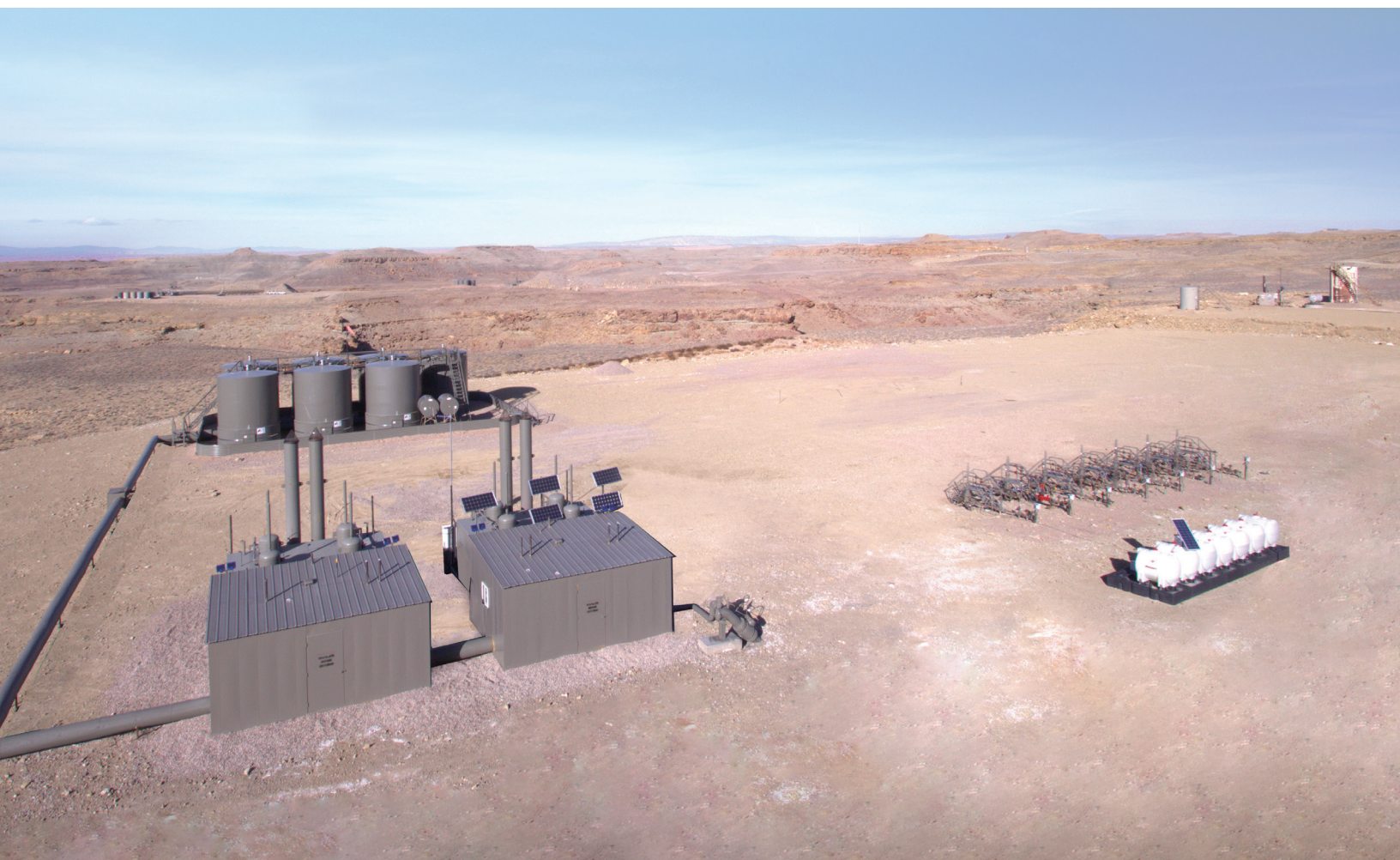

MEASUREMENT & ANALYTICS | UPSTREAM OIL & GAS

Be productive

Automation intelligence
from wellhead to distribution



Measurement made easy



—
 “Using Totalflow optimizing solutions, we improved our field decline curve by 7%.”
Production Foreman
 East Texas

—
 “The low cost, compact design of the ABB gas chromatograph has allowed us to increase accuracy while decreasing cost.”
Measurement Coordinator
 Central Texas

Well pad monitoring and control

ABB's wellhead monitoring solutions allow for maximized production while ensuring the safe and proper operation of the pad. This is accomplished through the gathering and processing of quality input data from various ABB Primary Meters, Tank Level Systems and Instrumentation over wireless or hard-wired paths. The processing and control of this data is handled through our pre-programmed or user-designed applications contained in ABB's industry leading RTUs. The results are logged, trended and transmitted through both traditional and IP meshed networks back to either an ABB host system or a third party host/SCADA system. The conclusion is a smart well pad improving safety and providing the customer with real-time information that is both predictive and diagnostic.

Oil, gas and water measurement

With ever increasing environmental and shareholder pressure being placed on producers there has never been a greater need for timely and accurate measurement data. ABB continues to offer unrivaled excellence in measurement of oil, gas and water utilizing a complete line of primary meters, transmitters and flow computers. From traditional orifice metering through wedge, magmeter, swirl and our industry leading coriolis meter in association with ABB's field transmitters, measurement has never been as accurate or easy.

Gas quality

ABB's line of custody transfer GCs and process analyzers offer a low cost and high accuracy solution to measuring composition, heating value and process efficiency. Our low powered, robust NGC and PGC offer unrivaled flexibility and performance. This enables our customers to increase the overall measurement accuracy of their system while at the same time not increasing the technical burden on operators. Within the plant gate, ABB's process analyzers are proving increasingly valuable for plant process control and optimization. In addition, units like our RVP analyzer are providing valuable analysis of today's condensate rich production streams. From wellhead to burner tip, ABB's analytical products will enhance the efficiency and accuracy of your business.

Gas control

With the increasing complexity of gas gathering, transmission, and distribution systems, control of high and low flow runs is critical. The consolidation of smaller stations into mega facilities requires I/O monitoring and control, safety overrides, valve control and positioning and tube switching to meet the ever changing demands of industry. ABB provides customers industry leading solutions that meet or exceed the stringent regulations, cost restraints and safety concerns of our customers with standard applications that are flexible, efficient, and reliable.

Optimized performance

Increased profitability with our devices

In years past Totalflow successfully revolutionized the world of gas measurement and its traditional paper chart recorders with our remote electronic flow computers. More recently we changed the way we look at BTU analyzers with our ingenious gas chromatography solutions. Now we're ready to do it again. Only this time we're incorporating the products and solutions of ABB as a whole, the world's largest automation company.

ROI achieved in 20.5 days using our Plunger Lift Application!

Total upgrade cost **\$3,125.00**

Production information

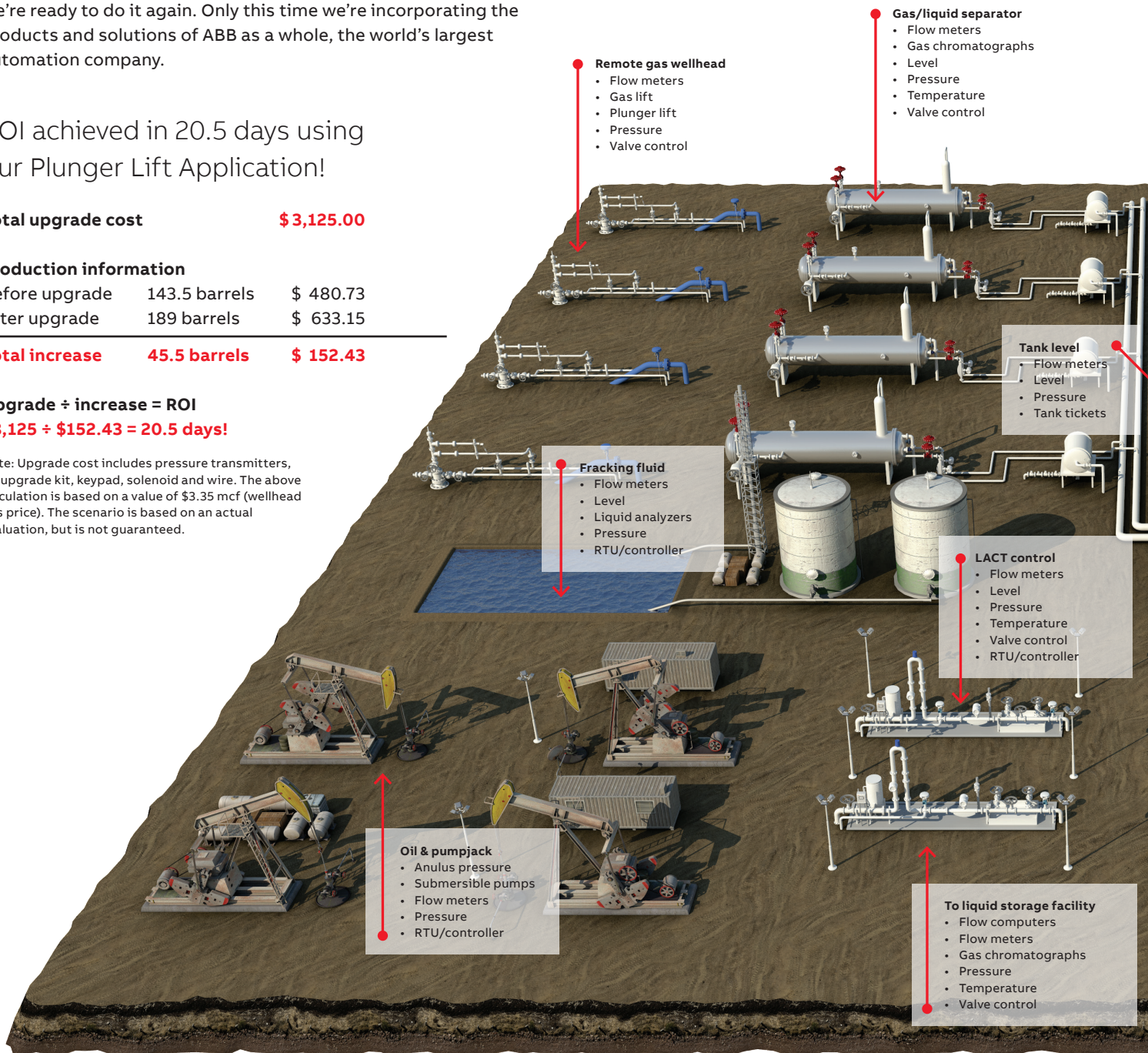
Before upgrade	143.5 barrels	\$ 480.73
After upgrade	189 barrels	\$ 633.15

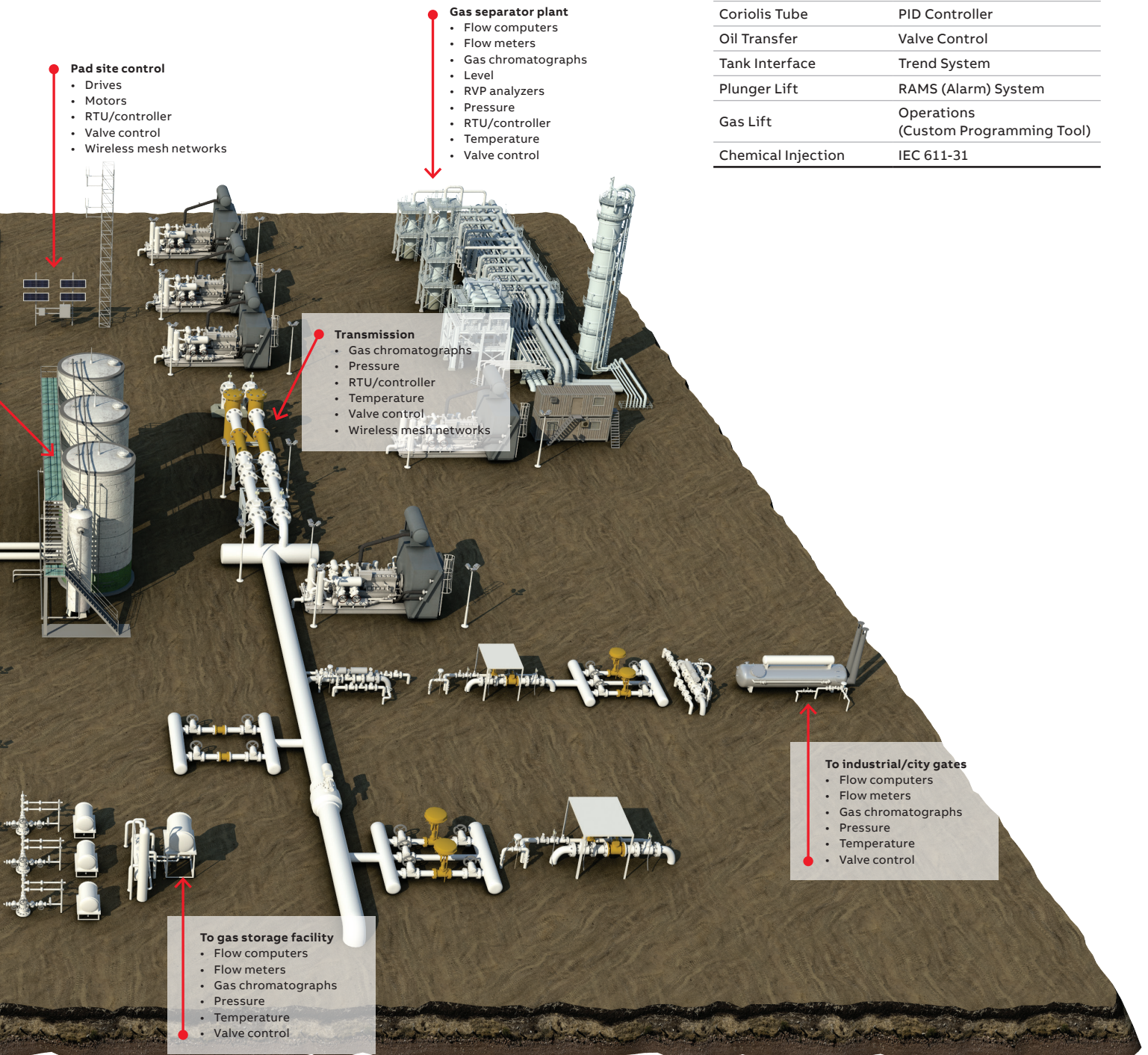
Total increase **45.5 barrels** **\$ 152.43**

Upgrade ÷ increase = ROI

\$3,125 ÷ \$152.43 = 20.5 days!

Note: Upgrade cost includes pressure transmitters, G5 upgrade kit, keypad, solenoid and wire. The above calculation is based on a value of \$3.35 mcf (wellhead gas price). The scenario is based on an actual evaluation, but is not guaranteed.





Sample of Pre-Programmed Applications

AGA3	Well Test Application
AGA7	Pad Controller
Liquid Measurement	Shutdown App
Coriolis Tube	PID Controller
Oil Transfer	Valve Control
Tank Interface	Trend System
Plunger Lift	RAMS (Alarm) System
Gas Lift	Operations (Custom Programming Tool)
Chemical Injection	IEC 611-31

A comprehensive portfolio

Efficient and enhanced production

- 01 Computer interface
- 02 RTU
- 03 Control
- 04 Communications
- 05 Pressure & Temperature
- 06 Level
- 07 Flow
- 08 DP flow
- 09 Flow computers
- 10 Analyzers



Computer interface	Production automation	Instrumentation	Measurement	Control
Software solutions	Applications	Pressure transmitters	Flow computers	Valve control
• PCCU	• Chemical management	• Gauge pressure (high)	• Basic FCUs	• Digital positioners
• PAS (Plunger Analysis)	• Plunger lift	• Gauge pressure (low)	• Extendable FCUs	• I/P converters
• SCADA Advantage	• Gas lift	Temp. transmitters	• Explosion-proof FCUs	Remote controllers
• eXLerate	• Valve control (AO / DO)	• Field-mounted	• Liquid FCUs	• Extendable controllers
	• PID loop	• Head-mounted	Analyzers	• Custom-built solutions
	• IsaGraf custom logic	Level transmitters	• NGCs	• Remote IO - XIO
	• LACT control	• Ultrasonic transmitters	• PGCs	
	• Pump control	• Guided wave radars	• RVP analyzers	
	• Emergency shutdown	• Liquid level sensors	Remote controllers	
	• Tube switching	Flowmeters	• Extendable RTUs	
	• Station totalization	• Coriolis meters	• Custom-built solutions	
	• Well Test	• Mag meters		
	Remote controllers	• Vortex / Swirl meters		
	• Extendable RTUs	• Thermal mass meters		
	• Custom-built solutions			

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ABB Inc.
Measurement & Analytics

Contact Us:	
Quotes:	us-iama-quotes@abb.com
Orders:	abb.sendorder@us.abb.com
Training:	US-IAMA.training@us.abb.com
Support:	upstream.support@us.abb.com
Process Analytics Support:	us-pa.support@abb.com
<ul style="list-style-type: none"> • CGA/CEMS • PGC5000 • RVP & Multiwave Photometer 	
Tech Support - Instrumentation:	automationsupport@us.abb.com
<ul style="list-style-type: none"> • Flowmeters • Transmitters & Recorders 	
Tech Support - Instrumentation:	us-cwa.support@abb.com
<ul style="list-style-type: none"> • Combustion analyzers • CWA & AZ40 	

