Recover More with EOR Alpha Products

April 2023

Complus Systems Group

Who is Complus Trading?

- Complus Trading, part of Complus Systems Group, is an innovative organization representing EOR family products Alpha, a proven technology that has successfully treated over one thousand wells worldwide.

- EOR Alpha products have shown great success increasing oil mobility and recovery in both primary and secondary production phases as well as waterfloods.

- Alpha products have a proven product utilizing relatively unfamiliar technology in the form of a true oil-releasing catalyst, non-living enzyme supported by state of the art nano technology.

- Complus Trading has developed new methodologies which has greatly enhanced the products applicability in the upstream oil-recovery segments, to include unconventional assets. Additionally, we have begun to successfully enter new markets such as midstream separation, remediation, and storage cleaning.

Complus Trading

Complus Trading is proud to be producer of AlphaZyme®, the most experienced and successful enzyme-EOR product available for enhanced oil recovery.

AlphaZyme® is proud to be an American-made product, manufactured in Houston, Texas.

Value Proposition for Oil Recovery

Benefits

Complus Trading Solutions provides sustainable increases in oil production with methodologies utilizing AlphaZyme® technology

Recover More OOIP
- Help to release trapped oil and enhance oil's mobility to produce

Production Improvement
- Reach unrecoverable oil through tight rock with time, water +AZ
- Aid oil mobility through formation without impact to crude, no added emulsions, effective for both heavy and light oil

Flow Assurance
- Alleviate blockages; mobilizes paraffin to production, not solving it (not inhibitor)

Life of Well Improvement
- Oil's improved mobility sustains profitability and delay P&A costs

Execution

Complus Trading Solutions works together with clients to plan and execute field-specific projects

Near Wellbore Treatments
- Advantageous of selected wells for huff-n-puff stimulation or similar operation

Existing Injectors (with known channels of communication)
- Distributes product through the field, improving sweep efficiency and aiding oil's mobility

Reclaimed AlphaZyme®-Water
- Recovered post treatment, if feasible, utilized for additional stimulation operations in the field, helping secure economic success at a low cost

Value Proposition for Oil Recovery

Risk

Complus Trading Solutions recommended methods and operations, utilizing the technology AlphaZyme®, provides little operational risk

- **No harm to people or environment**
- **No damage to equipment or systems**
- **No negative impacts to reservoir**
- **No impact to the hydrocarbon product**

Return on Investment

Complus Trading Solutions when strategically treating wells from a field-view, yield incremental oil that present significant ROI

Incremental oil typically pays for treatment in 30-90 days

- Water injection communication time to producers must be taken into account – including accurate measurements

Anticipated ROI equal to 2-3x investment or more

- Ability to have established historical data production and accurate measurements are key

Benefit of environmentally friendly solution

- Better for assets and reservoirs
- Improvement to crude quality / value - pure separation, no chemical bi-products

Technology Background

What is AlphaZyme® ?

AlphaZyme is the evolution of microbe technology for the purpose of EOR.

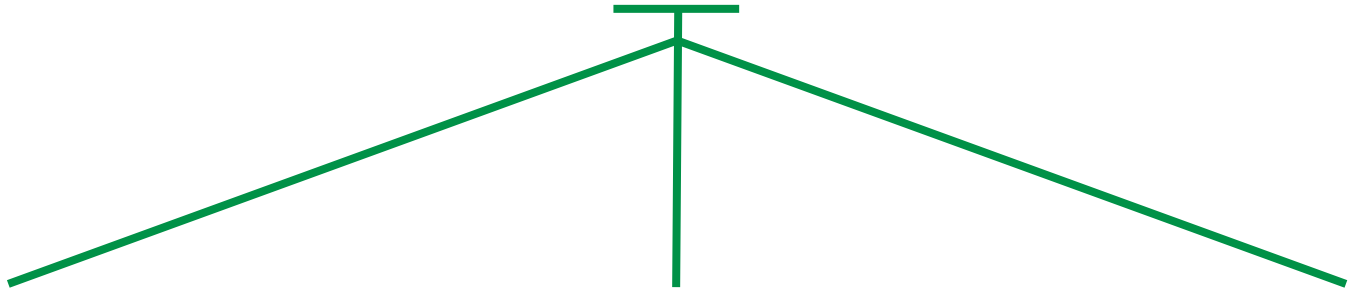
A natural biological catalyst designed to increase oil mobility and improve relative-permeability, helping to recover more OOIP.

A 100% biodegradable solution that is more powerful and longer lasting in the reservoir as a result of its catalytic functionality.

Our products can handle adverse well conditions such as:

- Temperature
- pH
- Salinity
- Radioactive Isotopes
- NORM
- Sulfur
- Hydrogen Sulfide content
- Paraffin
- Polymers blockage caused by old EOR products

IOR / EOR



Chemistry

- Fracturing
- Hot oils
- Acid and caustic
- ASP, polymers

Biology

- Microbes – Living
- Enzymes – Non-living

Physics

- Water-flooding
- Steam -injection
- Microwave
- Radio Frequency
- Nano Technology

Enzyme-EOR ?

Living Organism

Microbe – single-cell organisms so tiny that millions can fit into the eye of a needle. Oil-Eating microbe converts oil into carbon dioxide and water.

Non-Living Organism

Enzyme – substance produced by a living organism that acts as a catalyst to bring about specific biochemical reaction.

True Biological Catalyst

Catalyst – substance that increases the rate of a chemical reaction without itself undergoing any permanent chemical change.

Solution Comparison

AlphaZyme® surpasses traditional recovery solutions in nearly every feature

Feature	Microbes	Surfactant	Polymer	Thermal	AlphaZyme®
Category	Biology	Chemistry	Chemistry	Physics	Biology
Description	Living bacteria to break up the oil	Reduces IFT	Large sized molecules to push oil	Increases mobility through heat	Millions of interactions per seconds to free oil
Market acceptance	🟡	🟢	🟢	🟢	🟡
Applied as Conventional EOR Solution	🟢	🟢	🟢	🟢	🟢
Applied as an Unconventional EOR Solution	🔴	🟢	🔴	🔴	🟢
Provides effective physical mobilization of oil	🟡	🔴	🟢	🟢	🟢
Positive impact to IFT, Contact Angle, Capillary	🔴	🟢	🟡	🔴	🟢
Retains Efficacy over long distances	🔴	🟡	🟡	🔴	🟢
Minimal treatments required for efficacy	🟡	🟡	🔴	🔴	🟢
Non-consumable and Reusable solution	🔴	🔴	🔴	🔴	🟢
Ease of use, no special equipment required	🔴	🟢	🟡	🔴	🟢
No risk to equipment or reservoir	🔴	🟡	🟡	🟢	🟢
Environmentally friendly and non-harmful	🟢	🔴	🔴	🟢	🟢

These features directly affect capex and opex

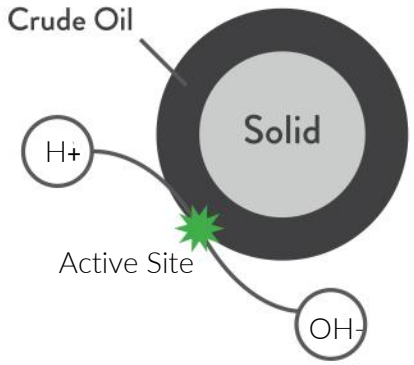
🟢 = High 🟡 = Medium 🔴 = Low

Things to Consider when Choosing EOR Technologies

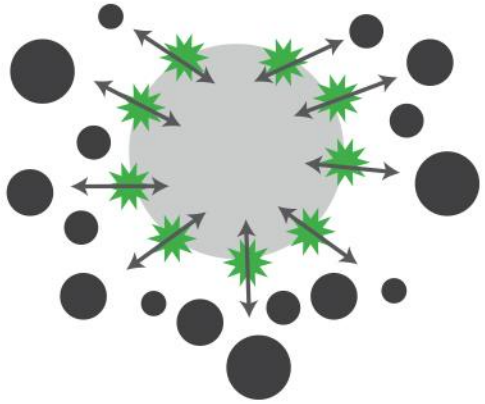
Methods	Biology		Chemistry	Physics
	Non-living	Living		
Process used	Enzyme	Microbe	Acid, alkaline, hot oils, organic & inorganic polymers, surfactants, fracturing additives,…	Steam injection, water flooding, fire & hi-temp combustion, CO_2, N_2, CH_4 capping, ultra sound & micro wave, ...
Real catalyst	Yes	Yes	No	No
Real DNA molecules	Yes	Yes	No	No
Environmental friendly	Yes	Mostly yes	No	Mostly yes
Use simple pumping	Yes	No	No	No
Volume of oil increase	High	Small	Average	Average
Duration of oil lasts	18-36+ mo.	3-4 mo.	3-6 months	3-6 months
Special tools needed	No	Yes	Yes	Yes

How does AlphaZyme work?

Oil releasing process with AlphaZyme®



AlphaZyme® molecule interacting with crude oil attached to solid



AlphaZyme® physically releases oil from solid, relieving IFT, improving contact angle and alleviating capillary pressures

Oil-wetted surface changed to a water-AlphaZyme®-wetted surface

Technology & Mechanism

AlphaZyme® is the evolution of microbe-biology technology for the purpose of improved oil-recovery. The product is engineered through a proprietary DNA-transfer process that involves impregnating a high-protein nutrient solution with selective DNA of oil-digesting microbes. This process results in an inert and water-soluble protein DNA-molecule, a non-living biological enzyme, specifically designed to act as an oil-releasing catalyst, capable of producing millions of reactions per second.

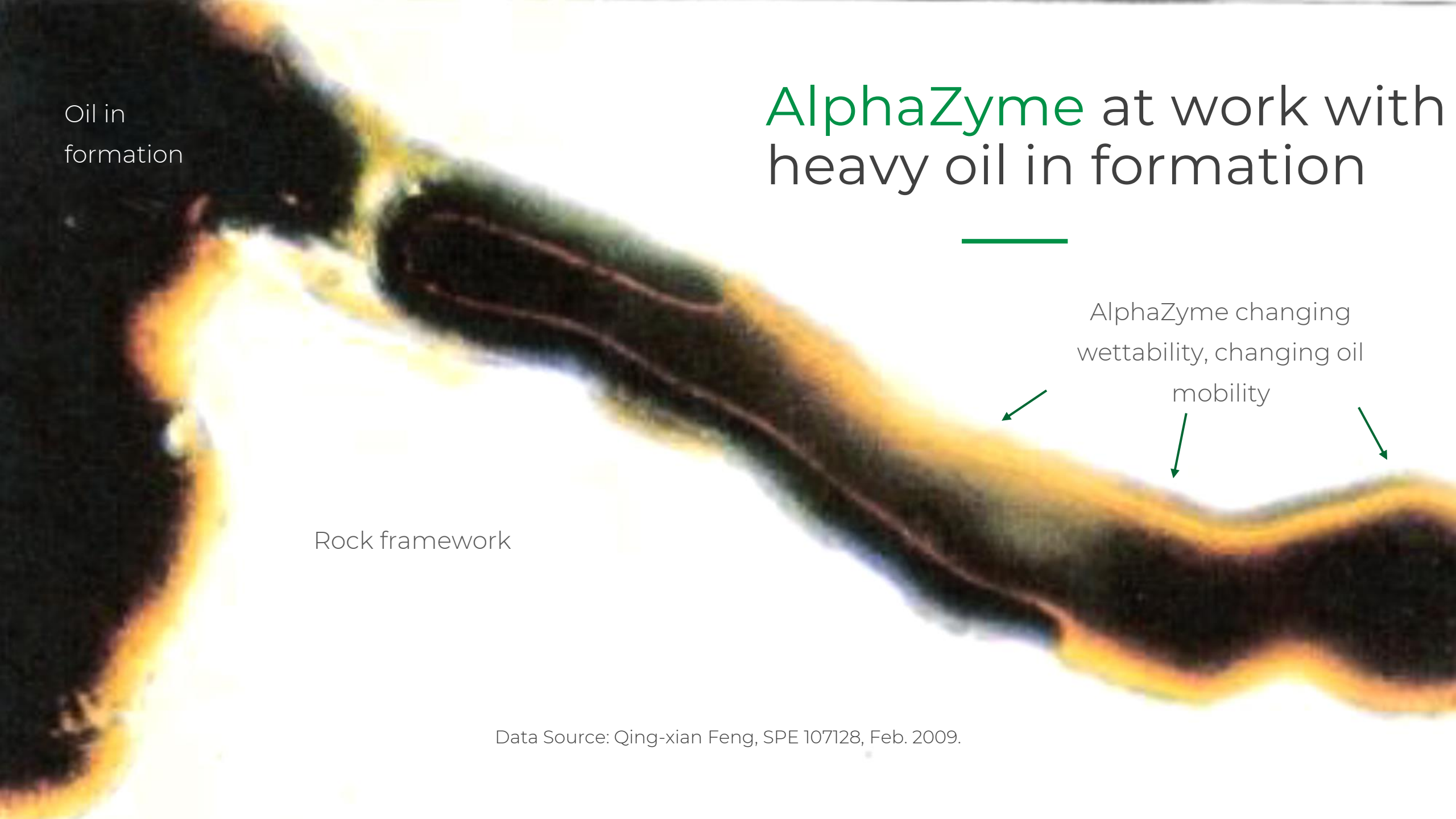
The enzymatic function of the catalyst is strictly limited to its interaction with hydrocarbons. As a true-catalyst, AlphaZyme® has the ability to perform its function repeatedly as a non-consumable agent, without loss of efficacy over time. The mechanism involves three components: H^+, OH^-, and an “active site”, which represents the proprietary DNA component. The H^+ and OH^- components form a polar part and the active site forms a non-ionic part. Upon contact with a hydrocarbon the non-ionic part allows the enzyme to penetrate the hydrocarbon, whereby the polar H^+ and OH^- components work to release microscopic droplets of oil.

Technology & Mechanism, con't

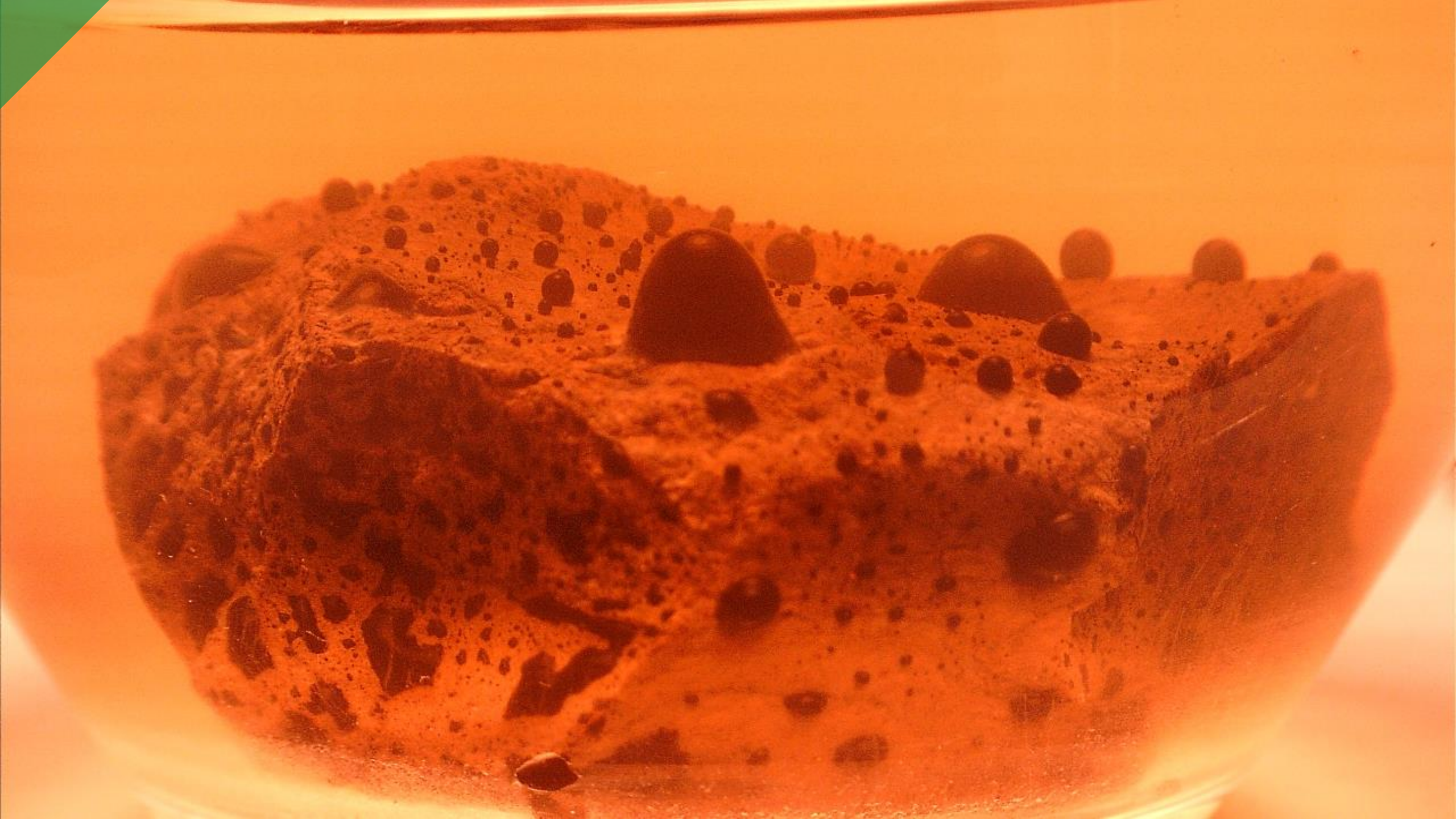
The result of this unique behavior is a clean release of oil by relieving interfacial tension, improving contact angle and alleviating capillary pressures. This process is continuous over time and produces no byproducts of any kind. The hydrocarbon's mobility is improved without impacting the hydrocarbon chain or changing viscosity. AlphaZyme's® enzymatic catalyst function is capable of providing production impacts that have been measured in the field for durations in excess of 12 months after a single treatment.

AlphaZyme® is the industry's non-consumable and reusable downhole oil-recovery technology, an environmentally-friendly solution.

AlphaZyme at work with heavy oil in formation



Data Source: Qing-xian Feng, SPE 107128, Feb. 2009.



AlphaZyme, a catalyst at work

0 hours

24 hours

48 hours

72 hours

Without any agitation, AZ cleanly releases oil from the surface of rock.

Click above to watch embedded video.

Complus Trading

As AlphaZyme reaches the oil / sand mixture, oil immediately releases from the substrate.

Gravity then does its job; the pure oil separates and floats to surface while sediment is left behind on the surface floor.

Summary of Alpha® Benefits

- All of our EOR products are based on advance engineered nanotechnologies that improve the penetration into the formation, in order to optimize dramatically the oil recovery.
- Our AlphaZyme D300, like all other Complus EOR products is developed to resist to temperatures of 300 degrees Celsius, so that it can be used in any condition of the formation and thus in any oil well.
- AlphaZyme D300 can be used with both heavy and light oil.
- AlphaZyme D300 combines both engineered enzymes that change the viscosity of oil, changing stones and sand from oil wet to water wet and nanotechnology that permits to the product to penetrate deeper in the formation so to recover dramatically more oil than other traditional products.
- Depending by the type of formation, the effect of viscosity change, performed by our engineered enzymes last, in average, much longer than any other traditional product (from 12 up to 36 months).
- Further to single well treatment, our EOR products can be used also in flooding operations to treat multiple oil wells at once.

Summary of Alpha® Benefits

- AlphaZyme D300 is user friendly, being very easy to use. No need of any pre-treatment or pre-warming. Just mixing with simple room temperature water and injecting in the formation through the well tubing or casing. The quantity of needed product is calculated very easily with annulus calculations.
- Our product AlphaZyme D400, used in flooding operations, with large quantity of high pressure steam water, is perfectly able to unblock those oil wells previously blocked by polymers used in older EOR products.
- With our AlphaSteamFlash products, it is possible to stimulate perfect oil recovery of very heavy oils and bitumen.
- Our AlphaStripBTS products are designed specifically to help strip the oils from sands when used on Tar Sands, while softening and braking up Bitumen type oil particles and into smaller droplets when used on Bitumen Oils. This allowing for higher levels of oil reclamation during the frothing tank processes.
- AlphaZyme D-600 family products are used as a sludge buster product to separate oil from mud and thus improve production by changing the viscosity of the oil.

Summary of AlphaZyme® Benefits

- In addition to a complete set of EOR products, covering all types of formations and oils, Complus Systems offers also a complete set of products for Bioremediation of both soil and water polluted by oil spills and brine, successfully used to clean the coast of Mexico Gulf. In example, when treating sludge, after oil, water and dirt are separated, the dirt can be bioremediated in order to obtain a perfectly clean and already fertilized soil, ready to be used for agriculture.
- In a few words, our catalog of products is rich and complete, giving to our client the opportunity to operate in any condition and with any type of oil, temperature and even giving the chance of cleaning, so to have a green environment. Furthermore all our products are totally non toxic, respecting the need of green products and a healthy environment. Both our EOR and Bioremediation products are EPA certified.

Complus Trading
Market-Entry / Case studies

Upstream Target Market

1. US-Conventional
   - Marginal / Stripper < 10 bopd (1-2 AZ each)
   - Primary / Secondary 11 - 3,000 bopd (2-12 AZ each)
   - Tertiary waterflood (4-12+ AZ each)

2. US-Unconventional
   - Vertical (2-6 AZ each)
   - Horizontal (8-100+ AZ each)

3. International Conventional
   - Primary / Secondary 20 - 3,000 bopd (4-12 AZ each)
   - Tertiary waterflood (4-12 AZ each)

4. Offshore
   - Secondary 250 - 3,000 bopd (4-12 AZ each)
   - Waterflood (12+ AZ each)

(each AZ unit is 55-gallon drum or 275-gallon tote)

Upstream Market-Entry Results

1. Stripper Well Trials
   - Well A: 1-bopd with 55% avg increase for 15 months post-treatment
   - Well B: 1-bopd with 300% increase for first 60-days and settled in at 65%
   - Well C: 3-bopd with 66% increase for first 90-days, 230 bbls incremental oil

2. Waterflood Application
   - First wells treated, awaiting results
   - First offshore project identified

3. Secondary Production Conventional Wells
   - Well D: 18-bopd with 65% avg increase for first 65 days and currently 40%
   - Well E: 80-bopd treated, 26% increase first 90-days, 1,400 bbls additional oil
   - Well F: Problem well at 0-bopd, achieved 7.5-bopd avg first 90 days, 660-bbls
   - Heavy oil steam flood: off-spec tank opportunity identified, working to treat emulsions and bring crude to sellable value

3. Unconventional Frac
   - First major Permian field trial scheduled in February
   - Two brownfield low psi stimulation jobs scheduled in April

Proof of Concept – Omani Heavy-Oil Conventional

Gross production improvement

The Situation

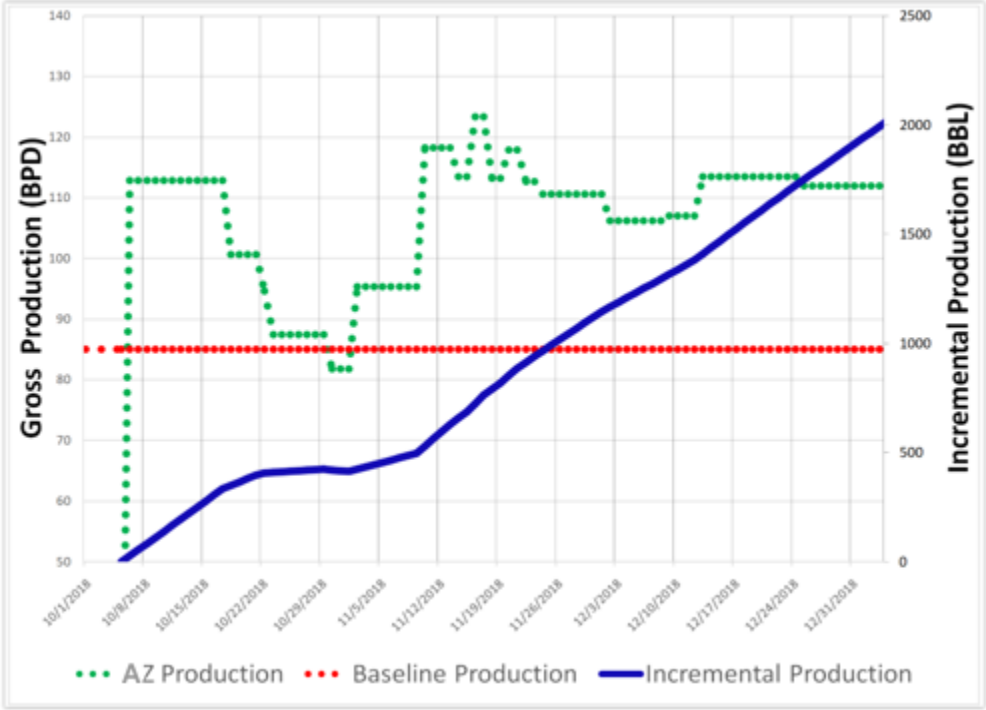
- Well IP 119 bopd, declining to 68 bopd
- 20% water cut
- Average porosity 23% producing 16 API oil from three pay zones

The Treatment

- Well shut-in with squeeze job of 365 bbl of water, and 4 drums (220-gal) of AlphaZyme®

The Result

- Gross production post treatment has yielded over 2300-bbls incremental vol. in the first 90-days



Proof of Concept – Conventional Rescue & Recover

Achieved 660 bbls incremental oil in first 90-days

The Situation

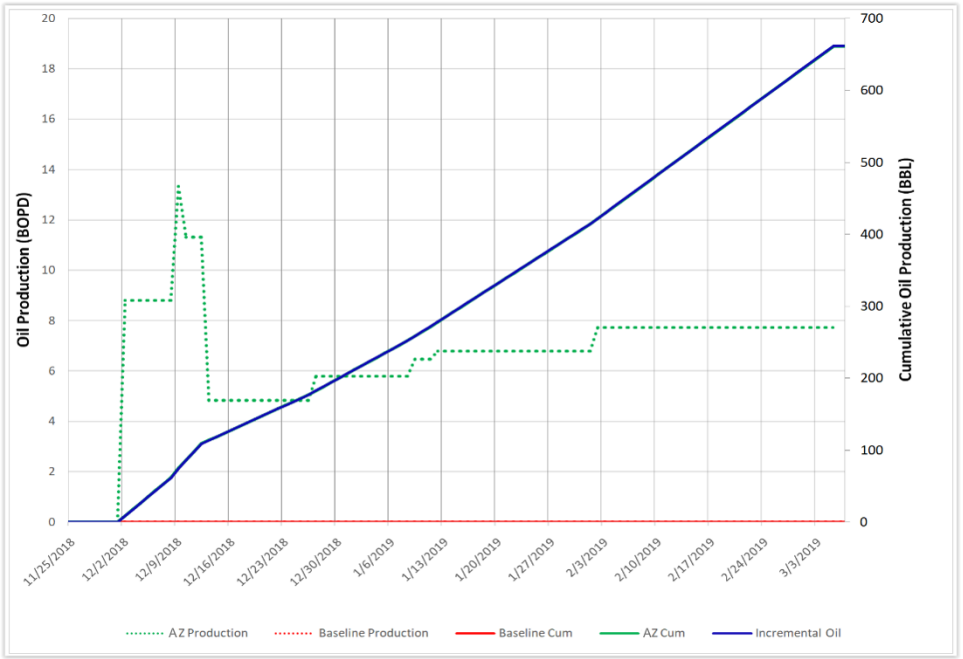
- Well IP 44 bopd, experienced severe decline over first 18 months production
- Well production hit 0-bopd for 100 days prior to AZ treatment
- Average porosity 23% producing 21-API
- No gravel-pack, sand production problem

The Treatment

- Stimulation included Qty 4 drums (220-gal) of AlphaZyme® and 350 bbl of water
- 5-7 day shut-in recommended
- Treated down backside, keeping costs low
- Rescue operation and attempt to bring well back to life

The Result

- Immediate improvement achieved, avg of 7.5-bopd first 90 days, sand prob mitigated
- Yielded 660-bbls of incremental oil in first 90 days achieving positive ROI, still monitoring



Proof of Concept – U.S. Marginal Conventional

66% production improvement avg at 90 days

The Situation

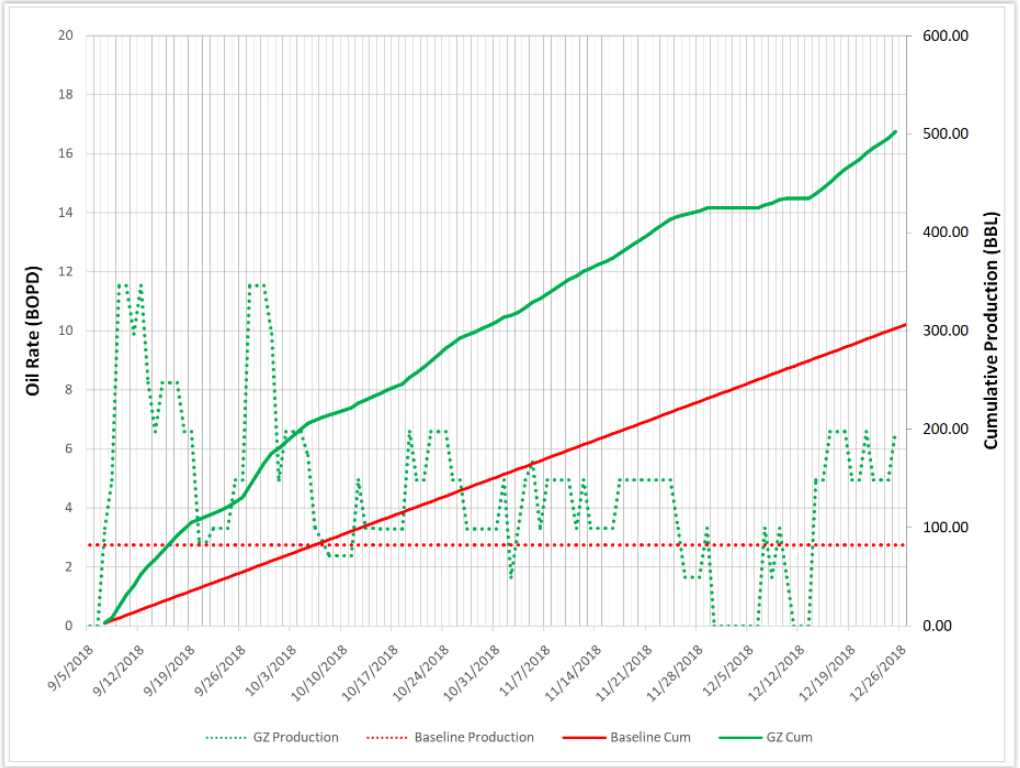
- Well IP 21 bopd, declining to 3 bopd in less than 18 months
- Average porosity 11% producing 41 API oil from a single pay zone

The Treatment

- Well treated down backside with Qty 2 drums (55-gal) of AlphaZyme® 2% KCl water and 325 bbls produced water
- Well shut-in for 4 days

The Result

- Average of 66% improvement over the first 90 days yielding 230 bbls incremental oil



Proof of Concept – U.S. Marginal Conventional

115% production improvement avg at 100 days

The Situation

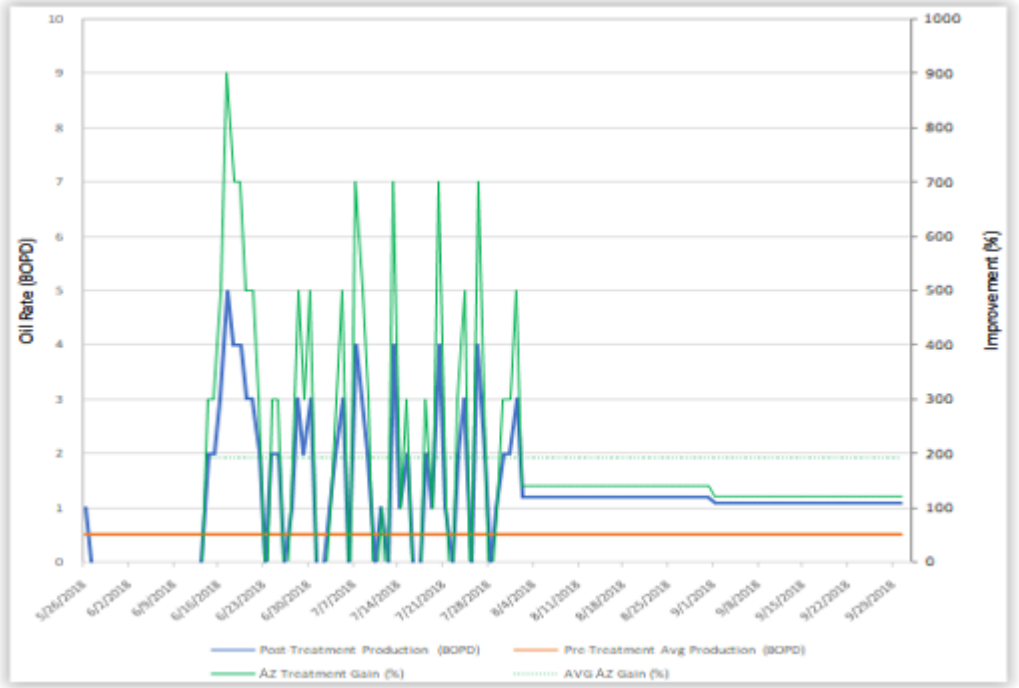
- Well IP 57 bopd, declining to < 0.5 bopd
- Average porosity 12% producing 32 API oil from a single pay zones

The Treatment

- Well treated down backside with Qty 1 drums (55-gal) of AlphaZyme® and 120 bbls produced water
- Well shut-in for 7 days

The Result

- Average of 115% improvement over the first 100 days yielding 70 bbls incremental oil
- Positive ROI achieved at 115 days



US-Marginal Well Success

WELL 140

FORMATION: Anacacho
POROSITY: 8%
PRE-TREAT PRODUCTION: 3.4 bbls/day
OIL GRAVITY: 34
COMPLETION: 1991, 104 bbls/day
NOTED CONDITIONS: Treated with GZ & water + 2% KCl

WELL 130

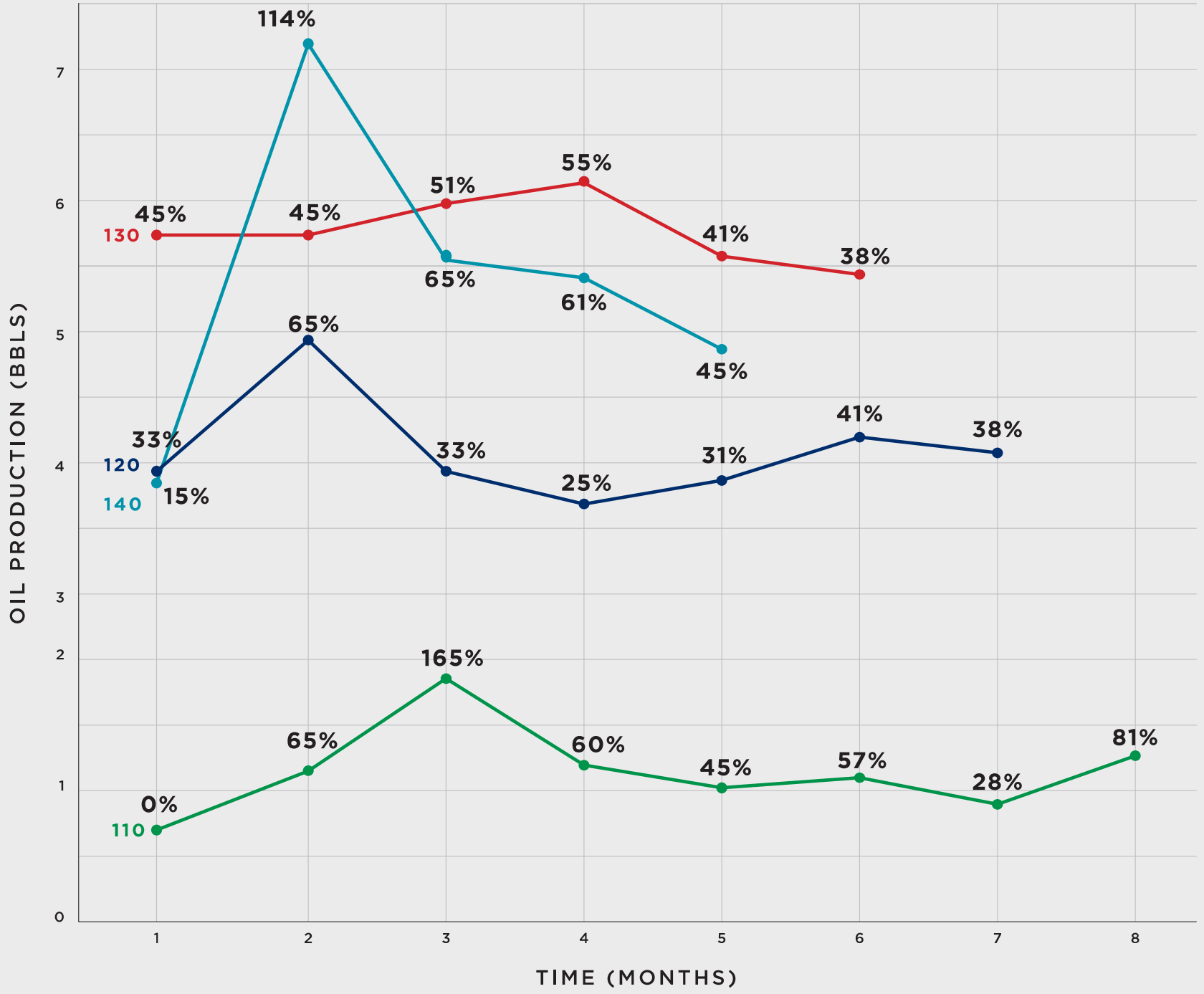
FORMATION: Hunton
POROSITY: 14%
PRE-TREAT PRODUCTION: 4.0 bbls/day
OIL GRAVITY: 36
COMPLETION: 1984, 75 bbls/day
NOTED CONDITIONS: Moderate paraffin, 14%

WELL 120

FORMATION: Tonkawa
POROSITY: 10-14%
PRE-TREAT PRODUCTION: 3.0 bbls/day
OIL GRAVITY: 38
COMPLETION: 2009, 30 bbls/day
NOTED CONDITIONS: Moderate paraffin, 15-20%

WELL 110

FORMATION: Strawn Sand
POROSITY: 8-12%
PRE-TREAT PRODUCTION: 0.7 bbls/day
OIL GRAVITY: 36
COMPLETION: 1996, 101 bbls/day
NOTED CONDITIONS: Depleted, with some paraffin



Proof of Concept – U.S. Permian Unconventional

First major unconventional field trial

The Situation

- Execution of first zipper-frac in February
- Trial Value of $400K
- Successful indicators will include:
  - Increase initial oil production
  - Reduced duration of time to produce
  - Oil mobility to produce at less pressure

The Method

- AlphaZyme to mix with frac water, to interact with the most oil in the fractures
- Quantity-30 totes (6,600 gal) mixed with frac water at ratio of 4-gpt (gallons per thousand)
- Solution will benefit from natural shut-in duration during completions

Execution

- Project planning executed
- Frac job execution in Q2

Proof of Concept – U.S. Permian Unconventional

Two well trial for unconventional brownfield stimulation trial

The Situation

- Execution of Qty-2 unconv. brownfield stim
- Trial to mobilize oil w/less required energy/psi
- Successful indicators will include:
  - Improved oil production and flow rate
  - Reduced duration of time to produce
  - Assist Oil mobility to produce at less psi

The Method

- AlphaZyme injected with water at low psi to stimulate residual oil in the fractures
- Qty-2 drums (55-gal each) per well, mixed with water at ratio of 4-gpt (gallons per thousand)
- Solution will benefit oil migration thru proppant network and small closures with less required energy/psi to produce

Execution

- Product delivery in progress
- Low psi stim job scheduled to execute in Q3

Impacting on Unconventional Resources

- Mixed with frac water, AlphaZyme will treat an unconventional horizonal during a multi-stage frac process.

- Implemented during the frac process, AlphaZyme will maximize its opportunity to interact with hydrocarbons.

- As each stage is completed AlphaZyme will benefit from a beneficial soak period, optimizing its impact potential.

- When production begins the following improvements to oil mobility are achieved:
  - Oil-released from the surface of rock
  - Reduced IFT & capillary pressures
  - Improved contact angle
  - Improved relative-permeability
  - Maximize recovery of OOIP
  - Reduced impact to environment

Market Potential

1. Upstream Oil Recovery

2. Drilling
   - Cuttings
   - Emulsions
   - Soil Remediation

3. Downstream
   - Separation
   - Flow assurance

4. Environmental / Remediation
   - Tanker / FSO
   - Railcar
   - Trucking
   - Soil

Upstream Sales Strategy

1. Direct Sales to Operator
   - Well by well
   - Field based

2. CSS – Challenge-Specific Solutions
   - Recover More OOIP
   - Heavy oil
   - Paraffin / Asphaltene
   - Application specific “copy-cat” targets

3. Strategic Partners
   - Industry-specific
   - Regionally focused
   - Application specific

Recover More OOIP Opportunity

Challenge

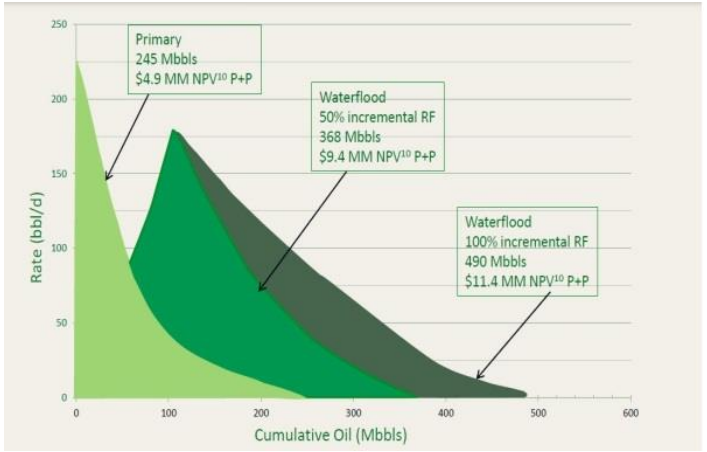
- ❖ Recover more OOIP than current industry methods
- ❖ Extend life-of-well with consistent production rates
- ❖ Reduce footprint of nasty production chemicals
- ❖ Cleanly recover oil
- ❖ Supply clean product downstream

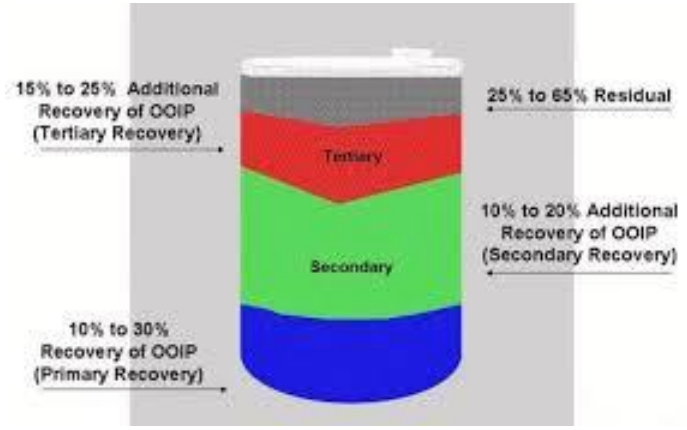
Product Features & Benefits

- ➢ Easy to use, low risk to implement
- ➢ Environmentally-friendly oil-releasing enzyme
- ➢ True catalyst, performs its function repetitively over-time
- ➢ Non-consumable and reusable oil-releasing agent
- ➢ No special equip needed & does not damage equip
- ➢ Inert water-soluble protein, plays well with chemistry

Value to Client

- ✓ Low cost, low risk and easy to use
- ✓ Efficiently recovers more oil and alleviates blockages
- ✓ Operation consistently achieves positive ROI
- ✓ Operation yields long-term positive effects to life of well
- ✓ Higher value crude at point of sale, clean crude





Upstream Recovery: Target Market

- ❑ US - Conventional Assets
  - ➢ Marginal / Stripper Wells
  - ➢ Secondary Production
  - ➢ Tertiary Production
- ❑ US - Unconventional Assets
  - ➢ Initial frac, new completions
  - ➢ Re-frac market, continued production
  - ➢ Clean-frac to reduce environmental footprint
- ❑ International
  - ➢ Middle East: Oman Qatar, Kuwait & UAE
  - ➢ North Sea
  - ➢ Canada, Mexico, Africa
- ❑ Offshore
  - ➢ North Sea, GOM & West Africa

Heavy Oil Opportunity

Challenge

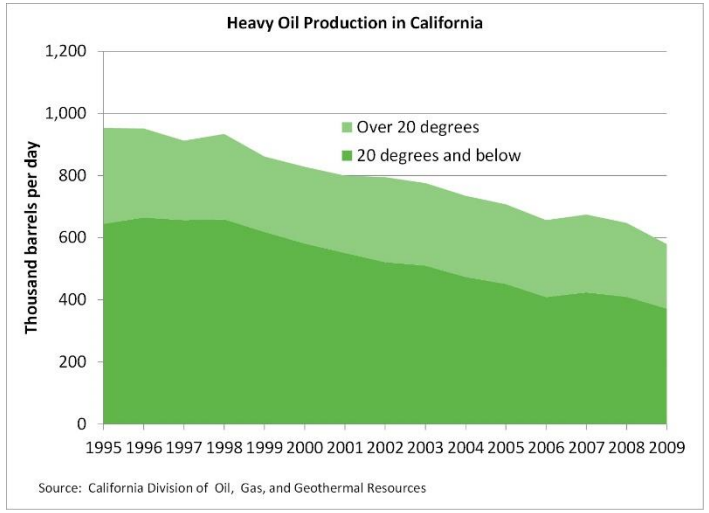
- ❖ High viscosity, low gravity API
- ❖ Strong adhesion properties, low mobility
- ❖ High sand production
- ❖ Asphaltene content
- ❖ Emulsions, formation of water-in-oil

Our Solution with AZ

- ➢ Release oil's adhesion to substrate
- ➢ Micro-oil droplets improve relative-permeability
- ➢ Relieve formation blockages; paraffin, asphaltene
- ➢ Improve oil mobility in-formation
- ➢ Reduced sand production

Value to Client

- ✓ Low cost OpEx method to Recover More OOIP
- ✓ Improvements to reservoir flow conditions
- ✓ Less chemical & less downtime = cost savings
- ✓ Aid to separation and downstream processing
- ✓ Benefit of environmentally-friendly solution



Oil Classification

Type	API gravity	Density (kg/m³)	Viscosity (cP)
Bitumen	<< 10	1000 ++	> 10.000
Extra heavy oil	< 10	1000 +	> 1000
Heavy oil	10 – 22.3	920 - 1000	> 100
Medium oil	22.3 – 31.1	870 - 920	10 - 100
Light oil	> 31.1	< 870	< 10

Tor Bjørnstad

Paraffin Opportunity

Challenge

- Hydrocarbon compound that precipitates on production components resulting from change in temp & psi
- Heavy wax substance that builds up on oil in a honeycomb-like structure, attached to oil
- Strong adhesion properties, low mobility with a strong tendency to create severe blockages and halt flow
- Current industry solution: Lots & Lots of nasty chemicals and/or heat

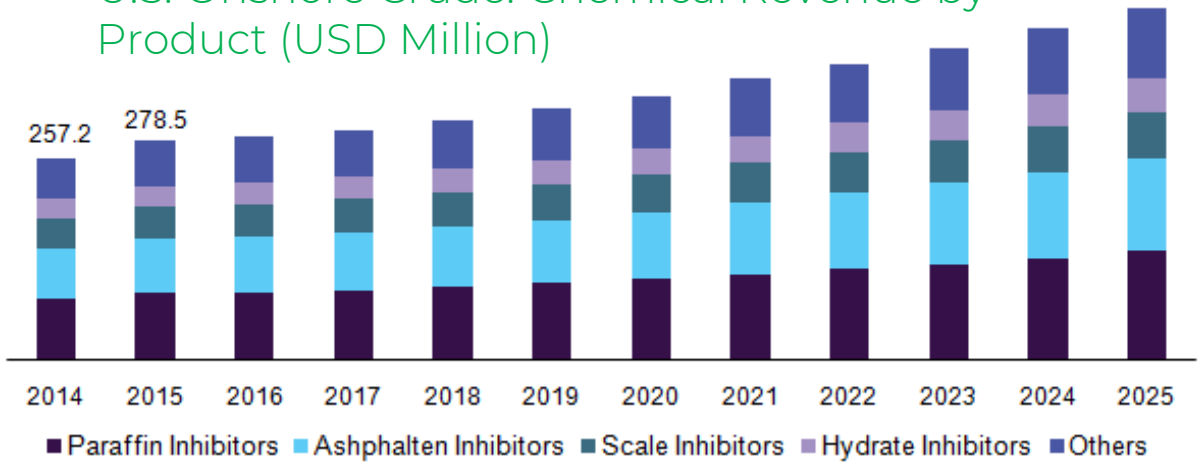
Our Solution with AZ

- AZ is not an inhibitor, does not solve paraffin
- Releases & displaces oil to mobilize paraffin
- Relieves formation blockages of mild to severe paraffin
- Improve oil & paraffin mobility

Value to Client

- ✓ Effective paraffin mobilization and blockage removal
- ✓ Recover More OOIP by releasing trapped hydrocarbons
- ✓ Improvements to equipment degradation
- ✓ Less chem, less opex & less downtime = cost savings
- ✓ Benefit of environmentally-friendly solution

U.S. Onshore Crude: Chemical Revenue by Product (USD Million)



US Avg yearly paraffin spend is $80-150M

FSO Tanker Cleaning Application

Challenge

- ❖ Tanks with existing water and hydrocarbon sludge
- ❖ Tanks have structural members making it difficult to clean with pressure-washers
- ❖ Current industry solution: Pressure-wash and remove hydrocarbon laden sludge manually. Costly for transporting hydrocarbon waste – nasty mess.

Our Solution with AZ

- ➢ Utilize AZ in Firehose Induction System to soak walls of tank
- ➢ AZ and water soak to the bottom of tank - releases and displaces oil from sludge
- ➢ Skim-off and recover incremental oil for refinery
- ➢ Re-circulate AZ water to next tank

Value to Client

- ✓ Effective cleaning and removal of hydrocarbons
- ✓ Recover more oil by releasing trapped hydrocarbons
- ✓ No equipment or tank degradation
- ✓ No hydrocarbons in sludge = cost savings for disposal
- ✓ Benefit of environmentally-friendly solution = cost savings for operations near shore

Typical FSO

Railcar Tanker Crude Cleaning Application

Challenge

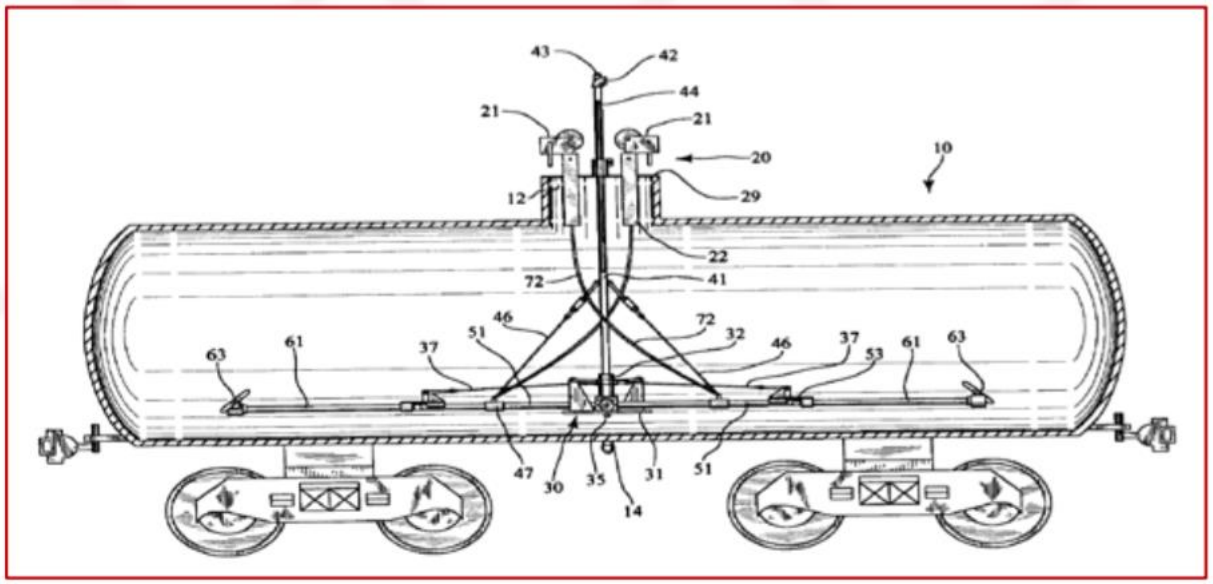
- ❖ Railcar tanker with heavy hydrocarbon sludge
- ❖ Current industry solution: Pressure-wash/steam and scrape to clean hydrocarbon/paraffin. Manually shovel hydrocarbon laden sludge thru BOV or suck it out of heel. Hazardous for personnel and costly for transporting / disposal of hydrocarbon waste – nasty mess.

Our Solution with AZ

- ➢ Add AZ to hot oiler with existing water
- ➢ AZ / water heated 200 F injected Railcar for 1 hour – releases and displaces oil from sludge
- ➢ Recover incremental oil for refinery
- ➢ Re-capture AZ water for next railcar tanker
- ➢ Remove clean hydrocarbon-free waste

Value to Client

- ✓ Effective cleaning and removal of hydrocarbons
- ✓ Recover more oil by releasing trapped hydrocarbons
- ✓ No equipment or tank degradation / improved operations
- ✓ No hydrocarbons in sludge = cost savings for disposal
- ✓ Benefit of environmentally-friendly solution = cost savings for on-site operations



Typical Tanker Railcar

API-22 Oil AlphaZyme D300® Client Lab Test

Service Hand Field Test, China

API-22 oil poured into glass container

Cut plastic bottle received API-22 oil

Water only added, no reaction after period of time

AlphaZyme product added to water

AZ added at approximately 10% concentration and allowed to work

After 30-45 minutes

Released oil is now visible at surface of water

After 3-hours

Significant portion of oil is mobilized to water surface

After 5-hours

AZ has released more than 90% oil from bottom and side walls, without agitation or heat

Untreated Crude Sludge from Tanker Railcar Heel

Hot Crude Sludge from Tanker Railcar Heel – Treated with AlphaZyme D300® (Test)

AlphaZyme® Treated Crude Sludge Mobility

PRODUCTS

AlphaZyme® D-300 Enzyme Based EOR

AlphaZyme D-300 is used as a well stimulation product to improve production by improving the viscosity of the oil. Temperature limit is 300 degrees Celsius. AlphaZyme D-300 can also be used in Water Flood Programs and is offered as AlphaZyme D-300WC.

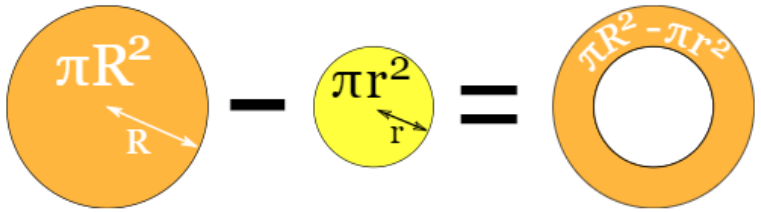
Product Dilution

These products are to be diluted to a 10% to 20% activity rate and injected into the Well Head at the well. Precise Displacement by volume should be calculated using the Annulus Formula. **Never use this product in the concentrated format.**

AlphaZyme® D-300 Enzyme Based EOR

Example of Annulus Volume formula injecting down the tubing

If Client pulls the pump and set a packer on the backside, the diluted product should be pumped down the tubing. This is the best strategy on older wells, to protect the casing from high pressure since the tubing pressure is tested regularly.



$$\text{Area} = \pi R^2 - \pi r^2$$
$$= \pi(R^2 - r^2)$$

To calculate the volume of the tubing, use the following formula: diameter x diameter divided by 1029 x length of the pipe.

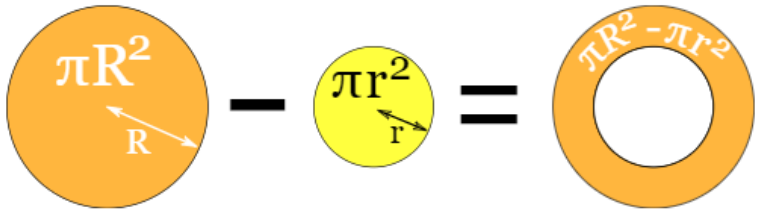
Example: if the tubing is 2 7/8 " diameter and it is 6500' deep use 2.875x2.875 / 1029 x 6500 = 52.21 barrels will fill the tubing. A Barrell is equal to 42 gallons of diluted barrels. In this case, a total of 2192,82 gallons of diluted product are necessary with a total of used concentrated AlphaZyme D-300 product of 219,28 gallons (or 0,85 Metric Tons). One metric ton of AlphaZyme D-300 is equivalent to 258,87 Gallons.

On a small well stimulation we generally pump 25 barrels per foot of perforations in vertical wells and displace with the volume of the tubing by 1.5 times. For larger stimulations we will treat with 50 barrels per foot of pers.

AlphaZyme® D-300 Enzyme Based EOR

Example of Annulus Volume formula injecting down the casing

If the client does not want to remove the pump and use the annulus to push the treatment down in the formation, calculate the casing volume with the same formula and subtract the tubing volume for the casing and that is our displacement rate x 1.5.



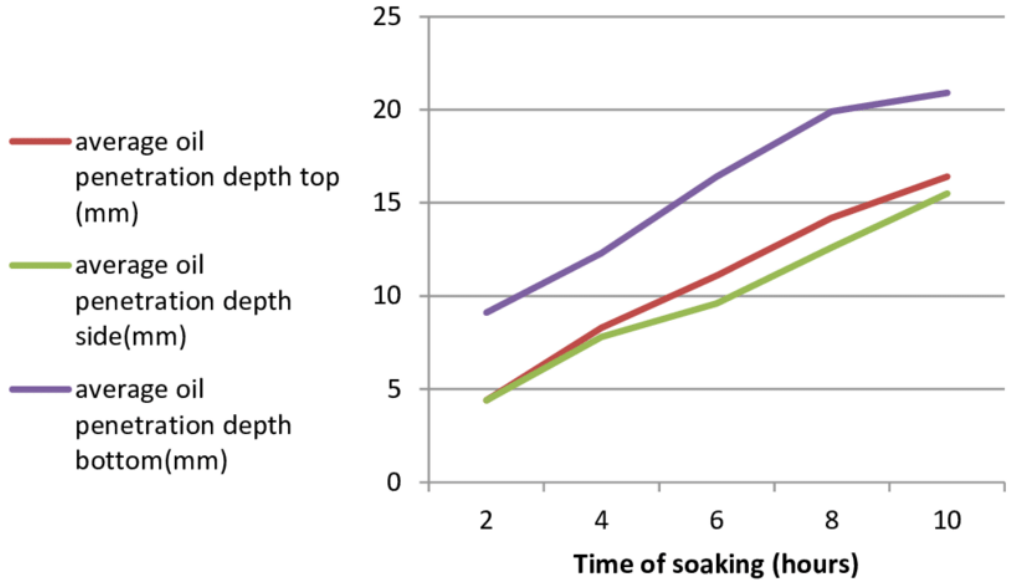
$$\text{Area} = \pi R^2 - \pi r^2$$
$$= \pi (R^2 - r^2)$$

When treating down the annulus, always set the pump in the upward position and tighten the stuffing box before beginning the treatment. However normally, per each well, consider a quantity of 1 metric ton of concentrated AlphaZyme D300 to be diluted to 10% with produced water (or saline water or normal water) in a mixing tank, equivalent to 10 metric tons of water and the mix shall be injected in the annulus with a 5000 psi pump.

AlphaZyme® D-300 Enzyme Based EOR

Soaking period

In order to maximize the duration of stimulation up to the maximum of 36 months, we suggest, at the end of at least one week soaking period, to open only partially the well, to only 30% capacity for 3 days, then to 50% for another 3 days and to 100% after another 6 days. In that way the Enzyme will continue to work for a long time after treatment. According to experience on previously treated wells, results may vary based on type of formation. Some soak times have been up to 14 days to get maximum output.



AlphaZyme® D-400 PB Enzyme Based EOR

AlphaZyme D400 PB High Temperature is a microemulsion/ nano particle product designed and formulated with co-solvents and surfactants to enhance the removal of polymers fluids and improving water floods by reducing surface tension, breaking down PHPA and changing producing rock from oil wet to water wet. This product also has an oil enhancing enzyme built to release oil imbibed in the rock.

AlphaZyme D400 PB High Temperature delivers superior water wetting characteristics in both carbonate and sandstone reservoirs. The result is a more efficient stimulation, with residual wetting, that enhances the performance and life of an oil or gas well and its longevity.

The AlphaZyme D400 PB (Polymer Breaker) High Temperature is a product developed to break up polymer damage in formations. This damage can be caused by previous water flood applications of polymer and also frac damage caused by polymer. AlphaZyme D400 PB (Polymer Breaker) is a special nano surfactant with added nano particles. This product is effective in all API levels.

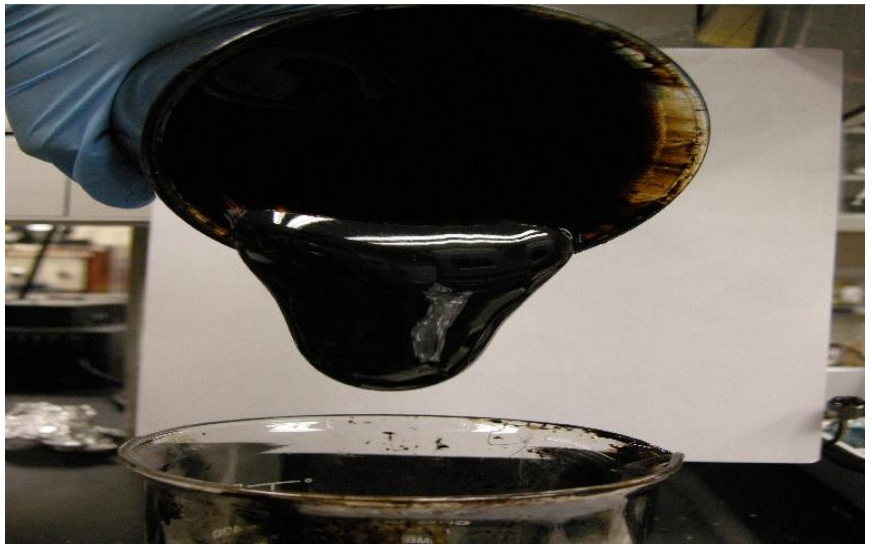
AlphaZyme® D-400 PB Enzyme Based EOR

Specific Gravity:	1.026	Appearance/Odor:	Amber/Alcohol Odor
Flash Point:	2.05°F	pH:	6 to 8

AlphaZyme D400 PB High Temperature is recommended at a loading of .75 to 1.5 GPT in fracturing fluids. Do not allow to touch active acid in the formation. It is suggested to always run a compatibility of fluids. AlphaZyme D400 PB High Temperature is available in 55 gallon drums and various totes or bulk.

AlphaSteamFlash® 500 WB Heavy Oil EOR

Complus Trading North America, LLC offers ASF-500WB in a Liquid Surfactant Blend. This product has various specifically designed Stabilizers, Nano Surfactants, and Nano Particles for use in Heavy Oil Wells where Steam Injection Methods are used for oil extraction and increased well stimulation. It is designed to give excellent foaming characteristics upon injection into the well's formation. This foaming action allows for deeper formation penetration and increased dispersion, of the steam and our chemical additives, to advance further into all areas of the formation. ASF-500 WB is designed and contains specific products to handle and perform optimally in "High Temperature Well Environments".



The "Steam Injection Method for well stimulation" is designed for the delivery of chemicals deep into the formation. Steam Injection has a tendency for the steamed chemicals to travel the path of least resistance. With our ASF 500 WB the foam is directed into all areas of the formation. ASF-500 WB carries penetrating Nano Surfactants that helps penetrate heavy oils and bitumen, while delivering our Nano Particles to assist in breaking up the oil particles into smaller droplets thus allowing better flow back to the well bore and adding to better separation of the larger particles.

Specific Gravity: 1.021

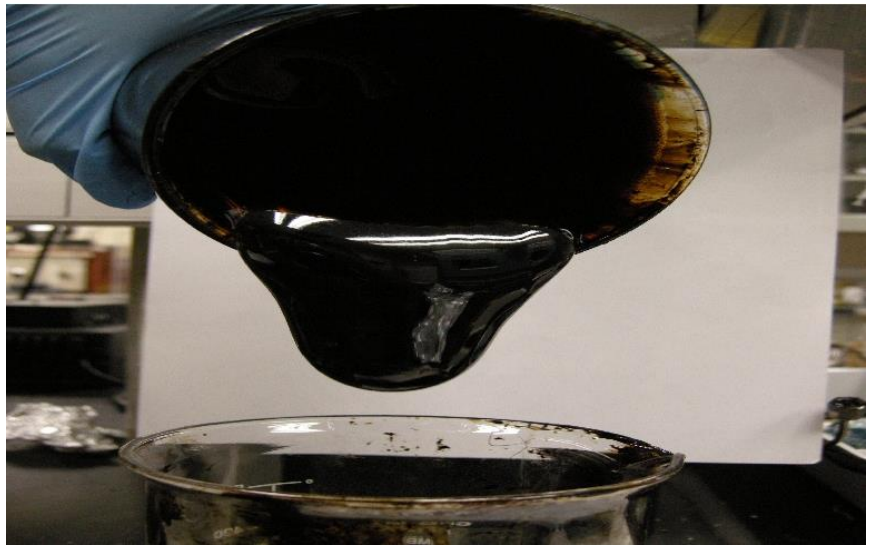
PH : 8-9.

AlphaSteamFlash® 500 WB Heavy Oil EOR

Application

ASF-500WB is designed for steam injection into heavy oils, bitumen and/or tar sands.

*Concentrations levels of 20% to 30% at 10,000 ppm are commonly recommended for well stimulation applications and may vary from well to well depending on the specific oil characteristics and well formations being targeted. ASF-500WB is only to be used in hot water and steam applications. Increased ppm can be more beneficial



Alpha-Strip BTS (Bitumen & Tar Sands)-100 Lower Temperatures EOR

Complus Trading North America, LLC offers our Alpha-Strip BTS-100 LT as a Liquid Microemulsion Surfactant with Nano Particles to enhance oil molecule penetration and molecule dispersion for use with Bitumen and Tar Sand Oils. This product is designed specifically to help strip the oils from sands when used on Tar Sands, while softening and braking up Bitumen type oil particles and into smaller droplets when used on Bitumen Oils. This allowing for higher levels of oil reclamation during the frothing tank processes.

Tar Sands Oils trap sands within the oil itself. By using our AS BTS-100 LT, with our proven microemulsion and nano particle technology, this product specifically softens the Tar Sand Oils and allows for the removal these oils from the sands. When used on Bitumen type oils, AS BTS-100 LT allows for these oil molecules to also soften so that these oils can be moved and handled more easily, thus reducing handling time of the Bitumen and reducing processing costs normally associated with Bitumen in the frothing reclamation and secondary separation recovery processes. This is all achieved through Complus Systems' specifically designed Nano Particles found in our oil penetrating Alpha- Strip Formulas. These Nano Particles helps pry and loosened oils from the sands by softening the molecules and softening the Bitumen molecules. This softening process enabling more oils to be captured and recovered in the secondary separation recovery process. This process now becomes faster, easier and more cost effective in handling these Tar Sands and Bitumen Hydrocarbons.

Our Nano Particles in this formula are < 5 Nano meters and is a sodium metasilicate.

Specific Gravity: 1.021

PH : 8-9

Alpha-Strip BTS (Bitumen & Tar Sands)-100 Lower Temperatures EOR

Application

AS-BTS-100 LT is designed to be used during the Bitumen and/or Tar Sands Frothing Tank Reclamation and Secondary Separation Recovery Processes.

*Concentrations 1 GPT or 1000 ppm are commonly recommended for application but may vary due to the quality and content of the Bitumen and Oil Sands being treated. This product performance can be improved in hot water at < 180F.

Products are available for secondary recover thru Centrifuges

Alpha-Strip BTS (Bitumen & Tar Sands)-110 Higher Temperatures EOR

Complus Trading North America, LLC offers our Alpha-Strip BTS-110 HT as a Liquid Microemulsion Surfactant with Nano Particles to enhance oil molecule penetration and molecule dispersion for use with Bitumen and Tar Sand Oils. This product is designed specifically to help strip the oils from sands when used on Tar Sands, while softening and braking up Bitumen type oil particles and into smaller droplets when used on Bitumen Oils. This allowing for higher levels of oil reclamation during the frothing tank processes.

Tar Sands Oils trap sands within the oil itself. By using our AS BTS-110 HT, with our proven microemulsion and nano particle technology, this product specifically softens the Tar Sand Oils and allows for the removal these oils from the sands. When used on Bitumen type oils, AS BTS-110 HT allows for these oil molecules to also soften so that these oils can be moved and handled more easily, thus reducing handling time of the Bitumen and reducing processing costs normally associated with Bitumen in the frothing reclamation and secondary separation recovery processes. This is all achieved through Complus Systems' specifically designed Nano Particles found in our oil penetrating Alpha-Strip Formulas. These Nano Particles helps pry and loosened oils from the sands by softening the molecules and softening the Bitumen molecules. This softening process enabling more oils to be captured and recovered in the secondary separation recovery process. This process now becomes faster, easier and more cost effective in handling these Tar Sands and Bitumen Hydrocarbons.

Our Nano Particles in this formula are 10 to 15 Nano meters and is a special coated sodium silicate

Specific Gravity: 1.021

PH : 8-9

Alpha-Strip BTS (Bitumen & Tar Sands)-110 Higher Temperatures EOR

Application

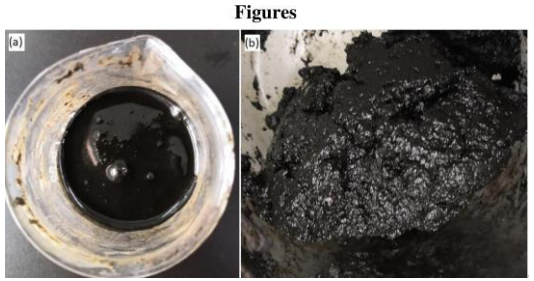
AS-BTS-110 HT is designed to be used during the Bitumen and/or Tar Sands Frothing Tank Reclamation and Secondary Separation Recovery Processes.

*Concentrations 1 GPT or 1000 ppm are commonly recommended for application but may vary due to the quality and content of the Bitumen and Oil Sands being treated. This product performance can be improved in hot water up to 300F.

Products are available for secondary recover thru Centrifuges

AlphaZyme D-600 SB (Sludge Buster) EOR

AlphaZyme D-600 SB is used as a sludge buster product to separate oil from mud and thus improve production by changing the viscosity of the oil. Temperature limit is 0 to 82 degrees Celsius. AlphaZyme D-600 is derived from AlphaZyme D-300 and contains as well enzymes, but cannot be used at high temperatures (i.e.: cannot be used inside wells for stimulation). **Do not allow AlphaZyme D-600 to freeze.**



Treatment Calculation of AlphaZyme D-600 SB

Givens: 201 Gallons per Cubic Yard

1.25 Cubic Yards per ton

times

60 tons per hour in the big frac tank mixer

Equals

75 Cubic Yards per hour processed by in the big frac tank mixer.

Application: 3 Gallons of D-600 per 30 yards of Sludge.

10 to 1 Ratio Yards to Gallons.

75	Cubic Yards
30	divided by 30 Cubic Yards
2,5	
7,5	Gallons per hour of AlphaZyme D-600 SB

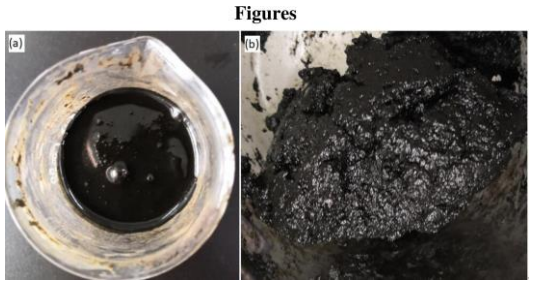
AlphaZyme D-600 SB (Sludge Buster) EOR

Step by step application procedure

1. D-600 is sprayed on to Sludge, Ground and Mixed into Sludge prior to inserting into frac tank.
2. Water is then inserted in frac tank with Sludge treated with D-600
3. Additional mixing is done in tank.
4. Oil is released from Sludge and skimmed off of the top of the water.
5. Remaining water is removed and held for further reuse.
6. Remaining soil is then removed from frac tank.
7. Optionally, the remaining soil can be bioremediated with our CCCP-7010 or CCCP-7010 DESERT BLOOM products, to be eventually reused as already fertilized agricultural soil.

AlphaZyme D-610 SB (Sludge Buster) EOR

AlphaZyme D-610 SB is used as a sludge buster product to separate oil from mud and thus improve production by changing the viscosity of the oil. Temperature limit is 0 to 82 degrees Celsius. AlphaZyme D-610 SB is derived from AlphaZyme D-600 SB. While AlphaZyme D-600 SB contains enzymes, in the AlphaZyme D-610 SB the enzymes are replaced with engineered nano particles in order to give to clients a cost saving solution. **Do not allow AlphaZyme D-610 SB to freeze.**



Treatment Calculation of AlphaZyme D-610 SB

Givens: 201 Gallons per Cubic Yard

1.25 Cubic Yards per ton

times

60 tons per hour in the big frac tank mixer

Equals

75 Cubic Yards per hour processed by in the big frac tank mixer.

Application: 33 Gallons of D-610 SB per 30 yards of Sludge.

10 to 1 Ratio Yards to Gallons.

75 Cubic Yards

30 divided by 30 Cubic Yards

2,5

82,5 Gallons per hour of AlphaZyme D-610 SB

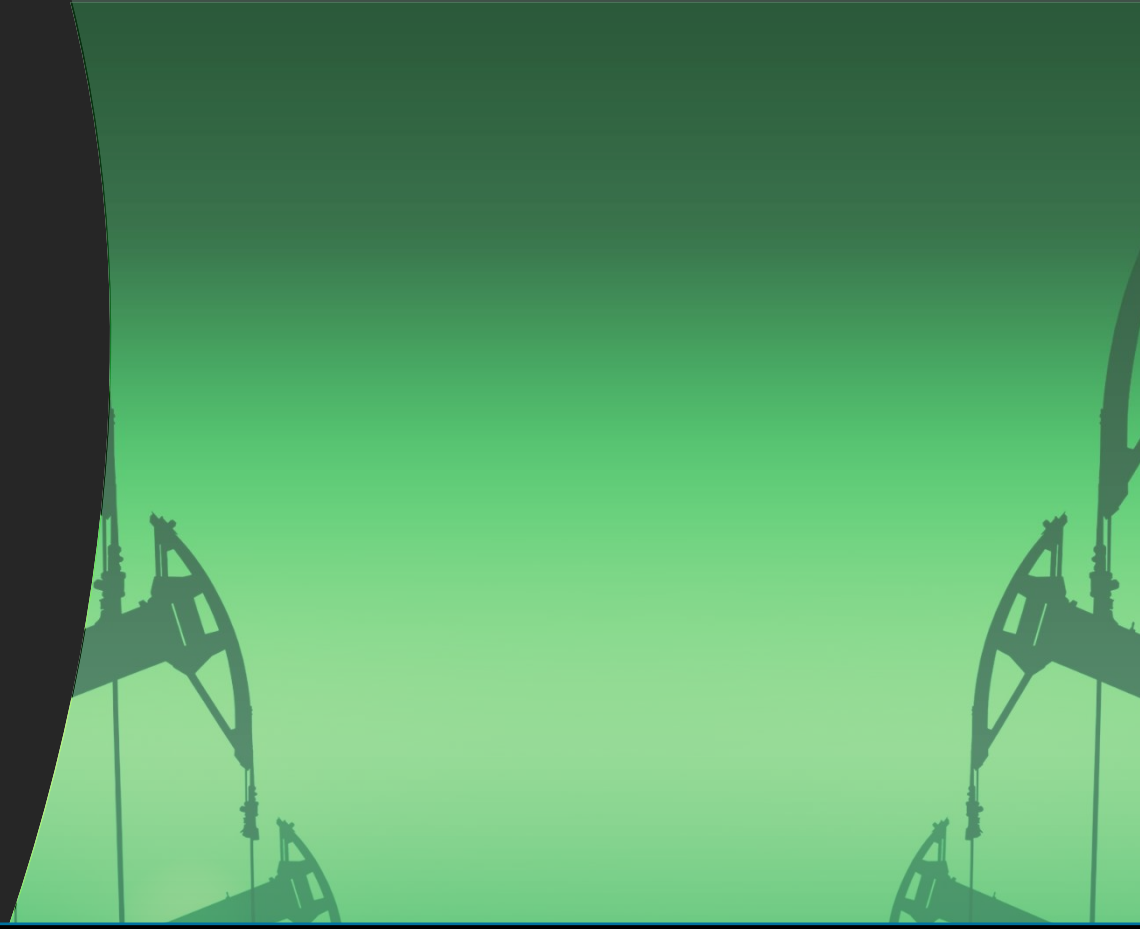
AlphaZyme D-610 SB (Sludge Buster) EOR

Step by step application procedure

1. D-610 SB is sprayed on to Sludge, Ground and Mixed into Sludge prior to inserting into frac tank.
2. Water is then inserted in frac tank with Sludge treated with D-610 SB
3. Additional mixing is done in tank.
4. Oil is released from Sludge and skimmed off of the top of the water.
5. Remaining water is removed and held for further reuse.
6. Remaining soil is then removed from frac tank.
7. Optionally, the remaining soil can be bioremediated with our CCCP-7010 or CCP-7010 DESERT BLOOM products, to be eventually reused as already fertilized agricultural soil.

Thank you
For your time.

Please contact us for more information and learn if our EOR Alpha products are the right choice for your oil wells.



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