



KAPLAN INDUSTRY

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**Providing biological answers
to industrial needs**



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We are Kaplan Industry Venezuela. We're a company that manufactures and supplies biocompound products, providing biological answers to industrial needs while saving costs and increasing revenue. We specialize in the production of biobased surfactants and remediation microbial packages, assisting fossil fuel production and hazardous waste clean-up.

Our aim is to increase profits and provide solutions to several industrial verticals in the U.S. territories. We enhance oil recovery, we help provide industrial cleaning solutions, we digest sanitation waste, we provide environmental biohazard solvents, and we clean and revitalize depreciated or contaminated soils.

Quite frankly, our products are very different from our competitors. Whereas other companies can help one or two industries, or others say they can accommodate as many industries as we do albeit ineffectively, Kaplan Industry has been consistently successful in solving problems, saving overhead costs, increasing profits, and most importantly: **maintaining the health and safety of people**, all without sacrificing our methodology of quality service. Our products are diverse in their performances, and they satisfy several versatile needs.

HEALTHY ANSWERS TO ECONOMIC NEEDS.



Kaplan Industry began using organic compounds in our agricultural products, and we've had tremendous success with them over the years. Our products have been environmentally safe, 100% biodegradable, and they have been able to be manufactured and supplied in affordable ways.

We've also handled waste management services for 20 years, and we've been successful in increasing petroleum production with oil companies through products that actually benefit the environment and leave it healthy. We've had several clients use us for industrial cleaning, farms have produced their best yields time after time, and we have proven over and over that our products clean biohazards unbelievably well.

SURPASSED EXCELLENCE WITH EXPERIENCE YOU CAN TRUST.



Our business goals are to not just turn a profit, but to bring answers: answers to agriculture, answers for bioremediation, answers to safe energy production, and answers to health. And we are wanting to bring answers to the local worker as well as the corporate office, the municipality and the consumer, the small and the large business: we aim to help everyone.

In conclusion, we look forward to becoming a vendor for you, servicing your needs and goals in both affordable and environmentally friendly methods. As our business statement says:



“If you want increased oil production, decreased sanitation waste, richer soils, purer water, healthier crops, and bigger yields, our products are the answer.

“Increasing profits and providing solutions — that’s Kaplan Industry.”

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OILTEC



ULTIMATE PETROLEUM PRODUCTION



As an oil well runs, its production is slowed by clots, waxy emulsions, corrosion, and other substances. Production depletes as perforations get clogged, and then fracking is needed, which can be costly or harmful depending on the fluid elements used.

The industry is finding that standard surfactants are less effective than biobased surfactants, which work at minimum dosage rates, making them effective at 50 times lower concentration than many traditional products. Ideal petroleum production is made possible by using our top-of-the-line, USDA BioPreferred surfactant called **OILTEC**!

- Opens Oil Flow
- Cleans Perforations
- Lightens Crude/Raises Gravity
- Breaks Up BS&W
- Breaks Down Tank Bottom Sludge
- Cleans Oil Tankers Fast & Effectively
- Cleans Pipelines & Transmission Lines
- Effective Solvent & Equipment Wash
- Non-Toxic, Non-Polluting
- Non-Corrosive, No PPE Needed

OILTEC dissolves clots formed in tubing and pipelines, and it eases surface tensions in the perf zone for increased petroleum flow and substantially improved oil production. It will also dissolve the hardened emulsions found at the bottom of crude oil storage tanks and reconstitute it back into a refinable product!

When used to open wells, **OILTEC** has been found to naturally lighten the crude oil and raise the gravity, increasing API numbers. It also sweetens the crude and keeps iron sulfide from forming. Better quality means a better sale price!

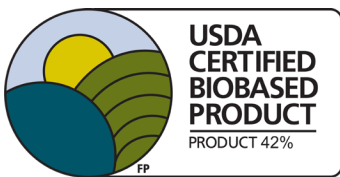




OILTEC is also the safest option to use as a solvent. When equipment washing, pipeline purging, and tanker cleaning, harsh and poisonous chemicals are needed to break down the caked-on oil, wax, and various byproducts. But **OILTEC** is more effective as a cleaner, and it's so safe to use that PPE isn't needed! It is the only BioPreferred and biodegradable surfactant that works better than any other.

The colloidal technology we use atomizes the solids, softening and eventually biodegrading them into a biomass, which fully dissolves without residue. Our micelle package literally breaks down the obstacles molecularly, and then the oil is free to flow. Unlike most solvents or surfactants which are too expensive, corrosive, dangerous to handle, and must be recovered, **OILTEC** is non-caustic, safe to handle, non-corrosive to equipment, fully biodegradable, and **requires no recovery**.

Whether it's wellbore cleaning, perf unclotting, eliminating corrosion, sludge breaking, tanker cleaning, or even if it's used as a fracking component, **OILTEC** is the ultimate solution for the Oil & Gas Industry.



Call us today and let **OILTEC** bring life back into your wells to increase your production profits!

Fully Biodegradable - Technologically Sound - 100% Safe



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PETROLEUM PRODUCTION CASE STUDIES

Well A - 4,321 ft. - Texas - 10/12/2023

Pre-treatment - Well produced 4 bbls per day crude with 25-56 bbls wateroil; Specific Gravity (SG) was 17 at pre-treatment.

Treatment - 33 bbls of OilTec mix pumped down 2 3/8 tubing in 4.5 20# casing, which was 5:1 dilution ratio (water: OilTec) shut in for 24 hours.

Post-treatment - After 24 hours, turned pumps back on and opened well, returned fluid for 24 hours. Had increased oil flow of 18 bbls per day with 24 bbls water. Oil cut sample showed SG was 24, and well flowed 18 bbls per day for 2 weeks.

Week 3 - Oil production fell to 16 bbls per day for 2 weeks.

Week 6 - Oil production fell to 12 bbls per day and stabilized, maintaining levels 1+ years later; SG is stable at 21.

Well B - 4,198 ft. - Texas - 10/13/2023

Pre-treatment - Well produced 3.5 bbls per day crude with 40+ bbls wateroil; SG was 19.

Treatment - 31 bbls of OilTec mix pumped down 2 3/8 tubing in 4.5 20# casing at 5:1 dilution ratio and shut in for 24 hours.

Post-treatment - After 24 hours, turned pumps back on and opened wells, returned fluid for 24 hours. Increased oil flow of 9.5 bbls, which held for 4 weeks with SG at 21.

Week 6 - Production showed 7 bbls of oil with SG at 20; well currently producing 6 bbls of oil, 30+ bbls of water, and SG is still at 20 1+ years later.

Well C - 6,280 ft. - Texas - 10/15/2023

Pre-treatment - Well produced 4.5 bbls of crude per day, and water cut was varied; SG was 18.

Treatment - 33 bbls of OilTec mix pumped down 2 3/8 tubing in 4.5 20# casing at 6:1 dilution ratio, pumped to the top of perfs.

Post-treatment - After 24 hours, turned pumps back on and opened well, returned fluid for 24 hours. Increased oil flow of 7 bbls, and water was at 25 bbls; SG was 21.

Week 6 - Showed 7 bbls of oil with SG at 20; current crude production is 6.5 bbls of oil with SG still at 20 1+ years later.

Well D - 3,965 ft. - Texas - 10/22/2023

Pre-treatment - Well produced 2 bbls of crude per day with SG at 17.

Treatment - 26 bbls of OilTec mix pumped to the bottom perfs through the annular with 2 3/8 tubing in 4.5 20# casing at 4:1 dilution ratio, shut in for 24 hours.

Post-Treatment - After 24 hours, turned pumps back on and opened well, returned fluid for 24 hours. Increased oil flow of 6 bbls with SG at 20.

Week 6 - Showed 5.5 bbls of oil with SG at 19; current production is 4.5 bbls with SG still at 19 1+ years later.

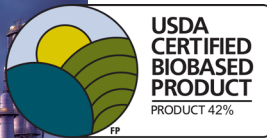
Well E - 3,200 ft. - Oklahoma- 11/02/2023

Pre-treatment - Well produced .6 bbl of crude, and water cut was varied; SG was 18.

Treatment - 38 bbls of OilTec mix pumped down annular with 2 3/8 tubing and 4" casing at 6:1 dilution ratio, shut in for 48 hours.

Post-treatment - After 48 hours, opened well and turned pumps on, returned fluid for 24 hours. Increased oil flow of 1.76 bbls of oil, 14 bbls of water, and SG was at 21, maintaining levels 1+ years later; SG is stable at 20.

Large Crude Storage Facility – Oklahoma – 3 totes of OilTec were used to break up 12 inches of BS&W. Facility provided fresh water for mixing and diluted the solution at 4:1 ratio. Solution was pumped on top of standing BS&W and left to sit. After 48 hours, the BS&W was 9 inches. An additional 48 hours showed reduced BS&W to 4 inches, which was an acceptable level, and they returned operations to the tank.



There have been many small stripper wells from Oklahoma to Nebraska that produced 1 bbl or less of crude daily, in which OilTec has been able to double the production. In each instance, the wells stayed at increased rates for more than 6 months post-treatment, and as the production slowly decreased, the rates have held higher than pre-treatment values. In each instance, the SG was raised to produce a lighter and sweeter crude.



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OILTEC TRIAL

Guatemala Petroleum Production Test - 2024

The surfactant injection was executed on 10/12/2024 without any problems. We plan to re-open the well today around 4-5 p.m.

Here is a summary of the activities regarding the injection of the OilTec mixture in the RS-101/C9-A zone:

1. Bleed off wellhead pressure from 70 psi to 0 psi.
2. Rig down beam pump wellhead.
3. Fish standing valve and pulled sucker rod out of the well (96) doubles + (1) single.
4. Installed circulation head on top of the X-mas tree.
5. Filled the mixing tank with 30 bbls of fresh water [pH 7.0], then mixed 6 bbls of OilTec surfactant at a 5:1 mixture as suggested by the distributor of U.S. Ag Industrial.
6. Filled the vacuum truck with 36 bbls of surfactant mixture and moved to RS-101.
7. Performed an injection test to C9-A formation.
8. Pumped OilTec surfactant while recording parameters in the wellhead.
9. Displaced the OilTec surfactant with 35 bbls of fresh water [pH 7].
10. Shut-in well for 24 hours.

Parameters recorded during injection test (25 barrels pumped):

<u>Bbls/Min</u>	<u>Wellhead psi</u>
• 0.5	• 0
• 1.0	• 0
• 2.0	• 0
• 3.0	• 0

Parameters recorded during surfactant pumped [36 bbls] at 1.1 bbls/min:

<u>Time</u>	<u>Wellhead psi</u>
• 15:30	• 0
• 15:35	• 50
• 15:40	• 150
• 15:45	• 300
• 15:50	• 400

Parameters recorded during displacement [35 bbls] at 1.1 bbls/min:

<u>Time</u>	<u>Wellhead psi</u>
• 16:00	• 0
• 16:05	• 200
• 16:10	• 230
• 16:15	• 270
• 16:20	• 275
• 16:25	• 225
• 16:30	• 230
• 16:33	• 235

NOTE: During the pumping procedure, the annular pressure did not fluctuate and stayed at 150 psi.

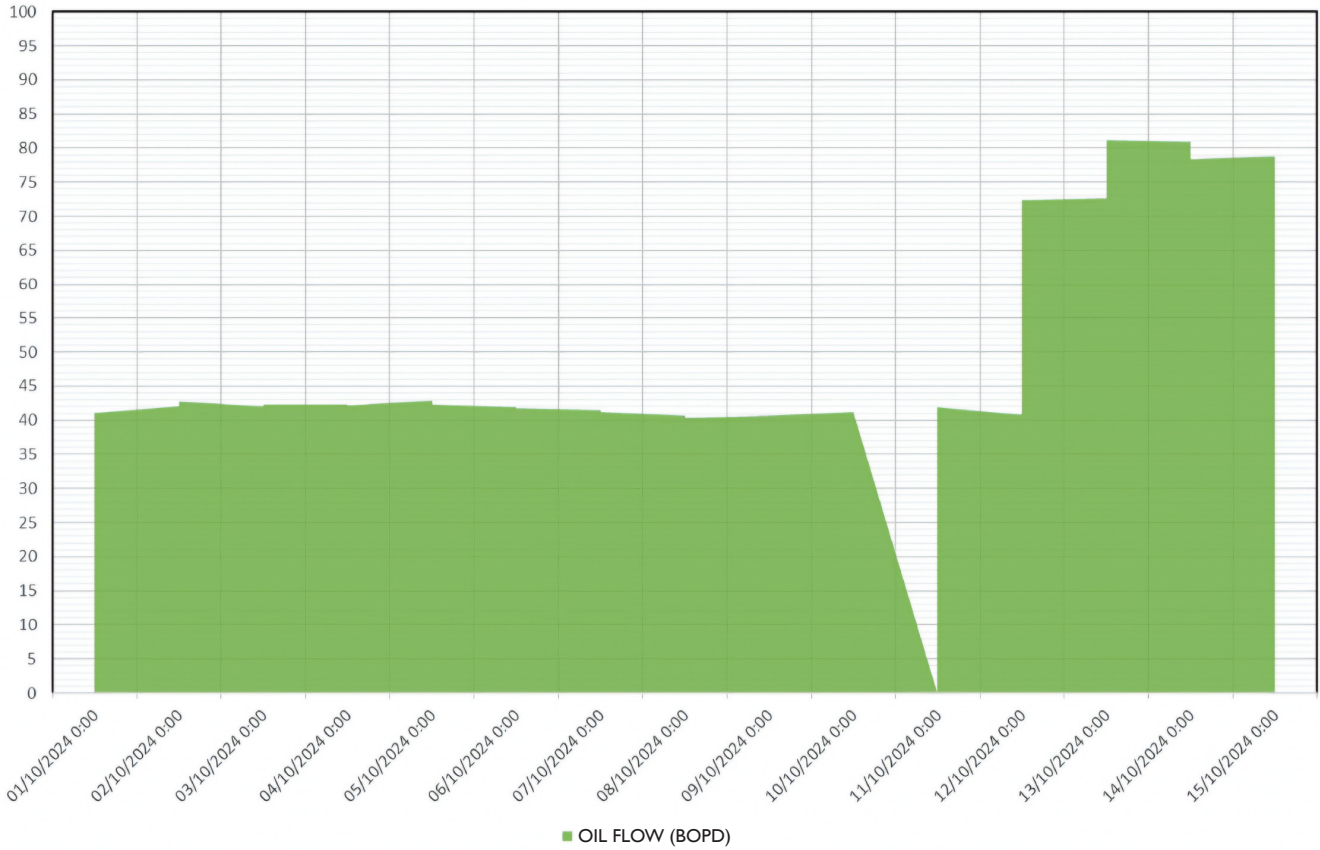
Forecast:

- Bleed off wellhead pressure.
- Rig down circulating head.
- Clean out inside the piston and traveling valve.
- Run in hole sucker rod string.
- Fill up the well with fresh water.
- Perform integrity test at 150 psi
- Install pumping unit head.
- Start the well once 24 hours has ended.

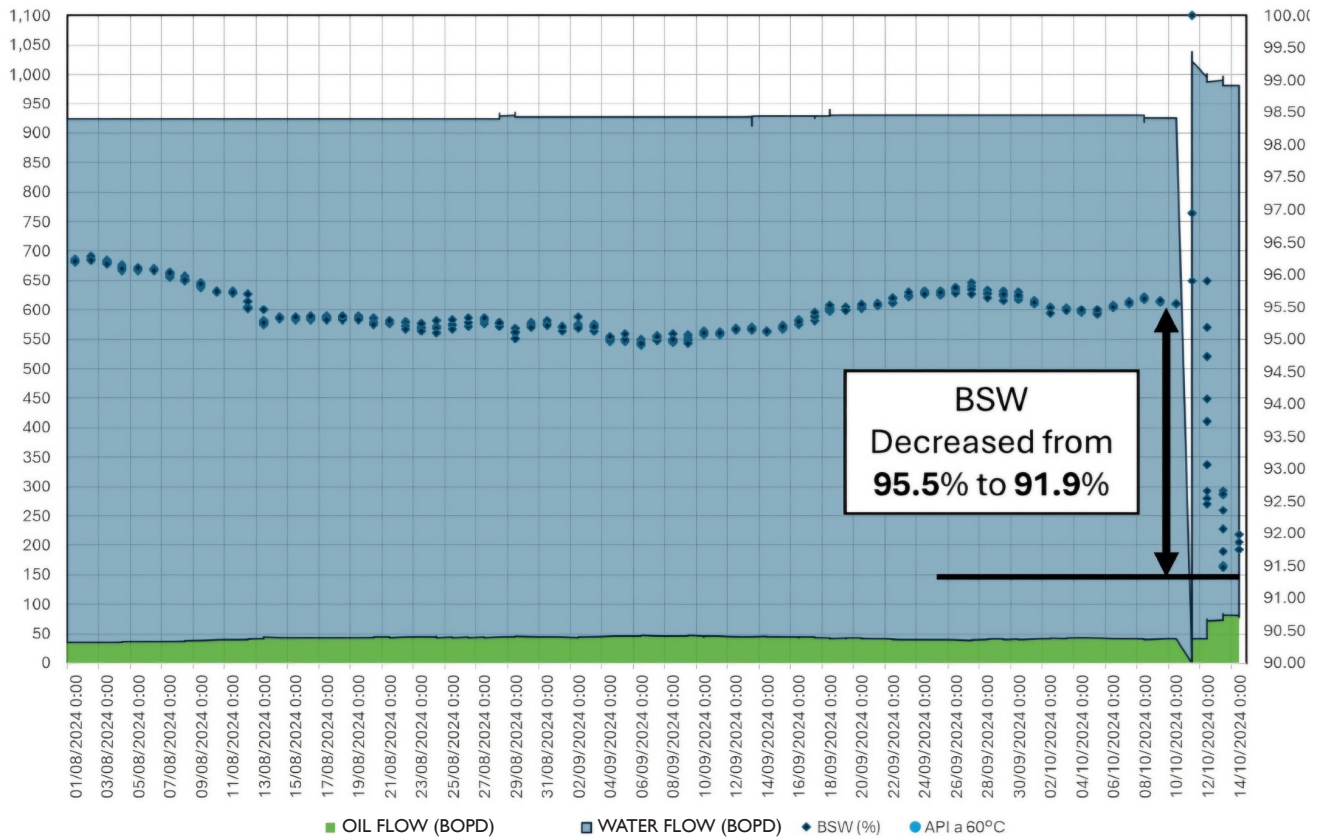
◦ **Results of first day flow back are 80% increase in oil production and 5% decrease of BS&W.**

◦ **Production of 30 bbls per day prior to treatment and 79.9 bbls post treatment.**

OIL
RS-101
OCTOBER 2024



WATER - OIL - BSW
RS-101
August - October 2024



Date (dd/mm/yyyy)	PRESSURE (PSI)	TEMP (F)	ANNULAR PRESSURE (PSI)	FREQUENCY (Hz)	SPM'S (STROKES/MIN)	MOTOR AMPERAGE ↑/↓ (Amps)	FLUID FLOW (BFPD)	BSW (%)	OIL FLOW (BOPD)	WATER FLOW (BWPD)	GAS FLOW (MSCF)	API @ 60 °C	Salinity
14/10/2024 0:00	90	94	148	60.0	7.00	74/54	980.87	91.75	80.92	899.9	73.286	16.7	17.0
14/10/2024 1:00	90	94	150	60.0	7.00	74/54	980.77	91.75	80.91	899.9	73.286	16.7	17.0
14/10/2024 2:00	90	94	150	60.0	7.00	74/54	979.57	91.75	80.81	898.8	73.827	16.7	17.0
14/10/2024 3:00	90	94	150	60.0	7.00	74/54	976.77	91.98	78.34	898.4	73.827	24.8	17.0
14/10/2024 4:00	90	94	150	60.0	7.00	74/54	976.57	91.98	78.32	898.2	73.827	24.8	17.0
14/10/2024 5:00	90	94	150	60.0	7.00	74/54	977.41	91.98	78.39	899.0	73.827	24.8	17.0
14/10/2024 6:00	90	94	150	60.0	7.00	74/54	977.17	91.86	79.54	897.6	73.827	23.7	17.0
14/10/2024 7:00	90	94	150	60.0	7.00	74/54	976.66	91.86	79.50	897.2	73.827	23.7	17.0
14/10/2024 8:00	90	94	150	60.0	7.00	74/54	976.27	91.86	79.47	896.8	73.718	23.7	17.0
14/10/2024 9:00	90	94	150	60.0	7.00	74/54	976.50	91.89	79.19	897.3	73.718	24.4	17.0
14/10/2024 10:00	90	94	150	60.0	7.00	74/54	976.45	91.89	79.19	897.3	73.609	24.4	17.0
14/10/2024 11:00	90	94	150	60.0	7.00	74/54	975.10	91.89	79.08	896.0	73.609	24.4	17.0
14/10/2024 12:00	90	94	150	60.0	7.00	74/54	975.37	91.95	78.52	896.9	73.393	23.4	17.0
14/10/2024 13:00	90	94	150	60.0	7.00	74/54	974.49	91.95	78.45	896.0	73.393	23.4	17.0
14/10/2024 14:00	90	94	150	60.0	7.00	74/54	975.46	91.95	78.52	896.9	72.754	23.4	17.0
14/10/2024 15:00	90	98	150	60.0	7.00	74/54	974.37	91.90	78.92	895.4	72.754	24.0	17.0
14/10/2024 16:00	90	98	150	60.0	7.00	74/54	973.57	91.90	78.86	894.7	72.860	24.0	17.0
14/10/2024 17:00	90	98	150	60.0	7.00	74/54	975.69	91.90	79.03	896.7	72.860	24.0	17.0
14/10/2024 18:00	90	98	150	60.0	7.00	74/54	974.37	91.86	79.31	895.1	73.179	23.6	17.0
14/10/2024 19:00	90	96	150	60.0	7.00	74/54	975.21	91.86	79.38	895.8	73.179	23.6	17.0
14/10/2024 20:00	90	96	150	60.0	7.00	74/54	974.17	91.86	79.30	894.9	73.393	23.6	17.0
14/10/2024 21:00	90	96	150	60.0	7.00	74/54	974.48	92.00	77.96	896.5	73.393	23.6	17.0
14/10/2024 22:00	90	96	150	60.0	7.00	74/54	975.10	92.00	78.01	897.1	73.501	23.6	17.0
14/10/2024 23:00	90	96	150	60.0	7.00	74/54	975.19	92.00	78.02	897.2	73.501	23.6	17.0
15/10/2024 0:00	90	96	150	60.0	7.00	74/54	975.57	91.96	78.44	897.1	73.501	22.3	17.0
15/10/2024 1:00	90	94	145	60.0	7.00	74/54	980.77	91.96	78.85	901.9	73.501	23.6	17.0
15/10/2024 2:00	90	94	145	60.0	7.00	74/54	984.37	91.96	79.14	905.2	73.718	23.6	17.0
15/10/2024 3:00	90	94	145	60.0	7.00	74/54	984.77	92.10	77.80	907.0	73.718	23.0	17.0

First Week

Date (dd/mm/yyyy)	PRESSURE (PSI)	TEMP (F)	ANNULAR PRESSURE (PSI)	FREQUENCY (Hz)	SPM'S (STROKES/MIN)	MOTOR AMPERAGE ↑/↓ (Amps)	FLUID FLOW (BFPD)	BSW (%)	OIL FLOW (BOPD)	WATER FLOW (BWPD)	GAS FLOW (MSCF)	API @ 60 °C	Salinity
21/10/2024 06:00	90	95	150	60.0	7.00	74/54	965.57	92.67	70.78	894.8	72.207	22.8	17.0
21/10/2024 07:00	90	95	150	60.0	7.00	74/54	965.34	92.67	70.76	894.6	72.207	22.8	17.0
21/10/2024 08:00	90	95	150	60.0	7.00	74/54	966.37	92.67	70.83	895.5	72.207	22.8	17.0
21/10/2024 09:00	90	95	150	60.0	7.00	74/54	965.34	92.67	70.76	894.6	72.207	22.8	17.0
21/10/2024 10:00	90	95	150	60.0	7.00	74/54	969.73	92.67	71.08	898.6	72.859	22.8	17.0
21/10/2024 11:00	90	95	150	60.0	7.00	74/54	970.73	92.67	71.15	899.6	72.859	22.8	17.0
21/10/2024 12:00	90	95	150	60.0	7.00	74/54	970.57	92.61	71.73	898.8	71.682	21.7	17.0

Second Week

Date (dd/mm/yyyy)	PRESSURE (PSI)	TEMP (F)	ANNULAR PRESSURE (PSI)	FREQUENCY (Hz)	SPM'S (STROKES/MIN)	MOTOR AMPERAGE ↑/↓ (Amps)	FLUID FLOW (BFPD)	BSW (%)	OIL FLOW (BOPD)	WATER FLOW (BWPD)	GAS FLOW (MSCF)	API @ 60 °C	Salinity
22/10/2024 18:00	85	96	150	60.0	7.00	74/54	976.80	93.01	68.28	908.5	72.434	21.9	17.0
22/10/2024 19:00	85	96	150	60.0	7.00	74/54	976.80	93.01	68.28	908.5	72.434	21.9	17.0
22/10/2024 20:00	85	95	150	60.0	7.00	74/54	976.80	93.01	68.28	908.5	72.434	21.9	17.0
22/10/2024 21:00	85	95	150	60.0	7.00	74/54	976.80	93.01	68.28	908.5	72.434	21.9	17.0
22/10/2024 22:00	85	95	150	60.0	7.00	74/54	976.80	93.01	68.28	908.5	72.434	21.9	17.0
22/10/2024 23:00	85	95	150	60.0	7.00	74/54	976.80	93.01	68.28	908.5	72.434	21.9	17.0
23/10/2024 00:00	85	95	150	60.0	7.00	74/54	976.80	93.15	66.91	909.9	72.434	22.9	17.0

Due to the results of production and quality increase, OilTec paid for itself within the first four days.



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Bio-Surfactants

Uses in production and EOR

As operators strive to meet projected demands, they also face a \$600-billion shortfall in planned investment, as well as growing pressures from those entities that demand net-zero emissions targets to be met depending on the local laws of the land. The push to reduce the carbon intensity of operations has intensified to not only remain competitive, but also receive access to capital from sustainability-minded investors. With financial restrictions and ESG pressure rising, operators need immediate implementable solutions and technologies to extend

total well life cycle while avoiding any potential financial sanctions from environmentally minded investors.



One answer that shows much promise is the use of new environmentally friendly, bio-based surfactants to build a better well from the start. Operators across top U.S. basins are finding success by implementing these bio-based surfactants, or bio-surfactants, in their initial well construction stages—not merely as part of a later EOR campaign. These treatments boost initial production, maintain higher production rates, and extend the total well life-cycle—resulting in low-cost, low-carbon oil.

The Benefits of Bio-Surfactants vs. Synthetic Surfactants

Following a review of a multitude of innovative technologies, industry experts identified bio-surfactants as a top emerging solution to improve financial security of shale operations while meeting more stringent environmental regulations. Bio-surfactants are a class of natural, bio-based surfactants comprising highly complex surface-active molecules with unmatched multi-functionality and sustainability. These molecules have unique functionality and characteristics that provide mechanisms of action that surpass traditional petroleum-based and premium surfactants.

Bio-surfactants reduce surface and interfacial tensions to extremely low levels, minimize fluid viscosity and have excellent wetting and dispersant properties, all of which help increase both initial and sustained production. Their unsurpassed small micelle size enables them to penetrate nano-pores to mobilize previously unreachable oil within the tightest shale formations. And unlike synthetic surfactants—which are often flushed out of the formation during flowback—up to 50% of the bio-surfactant treatment stays in the shale reservoir and slowly desorbs over time to ensure long-term production performance.



Made from renewable raw materials, bio-surfactants have a green profile that includes low toxicity, better biodegradability, and extreme stability under harsh reservoir conditions. They exhibit extremely low critical micelle concentrations (minimum effective dosage rates), making them effective at 50 times lower concentration than many traditional synthetic surfactants.

Successful Testing in EOR with Bio-Surfactants

An operator in the Delaware basin used a bio-surfactant treatment as part of a rig-less intervention to address declining oil production in an unconventional four-well pad, while avoiding a costly full mechanical work-over. A 155-day analysis showed that after just a single bio-surfactant treatment, the well's average daily oil production increased by more than 115%, with over 4,500 incremental bbl. of oil produced above forecast. The well also experienced a nearly 25% increase in gas production during that same period. The operator recovered treatment costs in less than four months and realized a more than 1.5x return on investment (ROI).

In early 2021, the North Dakota Industrial Commission unanimously approved funding to evaluate the ability of bio-surfactants to sustainably increase oil mobility and production across the Williston basin. Enhanced oil recovery treatments were initially used on two declining wells in the Bakken. Four months after the initial bio-surfactant treatment, oil production increased by more than 70% in both wells, with a less than 40-day payback.

In early 2018, a bio-surfactant treatment program was started on an Upper Devonian sand well in Pennsylvania. The well experienced a 140% increase in oil production 554 days after the initial treatment, with treatment costs recovered in under 50 days and higher than 3x ROI at 180 days. A second treatment in 2019 demonstrated a 320+% increase in oil production after 321 days, with treatment costs recovered in 34 days and more than 2x ROI at 180 days. Operators using bio-surfactants in EOR applications have also observed production increases in adjacent, non-treated wells, demonstrating both the impact of the treatments and the importance of placement. The impressive gains in oil production realized by using bio-surfactants to target specific problem areas has led to discussions on introducing them earlier in the well-life cycle. Utilizing bio-surfactants in frac fluids provides a cost-effective way to improve the well completion by reaching peak oil faster and sustaining higher production rates.

Bio-Surfactants in Completion, Frac, & Re-Frac

Implementing bio-surfactants in fracs and re-fracs achieves far-field displacement from the wellbore for maximum benefits and an even larger production impact. The result is a better-designed shale well, with improved performance from the start. Their high stability and multi-functional properties enable them to outperform traditional frac surfactants at a fraction of the cost while boosting initial production, maintaining higher rates for sustained periods, and slowing declines to maximize estimated ultimate recovery (EUR).

Operators are now beginning to utilize bio-surfactants during the completion of new shale wells. In initial field deployments in the Permian basin's Wolfcamp C formation, treatment resulted in a 32% increase in oil



production in the first 30-days and faster peak oil when compared to historical fracs using other premium surfactants. Well production was increased by more than 6,200 bbl., compared to the analog wells. The sustained production increase was achieved at 1/3 the application rate, helping to maximize EUR while delivering a greater than 3X ROI within the first 30 days.

In today's capital-constrained and environmentally conscientious world, the best way to marry industry with ecology is for EOR and better petroleum

quality is through the use of bio-surfactants. The future of the shale industry may be evolving, but environmentally friendly technologies like bio-surfactants which are more effective than their synthetic counterparts can help ensure a profitable and sustainable future through the production of low-cost and ecologically-sound bbl. of oil.



KAPLAN INDUSTRY
VENEZUELA



Kaplan Industry (USA)
1025 FL-17
Lake Hamilton, FL 33851

Kaplan Industry (Venezuela)
Av 61 Branger centro Empresarial
Arturo michelena zona industrial municipio
sur-Valencia Carabobo



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