

Increasing the Longevity of Unconventional Production

Michael Lantz, co-founder and CEO

www.kairosenergyservices.com

# Kairos Energy Services Overview

### The Business

 Founded in 2020, KES, LLC is a pre-seed company that strives to be the leader in downhole remediation and production enhancement

### The Problem

 50,000+ existing U.S. unconventional wells with limited options to improve production and profitability

### The Solution

- Our technology is a patent pending rigless chemical process that removes damage and increases hydrocarbon production
- First trial and revenue in Q4 2020 which is showing a 40% improvement in oil production and payback in less than 3 months

#### Structure

- KES focused on technology development and market capture
- KES partnered with Finoric, LLC for manufacturing and logistics





Leadership



Michael Lantz co-founder & CEO



Ambrish Kamdar co-founder & CEO at Finoric



Tom Burghart co-founder & COO



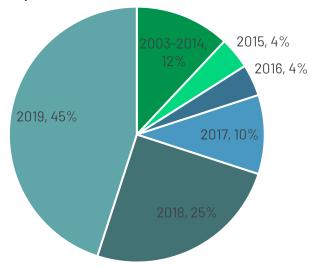
Ralph Nelms, P.E. Technical Advisor

Strong leadership and technical experience including chemistry optimization, reservoir / production engineering, logistics, and operations

# Optimization of mature unconventional wells could significantly improve E&P cashflow

- US Shale = Red Queen "It takes all the running you can do, to keep in the same place"1
- Average terminal decline rates across unconventional assets 15%<sup>2,3</sup>
- 2014–18: 50,000+ horizontal unconventional wells drilled in the US
- Lack of production enhancement techniques in the unconventional market
- Covid-19 has accelerated trend to improve 0&G ROCE & ESG

There is a large opportunity to enhance production and cash flow from existing wells 60% of tight oil US production from wells with 2018-19 vintage<sup>2</sup>



Share of US oil production from wells grouped by year of first production

### **Current state of downhole production enhancement options**

Low cost "Hail Mary" bullhead clean-outs

High-cost mechanical intervention clean-outs

High-cost, intensive EOR huff-n-puff: \$0.5 to 1.0 MM per well



Oil Drum, 2012 Alice in Wonderland

# Rigless Production Enhancement Technology

Remediates damage and increases fracture conductivity











# Proprietary candidate selection process

Candidates may include:

- Downhole damage & low frac conductivity
- Frac hit remediation
- Improving fracture protects
- Lost production from shut-ins

# Remediate multiple damage mechanisms

- Lab customizes chemistry using field fluids
- Identify chemistry solutions that are formation specific
- Develop & utilize green chemistry

### Treatment design

- Staged treatment approach with the volume based on original frac job
- Pair chemistry with specialty biodegradable diverter to maximize coverage along the lateral

### Treatment execution

- No need to pull the pump
- Through our partners, we provide fit for purpose pumping equipment

# Performance and profitability

- Payback in less than 6 months
- MOIC > 3x
- Post-treatment monitoring and value demonstration

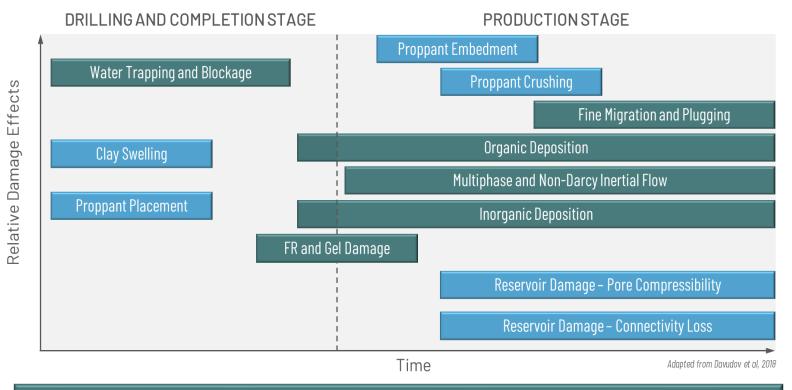
The innovation is in getting the right chemistry where it needs to go, economically



Patent Pending

# Multiple products to address various damage mechanisms

Through our proprietary damage identification process we identify and optimize chemistry to remediate these common damage mechanisms



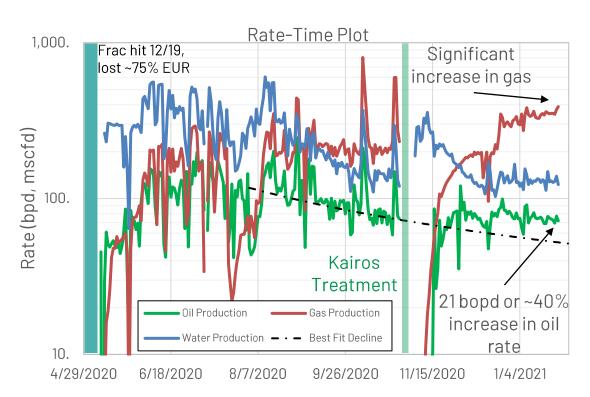
- Numerous studies have shown fracture conductivity is routinely damaged  $50-90\%^{1,2}$
- Even small improvements in fracture conductivity will result in large production improvement

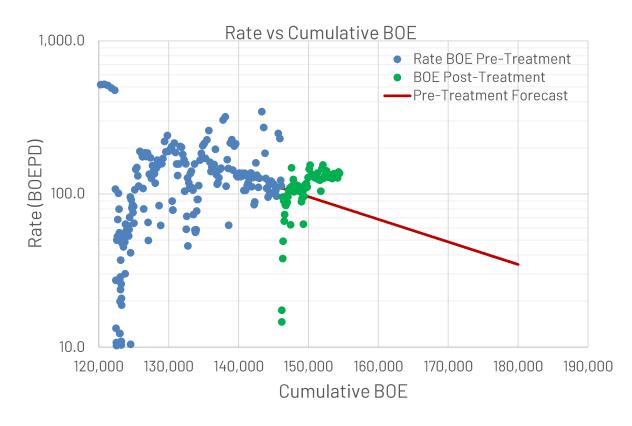
Kairos has products that address these highlighted damage mechanisms



# Eagle Ford: Kairos' first trial is showing a 40% increase in oil rate and added reserves

- ✓ Injected first treatment with no HSE events and hit our injection pressure targets validating diverter efficiency
- ✓ Oil rate is up 40% over the decline and increase in EUR
- ✓ Payback in less than 3 months







## Kairos' approach adds an additional \$10-28 MM in PV10 to your asset

A look at the impact at the asset level

### Results

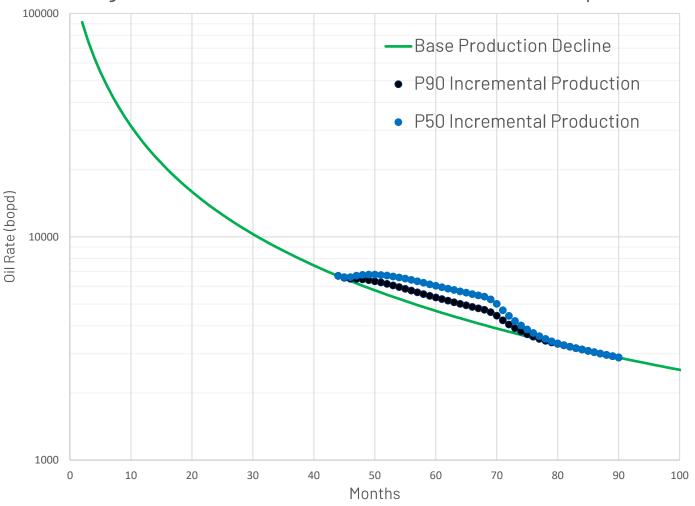
	P90	P50
Incremental Oil (bbl)	503,000	1,004,300
Max Incr. Rate (bopd)	690	1,377
NPV10	\$10.3 MM	\$27.6 MM
IRR	314%	628%

### **Assumptions**

- 284 Eagle Ford wells 2017-18
- 1/3 are candidates = 94 wells
- 4 well treatments / month
- Total program cost = \$8.0 MM
- Oil price = \$40/bbl

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### Eagle Ford Asset Level Predicted Production Response

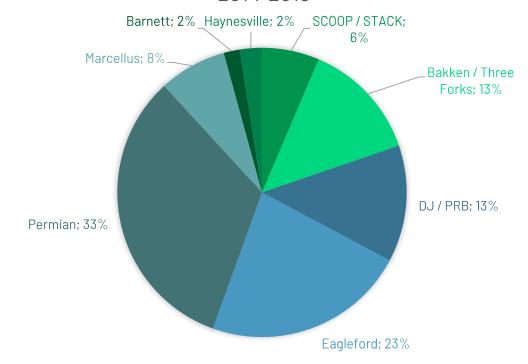


### Confidential

# We estimate this to be a >\$0.75 billion market

- Targeting wells that are ~2-6 years old
- 88% are in "oily" plays
- Of 50,000+ wells, on average 33% are candidates
- Market size \$0.75 to \$1.0 B

# of US Unconventional Horizontal Wells with 1st Production 2014-20181



50,043 unconventional horizontal wells completed between 2014-18



### Growth

### Acquire customers, strategic partners, and seed funding

\$0.5 MM seed investment to accelerate technology development and execute 25 treatments

Investment to fund 12 months of operation

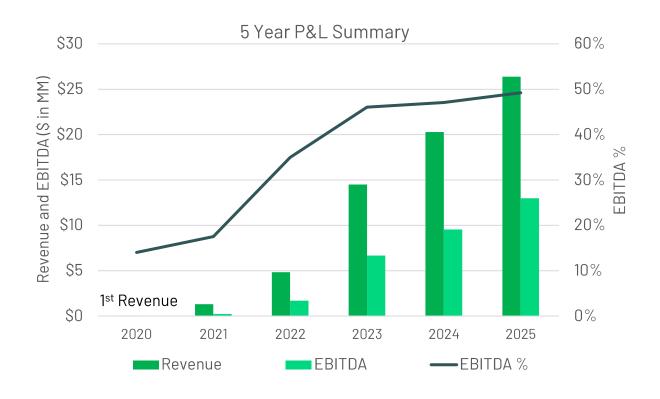
ltem		
Sr Chemist Add		
Contract lab & Eng. Work		
IT / Software		
BD & Management		
Chem add trailer		
Legal & Insurance		

### 2021 KPIS

- 25 treatments
- 3 basins

- Refine treatment economics and technical model
- EBITDA > 10%

Strong revenue growth and margin potential from production enhancement, rapid ROI technologies





# KAIROS ENERGY SERVICES

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For questions or inquires please contact Michael Lantz

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