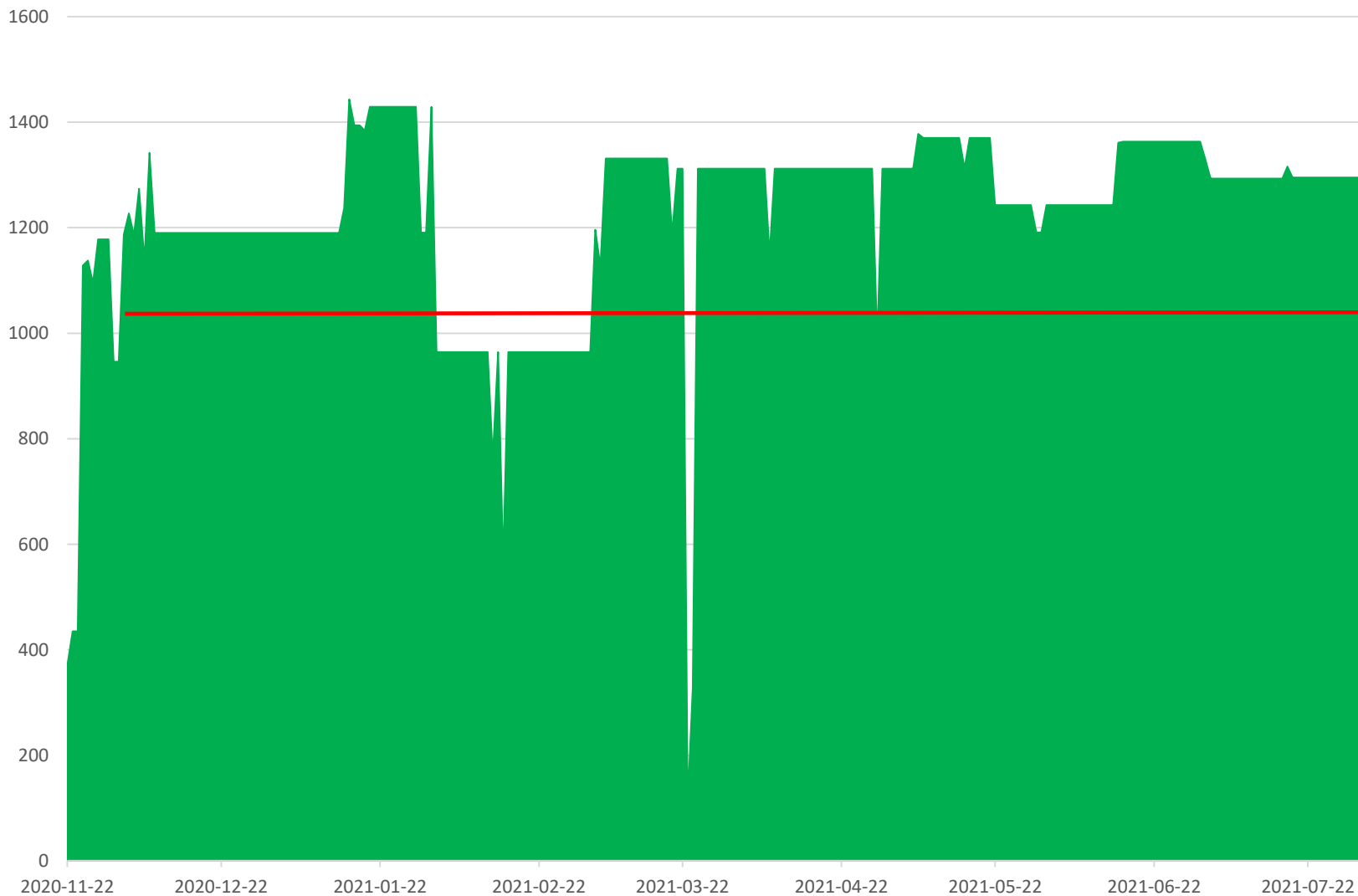
***In the USA, 1KW*H = 0.92 Lbs. of CO2
Saving of 17,222 Lbs. per Day or 6,286,176 Lbs Per Annum

** Data collected using individual electric meters

*** Source EIA

Long Stroke, Intelligent Rod Lifting Unit Selection Riley Exploration Permian – Beaten Path 597-648 1XH

Total Production



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Summary

- Changing the Paradigm of the Artificial Lift Systems delivered:-
 - Increased Production – Gravitational Gas Separation
 - Reduced Costs for Installation
 - Reduced Costs for Workovers
 - Reduced Electrical Cost
 - CO2 Emissions Reduction

Long Stroke, Intelligent Rod Lifting Unit Selection
Riley Exploration Permian – Beaten Path 597-648 1XH

The following is a quotation from Fred Kemp of Riley:-

“SSi units have allowed us to convert wells to rod pump years earlier than we originally thought possible. We have enjoyed increased production and substantially decreased electrical spend with SSi.

The units have proven to be reliable and rugged. The first unit we installed a year ago has produced a quarter of a million barrels total fluid, averaging 750 barrels per day, problem free.”

Long Stroke, Intelligent Rod Lifting Unit Selection
Riley Exploration Permian – Beaten Path 597-648 1XH:2
Acknowledgement

“We would like to provide grateful thanks to the Executive Management at Riley Exploration Permian, Inc. and SSI Artificial Lift for their permission and total support in presenting this paper”

Fred and Yero

