



**Transforming Oil Recovery  
Through Enzymatic Biotechnology**

**ZymeWett Technologies, LLC** is a biotechnology company transforming how oil is recovered and sustained. We develop and commercialize **enzymatic EOR/IOR solutions** that boost production, reduce costs, and minimize environmental impact.

Our core platform, **ZymeWett®**, is a next-generation biosurfactant and biocatalytic system that **restores reservoir wettability, reduces interfacial tension, and breaks down asphaltenes and paraffins**, unlocking oil that conventional methods leave behind.

Unlike chemical flooding, CO<sub>2</sub> injection, or thermal recovery, ZymeWett® works **naturally** with the reservoir, improving flow efficiency **without damage, high CAPEX, or environmental burden**.

## Key Performance Advantages

**Up to 35% increase**  
in recoverable oil

**Lower operating cost**  
(<\$10 per incremental barrel)



**Reduces viscosity and water cut**  
for sustained production

**100% biodegradable and ESG-aligned**



Headquartered in Miami with operations in Houston, Bogotá, and London, we deliver ready-to-deploy, scalable solutions for national oil companies, independents, and field operators globally.

Our mission is clear:  
**Use biotechnology, not chemistry to make energy production cleaner, more efficient, and more sustainable.**

ZymeWett Technologies is advancing the future of oil recovery where **higher performance and environmental responsibility go hand in hand**.



## Our Mission

At ZymeWett Technologies, our mission is to transform how the world recovers and sustains its energy resources by replacing outdated chemical and thermal recovery methods with **clean, high-performance enzymatic biotechnology**.

We exist to help operators unlock the trillions of dollars in recoverable oil still trapped in reservoirs **without the high cost, environmental impact, or operational complexity** of traditional EOR techniques. Our enzymatic platform enhances flow efficiency, restores reservoir balance, and extends well life, while reducing water use, chemical dependency, and carbon footprint.

## Where Our Technology Creates Impact



### Enhanced & Improved Oil Recovery (EOR/IOR)

Boosting recovery rates by 25–35% using biodegradable biosurfactant systems not polymers or harsh chemicals.



### Pipeline Flow & Drag Reduction

Reducing viscosity and friction to lower pumping energy and improve throughput.



### Storage Tank Cleaning

Converting sludge into usable oil through enzyme activity, eliminating toxic cleaning agents.



### Reservoir Flow Enhancement

Breaking down waxes, asphaltenes, and organic buildup to restore permeability.



### Bioremediation

Naturally degrading hydrocarbons in contaminated soils and waters



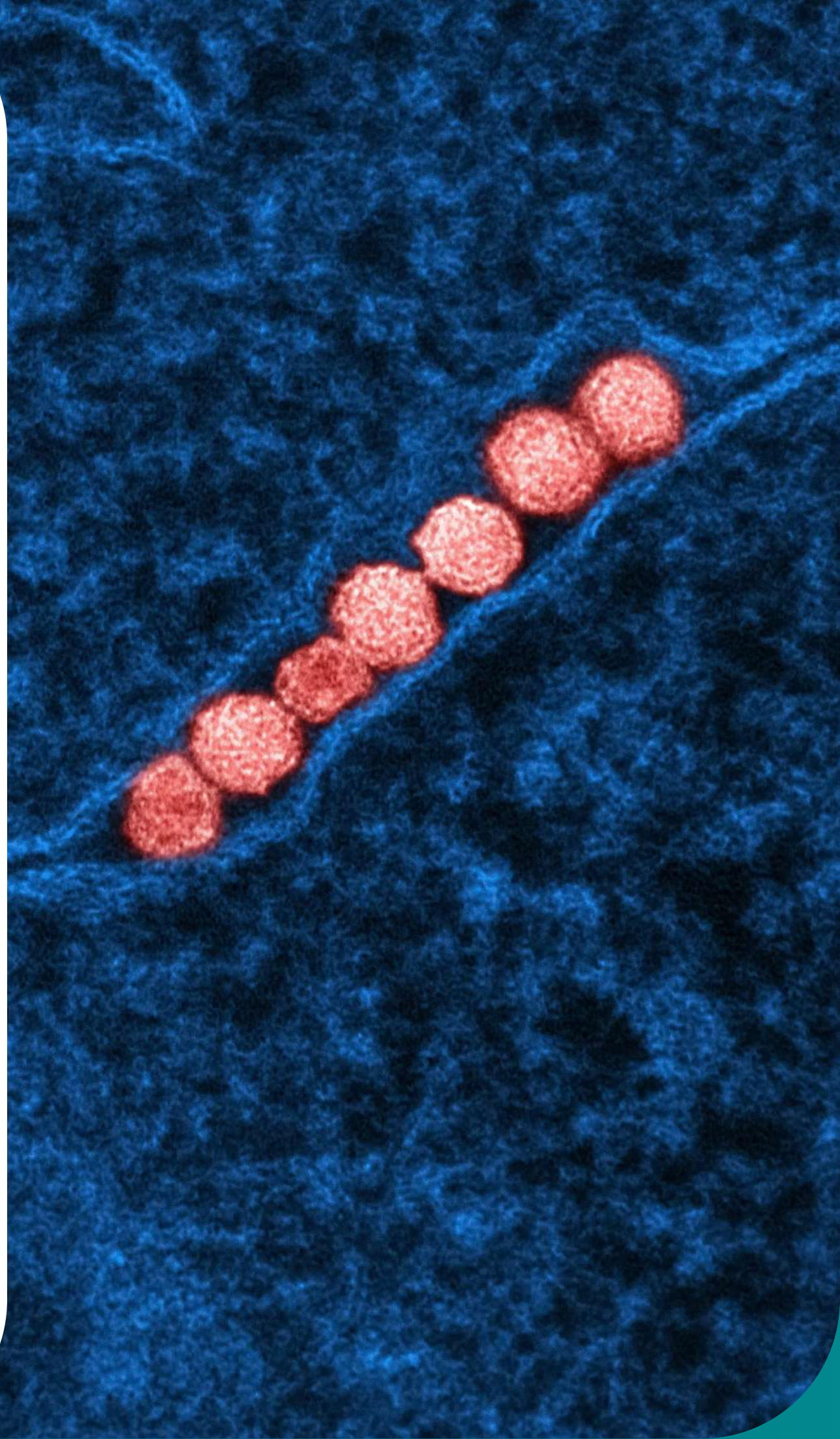
### Cross-Industry Enzyme Innovation

Expanding into PET recycling, sustainable agriculture, and food-grade enzyme systems.

## A Global, Scalable, ESG-Aligned Solution

ZymeWett® products are **ready for deployment worldwide** from shale and heavy oil fields to offshore, mature conventional reservoirs, and midstream operations. Every formulation is **scalable, customizable**, and engineered to help operators achieve:

- Higher production
- Lower operating cost per incremental barrel
- Compliance with ESG and sustainability mandates
- Long-term field value and improved asset life cycles



## Our Vision for the Future

We believe the next era of global energy will be powered by **biotechnology, not chemistry**. A future where operational efficiency, sustainability, and profitability are aligned, not opposed.

ZymeWett Technologies is leading that shift at the intersection of **energy, science, and environmental responsibility**.

Our mission is built around one core principle:  
**Extract more. Waste less. Harm nothing.**

# Our Vision

## Pioneering a Sustainable Future Through Enzymatic Innovation

At ZymeWett Technologies, we aim to lead the global shift toward biotechnology-driven oil recovery and sustainable industrial performance. We are building a future where enzymatic innovation replaces traditional chemical and thermal methods, proving that efficiency and environmental responsibility can go hand in hand.

Our solutions are designed to:

- **Maximize Reservoir Recovery**

Increase production and extend well life using safe, biodegradable biocatalysts that unlock trapped hydrocarbons.

- **Optimize Infrastructure Efficiency**

Improve pipeline flow, reduce drag, and simplify tank cleaning, lowering operating costs and energy usage.

- **Advance Environmental Stewardship**

Support ESG goals through clean bioremediation and carbon-conscious recovery methods.

- **Enable Cross-Industry Innovation**

Apply our enzyme platform to PET recycling, agriculture, and food processing to promote a more sustainable industrial ecosystem.

Our vision goes beyond boosting production; it is about turning biotechnology into scalable, real-world impact. By partnering with operators, research institutions, and governments, we are shaping an energy future where performance improves and the planet benefits.

ZymeWett Technologies aspires to be recognized not just as a technology provider, but as a catalyst for global sustainability, redefining what's possible in energy, industry, and the environment.

## The Challenge We Solve

### Unlocking Trillions in Stranded Oil Assets with Sustainable Biotechnology

Over 70% of the world's oil wells are now mature or declining. The oil is still there but recovering it is increasingly costly and environmentally restrictive.

Traditional EOR methods (chemical flooding, CO<sub>2</sub> injection, thermal recovery) demand:

- High CAPEX and complex infrastructure
- Significant energy use and emissions
- Chemical footprints that strain ESG compliance
- And still often recover only 10–15% of remaining oil

The result:

- ✓ Trillions of dollars in stranded reserves.
- ✓ Rising water cuts and reduced production efficiency.
- ✓ Limited viable solutions for operators needing rapid, economical results.

## The ZymeWett® Advantage

ZymeWett® changes the equation.

Our enzymatic biosurfactant technology:

- **Modifies wettability**
- **Reduces interfacial tension (IFT)**
- **Breaks down paraffins and asphaltenes**
- **Restores natural reservoir flow pathways**

All **without** chemicals, heat, CO<sub>2</sub> infrastructure, or formation damage.

### Performance Highlights:

- **25–35%** increase in recovery rates
- **Up to 30%** reduction in crude viscosity
- Reduced water cut and stabilized decline curves
- Fully **biodegradable** with a lower carbon footprint

### In Short

ZymeWett® unlocks stranded oil, extends field life, lowers operating cost, and supports ESG goals. **A cleaner, faster, more economical recovery solution built for today's energy realities.**

# Our Solution — The ZymeWett® Advantage

## Unlocking Trillions in Stranded Oil Assets with Sustainable Biotechnology

ZymeWett® is a next-generation enzymatic biosurfactant system engineered to transform Enhanced and Improved Oil Recovery (EOR/IOR). Instead of relying on chemicals, heat, or CO<sub>2</sub> injection, ZymeWett® uses natural enzyme reactions to restore reservoir balance, improve flow efficiency, and unlock trapped hydrocarbons, safely, cleanly, and cost-effectively.

### How It Works

Once injected, ZymeWett® acts as both a catalyst and a cleaner, directly at the oil–water–rock interface:

- Restores Wettability — Converts oil-wet rock back to water-wet, allowing trapped oil to be displaced.
- Reduces Interfacial Tension (IFT) — Frees oil from pore spaces with minimal resistance.
- Lowers Viscosity & Breaks Organic Blockages — Dissolves asphaltenes, waxes, and paraffins that restrict flow.

The result is cleaner flow pathways, stronger displacement, and higher production efficiency, even in mature or declining fields.

# Performance Highlights

Field and lab results consistently show:

**+25–35% increase**  
in oil recovery

**Up to 47% reduction**  
in IFT

**30% lower crude viscosity and 5–10% API gravity improvement**

Works up to **200°C and 100,000 ppm salinity**

**Biodegradable, non-corrosive, and reservoir-safe**

Effective in sandstone, carbonate, and unconventional reservoirs

# Why It Matters



More than 70% of oil remains stranded after traditional recovery. ZymeWett® unlocks that oil without new infrastructure, expensive injection systems, or environmental burden.

## Operators achieve:

- ✓ Higher output and stabilized decline
- ✓ Reduced water cut and longer well life
- ✓ Less than **\$10 per incremental barrel**
- ✓ Full ESG and regulatory compliance

**In Simple Terms**  
**ZymeWett® recovers more oil, for less cost, with less impact.**  
It is the smarter, cleaner, scalable recovery solution for the modern energy industry.



## Proven Results — Field Validation

### Independent Testing by Ecopetrol Confirms Breakthrough Performance

ZymeWett® has been independently validated in both laboratory and pilot environments, including a landmark evaluation by **Ecopetrol (NYSE: EC)** on the Rubiales Field, one of Latin America's largest and most challenging heavy-oil reservoirs.

Under controlled laboratory testing using real field samples, ZymeWett® delivered exceptional performance improvements:

- **+26.1%** increase in oil recovery
- **59.4%** reduction in residual oil saturation (more oil released from the rock)
- **12.5%** reduction in water cut (less water, more oil)
- **69.7%** decrease in water permeability (better sweep and pressure control)

These results confirm ZymeWett®'s core mechanisms: restoring wettability, lowering interfacial tension, breaking down organic blockages, and improving flow, all without chemicals, heat, or additional infrastructure.

Following the laboratory success, Ecopetrol authorized a **live pilot** across two wells, a **\$700K deployment** now underway. Upon successful field replication, Ecopetrol plans to scale ZymeWett® across **~1,000 wells**, representing a **five-year commercial opportunity exceeding \$500M**.

## Where ZymeWett® Excels

### A Versatile, Scalable, and Sustainable Solution Across the Oil Value Chain

ZymeWett® is more than an EOR solution, it's a multi-application enzymatic platform engineered to drive performance, cut costs, and reduce environmental impact across the oil & gas lifecycle.

#### 1. Enhanced & Improved Oil Recovery (EOR/IOR)

Designed for mature or underperforming wells.

- Restores rock wettability to free trapped hydrocarbons
- Dissolves paraffin, wax, and asphaltene blockages
- Boosts recovery 25–35% and reduces water cut
- Deploys with no new infrastructure required

✓ Higher production, longer well life, lower lifting cost.

#### 2. Pipeline Drag Reduction & Flow Optimization

Acts as a natural DRA for crude and product pipelines.

- Reduces friction + pumping energy
- Prevents wax/paraffin buildup
- Increases throughput and extends maintenance intervals

✓ Lower OPEX, steadier flow, fewer shutdowns.

#### 3. Storage Tank Cleaning & Sludge Conversion

A clean alternative to chemical solvents and manual cleaning.

- Breaks down sludge into recoverable oil
- Reduces waste disposal and environmental risk
- Cuts cleaning time, labor, and water usage

✓ Converts waste into revenue while improving safety.

#### 4. Bioremediation & Environmental Restoration

For oil spills, contaminated soil, and industrial sites.

- Accelerates natural hydrocarbon breakdown
- Produces non-toxic byproducts
- Fully biodegradable and ESG-aligned

✓ Fast, natural remediation without heavy machinery or chemicals.

# Leadership Team



## Global Expertise Driving Innovation and Commercial Success

ZymeWett Technologies is led by a world-class team with more than 150 years of combined experience across biotechnology, oilfield engineering, international business, and technology commercialization. Together, they are advancing a new global standard for sustainable, high-performance oil recovery.

### Emilio Carrascal

Founder & Chief Technology Officer

A scientist with 45+ years in biotechnology R&D, Emilio is the inventor of the ZymeWett® platform. He directs research, formulation development, and the company’s intellectual property pipeline.

### Kenny Okoye

President

Kenny leads global growth, strategic partnerships, and commercialization. With deep experience scaling international ventures, he drives market expansion and ensures ZymeWett delivers measurable impact for operators, governments, and investors.

### Guillermo Gómez

Chief Executive Officer

With 28+ years in global business development, Guillermo oversees corporate strategy and investor engagement, guiding ZymeWett’s transformation into a leader in enzymatic EOR and industrial biotechnology.

### Carlos Quintero

Co-Founder & Chief Business Officer

Carlos brings 27 years of oil and gas business development experience. He leads commercial strategy and global partnerships, ensuring successful deployment and adoption across major operators and EPCs.

### Clifford Grossman

Chief Financial Officer

Clifford brings 25 years in corporate finance and strategic capital management. He leads financial planning, fundraising, and investment oversight to support scalable global growth.

### Omar Minhaj

Chief Operating Officer

With 25 years in oilfield operations (Halliburton, Roxar, Beicip), Omar manages field deployment, logistics, and quality assurance, ensuring seamless integration into live reservoir environments.

### Mauricio Quintero

Chief Marketing Officer

Mauricio leads global brand strategy and commercial positioning. With 27 years in marketing and business development, he ensures ZymeWett’s technology is clearly communicated and recognized across global markets.

### Collective Vision

The ZymeWett leadership team combines scientific innovation, operational discipline, and commercial execution, delivering biotechnology that drives real, profitable, and sustainable transformation in oil recovery worldwide.



# Looking Ahead

## Pioneering the Future of Green Industrial Biotechnology

ZymeWett Technologies is not just transforming oil recovery, it is building the foundation for the next era of biotechnology-driven sustainability. Our long-term strategy leverages the success of ZymeWett® to create scalable enzymatic solutions that reduce environmental impact, improve efficiency, and unlock new value across global industries.

We are expanding our biotechnology platform through:

### Cross-Industry Enzyme Innovation

Developing next-generation enzymes for PET recycling, agriculture, and food processing to support circular material use and lower carbon production.

### OEM & Licensing Partnerships

Collaborating with major energy and chemical companies to co-develop and license ZymeWett® technologies for global deployment at scale.

### Advanced Biocatalyst Development

Designing new enzyme formulations to boost efficiency, reduce emissions, and accelerate environmental remediation across industrial sectors.

### R&D Centers of Excellence

Establishing regional research hubs to advance product innovation, pilot testing, and commercial readiness in key global markets.

## Our Future Vision

ZymeWett Technologies is evolving into a diversified industrial biotechnology leader, bridging science and sustainability to create cleaner, more efficient, and more resilient systems worldwide.

**We believe biotechnology is the key to the next industrial shift: Where performance, profitability, and environmental responsibility move forward together.**

## ZymeWett® — Science That Flows

At ZymeWett Technologies, we believe energy production can be both high-performance and environmentally responsible. ZymeWett® embodies that belief, a biotechnology platform engineered to increase oil recovery, improve flow efficiency, and reduce operational impact, all without major infrastructure changes.

Instead of relying on harsh chemicals or energy-intensive methods, ZymeWett® uses natural, biodegradable enzymes to restore reservoir balance, free trapped hydrocarbons, and optimize performance across wells, pipelines, and storage systems.

The result is simple: **more production, lower cost, and a smaller footprint.** ZymeWett® is science that flows, where innovation and nature work together to power the world forward, sustainably.



# Our Market Opportunity

## A \$97 Billion Industry on the Brink of Biotechnological Transformation

The global Enhanced Oil Recovery (EOR) market is projected to nearly **double** from **\$48.5B in 2023 to \$97.2B by 2033** (7.2% CAGR). With **over 70% of the world’s oil wells now mature or declining**, operators are under increasing pressure to recover more from existing assets while reducing environmental impact.

Traditional EOR methods such as CO<sub>2</sub> injection, chemical flooding, thermal recovery are becoming **too costly, too energy-intensive, and too carbon-heavy** to scale.

Meanwhile, more than **one million wells worldwide** still contain significant recoverable oil.

# ZymeWett’s Competitive Edge

ZymeWett® introduces a **biotechnology-driven alternative** that delivers higher recovery at lower cost and zero environmental compromise.

**Ready-to-deploy**  
enzymatic EOR platform  
validated by Ecopetrol (NYSE:  
EC).

**<\$10 cost per  
incremental barrel,**  
outperforming chemical and  
CO<sub>2</sub> methods.

**No new infrastructure  
required**  
it integrates seamlessly into  
existing field operations.

**Fully biodegradable and  
ESG-aligned,**  
ideal for sustainability-driven  
operators and regulators.

# Positioned for Expansion

Beyond EOR, ZymeWett® technology extends into:

- Pipeline drag reduction
- Tank cleaning & sludge-to-oil conversion
- Environmental bioremediation
- Enzymes for PET recycling, agriculture, and industrial processes

These adjacent markets represent **multi-billion-dollar** growth pathways, positioning ZymeWett Technologies as a **diversified, scalable biotechnology platform**, not just an oilfield service product.

**Bottom Line**  
ZymeWett® enables operators to **recover more oil, at lower cost, with lower emissions.**

We sit at the intersection of:  
**Energy efficiency.**  
**Environmental responsibility.**  
**Industrial biotechnology.**

A cleaner, faster, more profitable future for oil recovery is not theoretical, **it’s here.**

