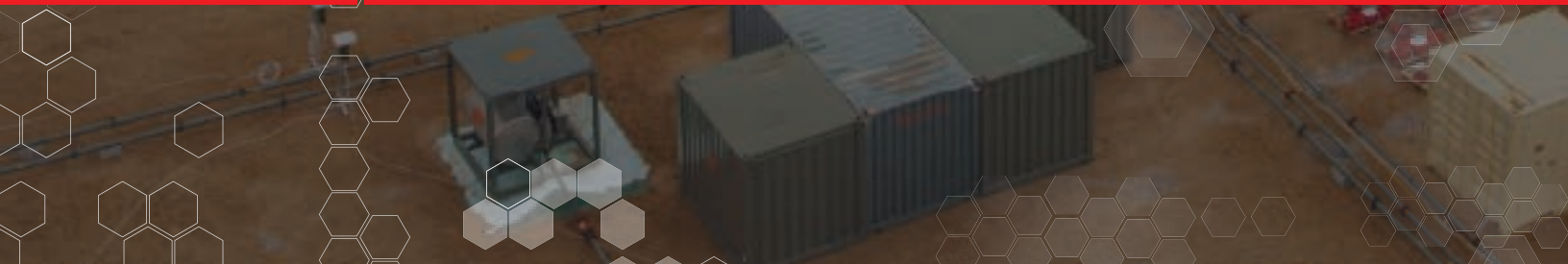


FRAC CHEMICALS

Direct technical advancement, product and services.



Drilling - Acidizing - Fracturing - Workover - Production - Offshore

THE ONLY CALL YOU NEED TO MAKE



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info@JetWellSolutions.com

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JET Well Solutions, Inc. / Fracturing Chemicals

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Biocides	JET Well Solutions carries the most competitive, capable and compatible biocides on the market. We distribute field-proven technology, with quality assurance.	Page 3
Breakers	Our diverse gel breaker line for frac fluids. StimBreak products are highly technical, offering various mechanisms to decrease viscosity based on gel conditions.	Page 4
Brines	Well-control fluid enhancers are itemized for specific in-depth conditions pre, during and post fracturing; StimJET performs to prevent well plugging in formation.	Page 5
Buffers	Assists in administration of frac fluid by adjusting base-fluid pH. GelMod optimizes performance of gel frac fluids by permitting crosslink and supporting gel stability.	Page 5
Clay Control	Geology within the formation matrix effects hydrocarbon extraction. CLAYSTAY products are fluid compatible and protect against clay dispersion and migration.	Page 6
Crosslinkers	JET Well Solutions provides state-of-the-art crosslinkers (XL), compatible with our gel and/or friction reducer to couple the molecules and create high controlled viscosity.	Page 7
Friction Reducers	JETSLICK alters rheological properties, reducing friction created within the frac fluid as it flows through small-diameter tubulars or similar restrictions.	Page 7
Gelling Agents	Standard dry powder and specialized JET-GEL slurries for customized proppant suspension within linear, crosslinked and hybrid gel systems.	Page 7
Non-Emulsifiers	Non-Emulsifiers (NE) prevent formation of stable emulsions between clear-brine completion fluids & specific formation reservoir crude oil. Our NE's are field proven.	Page 8
Scale Inhibitors	Matrix pumped scale inhibitors ensure treatment through an entire well process. JETGUARD prevents scale deposition while minimizing retreatment costs.	Page 8
Surfactants/ Flowback	Formulations to release bound oil from reservoir rock and reduce water blockage by accelerating drainage speeds of injected fluid. SURFLOW improves oil recovery (IOR).	Page 9

We specialize in Slickwater, Linear, Crosslinked and other varying systems to provide one-hundred plus options within a matrix of combinations, supporting your specific region, shale play and well formation within source rock.



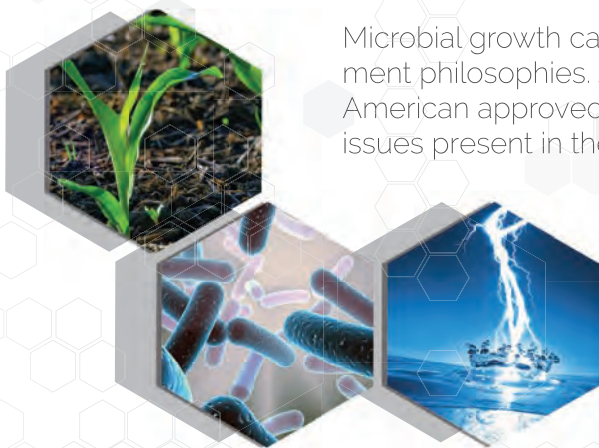
Email: info@jetwellsolutions.com

PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
BIOCIDES		
AMA®-324	Caustic-based, broad spectrum biocide releases thiocyanates and carbamates for slow kill, degrades at higher temperatures.	24% Dazomet
AQUCAR™ 714	Water treating biocide used as a fast-acting anti-microbial agent. Ideal for aerobes, bacteria, SRB and APB, algae and yeasts. Miscible with water & easily dispersed.	14% Glutaraldehyde / 2.5% Quat Blend
AQUCAR™ GA 15	Water treating biocide used as a fast-acting application against aerobes, SRB's and APB's. Consumed by FeS. For lower temperature conditions.	15% Glutaraldehyde
AQUCAR™ GA 25	Water treating biocide used as a fast-acting application against aerobes, SRB's and APB's. Consumed by FeS. For lower temperature conditions.	25% Glutaraldehyde
AQUCAR™ GA 50	Water treating biocide used as a fast-acting application against aerobes, SRB's and APB's. Consumed by FeS. For lower temperature conditions.	50% Glutaraldehyde
AQUCAR™ DB 20	Water treating micro-biocide used as a fast-acting broad spectrum control of bacteria, fungi, yeast and algae. Rapid decomposition.	20% DBNPA
AQUCAR™ DB 100	Fast-acting, non-oxidizing biocide. Environmentally favorable solid concentrate. used as a fast-acting broad spectrum control of bacteria, fungi, yeast and algae.	100% DBNPA
AQUCAR™ PS 20	Broad spectrum biocide inhibits growth of algae, bacteria, yeast and fungi. Apply in acid and alkaline environments, particularly vs sulfate-reducing bacteria (SRB).	20% THPS
AQUCAR™ PS 50	Broad spectrum biocide inhibits growth of algae, bacteria, yeasts and fungi. Apply in acid and alkaline environments, particularly vs sulfate-reducing bacteria (SRB).	50% THPS
AQUCAR™ THPS 75	Micro-biocide concentrate of AQUCAR™ PS 20 and AQUCAR™ PS 50 containing 76.5% tetrakis (hydroxymethyl) phosphonium sulfate. Also effective in iron sulfate.	75% THPS
B2512	Water treating biocide used as a fast-acting anti-microbial agent. Ideal for aerobes, bacteria, SRB and APB, algae and yeasts. Miscible with water & easily dispersed.	25% Glutaraldehyde / 12% Quat Blend
Barquat™ MB-50 WTM	Non-chloride based brine used as a higher density fluid. Additionally reduces treating pressures within the well.	50% Benzalkonium Chloride
Bellacide® 300	Synergistic, non-oxidizing biocide and bio dispersant, possessing both bactericidal and algacide properties.	2.5% TTPC / 2.5% Quat
Dantogard™ 2000	Winterized, non-haz solution for anionic, cationic and nonionic fluid applications. Used as both quick and extended kill biocide/preservative within multi-stage frac.	66% DMDM Hydantoin
Vantocil™ IB	Fast acting micro-biocide inhibits bacteria, yeast & mold. Effective preservative for nonionic & cationic fracs containing emulsion polymers & other rheology modifiers.	20% Polyaminopropyl Biguanide

OILFIELD USE APPROVED

Successfully control or eradicate microbial growth and prevent the build up of biofilms.

Microbial growth causes different problems and requires different treatment philosophies. Jet Well Solutions entails a full range diversity of North American approved, complimentary biocide products for the specific issues present in the anaerobic environment of your well.



PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
BREAKERS		
StimBreak 100	Ammonium persulfate oxidizing breaker formulated to degrade high viscosity fracturing fluids within low temperature conditions from 130° to 180° F.	Ammonium Persulfate
StimBreak 130	Delayed, moderate-temp encapsulated ammonium persulfate breaker designed for slow-release which allows delayed break of frac fluid from temps 180° to 240° F.	Encapsulated Ammonium Persulfate
StimBreak 131	Delayed, low-temp encapsulated ammonium persulfate breaker designed for slow-release which allows delayed break of frac fluid from temps 140° to 200° F.	Encapsulated Ammonium Persulfate
StimBreak 139	Delayed, high-temp encapsulated ammonium persulfate breaker designed for slow-release which allows delayed break of frac fluid from temps 240° to 300° F.	Encapsulated Ammonium Persulfate
StimBreak 200	Sodium persulfate oxidizing breaker formulated to degrade high viscosity fracturing fluids within lower temperature conditions from 130° to 180° F.	Sodium Persulfate
StimBreak 300	Sodium bromate, solid oxidizing breaker for high temp conditions from 240° to 300° F. Within low temperatures, a catalyst breaker such as StimBreak 800 is required.	Sodium Bromate
StimBreak 330	Delayed, high-temp encapsulated sodium bromate breaker designed for controlled release rates at temperatures from 240° to 300° F.	Encapsulated Sodium Bromate
StimBreak 400	Potassium persulfate	Potassium Persulfate
StimBreak 409	Potassium persulfate, high temp	Potassium Persulfate
StimBreak 411	Potassium persulfate, slow-release	Potassium Persulfate
StimBreak 430	Encapsulated potassium persulfate	Encapsulated Potassium Persulfate
StimBreak 509	Liquid enzyme, cleaner breaking process for use in borate-crosslinked fracturing fluids where pH reaches >9.0 and lower temperature ranges from 80° to 125° F.	Hemicellulose Enzyme
StimBreak 510	Liquid enzyme, cleaner breaking process used in borate-crosslinked fracturing fluids where pH reaches >9.0 and low-to-moderate temp ranges from 80° to 175° F.	Enzyme
StimBreak 530	Encapsulated Enzyme	Encapsulated Enzyme
StimBreak 548	Liquid enzyme solution; cleaner breaking process for use in borate-crosslinked frac fluids at low pH range of 4.0 to 8.0 and low-temp ranges from 80° to 145° F.	Hemicellulose / Mannanase Enzyme Blend
StimBreak 600	Hydrogen peroxide, liquid oxidizer formulation, highly effective within slickwater fracturing fluids within a broad temperature range from 80° to 400° F.	Hydrogen Peroxide
StimBreak 700	Liquid oxidizing chlorite breaker; effective degrading linear gel, crosslinked gel and friction reducers with high temperature conditions from 200° to 400° F.	Sodium Chlorite
StimBreak 900	Slurried oxidizing breaker for use within linear gel, crosslinked ge and friction reducers within a moderate temperature range from 200° to 280° F.	Proprietary Blend
StimBreak-GO	Inorganic aqueous solution used to degrade within gelled oil applications.	Proprietary Blend
BREAKER CATALYSTS		
StimBreak 800	Aqueous breaker catalyst assists oxidizing breakers such as StimBreak 300 function within lower temperature conditions with the same efficacy.	Proprietary Blend

CUSTOM VISCOSITY SOLUTION

Release control based on the gel system.

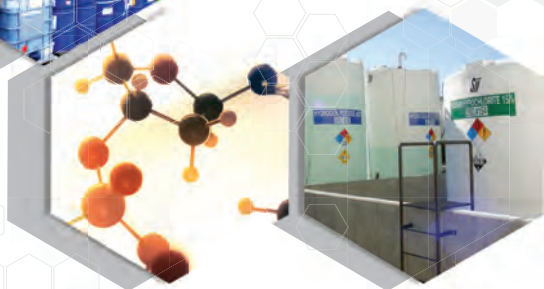
We carry an extensive line dedicated to the intricacies of the gel system.
Inquire today about your gel breaker needs!

PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
BRINES		
StimJET 101	Non-chloride based brine used as a higher density fluid. Additionally reduces treating pressures within the well.	Calcium Bromide
StimJET 201	Non-chloride based brine used as a higher density fluid. Additionally reduces treating pressures within the well.	Sodium Bromide
StimJET 301	Non-chloride based brine used as a higher density fluid. Additionally reduces treating pressures within the well.	Calcium Chloride
StimJET 401	Clay stabilizer used to neutralize anionic surfaces of swelling and mitigation clays while preventing damages to the wellbore. Loading rates based on weight.	2-7% Potassium Chloride
BUFFERS		
GelMod 120	Acidic solution used to lower pH and assist frac gel hydration within boron-contaminated frac water or saline water. Loadings to be determined before field use.	Acetic Acid Blend
GelMod 150	Acidic solution used to lower pH and assist frac gel hydration within boron-contaminated frac water or saline water. Loadings to be determined before field use.	Acetic Acid Blend
GelMod 220	Control agent for pH within borate or zirconium crosslinked frac fluids. Particularly efficient within high temp where a pH of 10 or higher is required for gel stability.	Potassium Carbonate / Potassium Hydroxide Blend
GelMod 250	A control agent for pH within borate or zirconium crosslinked frac fluids. Particularly efficient within high temp where a pH of 10.5 or higher is required for gel stability.	Potassium Carbonate / Potassium Hydroxide Blend
GelMod 250W	Winterized, control agent for pH within borate or zirconium crosslinked frac fluids. Efficient within high temp where a pH of 10.5 or higher is required for gel stability.	Potassium Carbonate / Potassium Hydroxide Blend
GelMod 325	Aqueous crosslinking buffer. Used to raise the fluid pH of linear gels to the needed level for crosslinking.	25% Potassium Hydroxide
GelMod 425	Aqueous crosslinking buffer. Used to raise the fluid pH of linear gels to the needed level for crosslinking.	25% Sodium Hydroxide
GelMod 450	Aqueous crosslinking buffer. Used to raise the fluid pH of linear gels to the needed level for crosslinking.	50% Sodium Hydroxide
GelMod 500	Stabilizes fluid pH and helps optimize the performance of crosslinkers, particularly within high temperature applications above 260° F.	45% Potassium Carbonate
GelMod 600	Buffer and stabilizer for linear gel crosslinking with produced waters and high TDS brines at temperatures of 80° to 250° F.	Proprietary Blend

CUSTOM FORMULATIONS

Have or desire a formula different than what we advertise?

- We have the ability to obtain raw materials and custom blend your preferred formulation from a network of supply chain partners throughout North America.



PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
CLAY CONTROL		
CLAYSTAY 101	Low-toxicity chloride-based salt used as a clay stabilizer to prevent clay swelling and migration. Product application pending lab analysis of clay sensitivities.	Potassium Chloride
CLAYSTAY 201	Low-toxicity chloride-based salt used as a clay stabilizer to prevent clay swelling and migration. Product application pending lab analysis of clay sensitivities.	Sodium Chloride
CLAYSTAY 301	Low-toxicity chloride-based salt used as a clay stabilizer to prevent clay swelling and migration. Product application pending lab analysis of clay sensitivities.	Ammonium Chloride
CLAYSTAY 435	Aqueous formulation of choline chloride and inorganic salts as KCL substitute provides an economical field-safe product at low cost.	Proprietary Blend
CLAYSTAY 470	70% aqueous solution of organic choline chloride is the effective KCL substitute for clay stabilization against temporary sensitive formations.	70% Choline Chloride
CLAYSTAY 475	Most concentrated organic choline chloride available can reduce loading application for temporary sensitive formations, while effective within drilling process.	75% Choline Chloride
CLAYSTAY 560	Permanent clay stabilizer within a cationic polymer aqueous solution. Highly concentrated and dense application allows for minimized loading rates.	Proprietary Blend of Cationic Polymers
CLAYSTAY 575	Semi-permanent clay stabilizer within a cationic polymer aqueous solution. Applied when high clay contents of formations lead to water sensitivity.	Proprietary Blend of Cationic Polymers

CLAY CONTROL EXPERTS

Don't know what clay control is needed for your well?

- We connect the geology with engineering by analyzing well cuttings through XRF, XRD and SEM in order to determine the proper CLAY-STAY selection. We also suggest when a clay control is not needed within a per-stage-basis, based on the formations and completions design matrix.

Import and bulk transfer specialists.

Jet Well Solutions imports the highest concentrate available via flexi-containers, then hauls within US DOT regulated bulk transports and 330gal totes. We can provide all delivery services straight to on-location, when you need it. We also provide mobile inventory tracking within the chemical field services for efficient accounting and ease of mind within a 24/7 operations.



PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
CROSSLINKERS		
XL-B101	Instant borate crosslinker or accelerator which provides self-buffering to high pH of JET-GEL guar slurry fracturing fluid for immediate viscosity enhancement.	Borate
XL-B102	Instant surface crosslinker or crosslinking accelerator that provides immediate viscosity for buffered JET-GEL: guar, HPG and CMHPG systems.	Borate
XL-B202	Naturally delayed borate crosslinker for guar-based fracturing fluids which contain a buffering agent within the gel system.	Borate
XL-B212	Borate crosslinker time delayer for XL-B202.	Borate
XL-Z105A	Zirconium-based instant crosslinker for low to neutral pH CMHPG fracturing fluids.	Zirconate
XL-Z105B	Zirconium-based delayed crosslinker for low to neutral pH CMHPG fracturing fluids.	Zirconate
FRICTION REDUCERS		
FR-1450XP	Friction reducer/viscosifier, contains surfactants for hydration as direct replacement to guar or xanthan. Thermal stability to 400° F BHT, tolerates most brines.	Proprietary Polymer Blend
JETSLICK A50	Anionic polymer emulsion formulated for light brine and fresh water applications where a Total Dissolved Solid (TDS) ppm is 50,000.	Anionic Polyacrylamide Emulsion
JETSLICK A150	Anionic polymer emulsion formulated for medium brine and fresh water (monovalent salts) applications where a Total Dissolved Solid (TDS) ppm is 150,000.	Anionic Polyacrylamide Emulsion
JETSLICK A200	Anionic polymer emulsion formulated for produced water and higher brine water (divalent salts) applications where a Total Dissolved Solid (TDS) ppm is 200,000.	Anionic Polyacrylamide Emulsion
JETSLICK C100	Cationic polymer emulsion formulated for light brine and fresh water applications where a Total Dissolved Solid (TDS) ppm is 100,000.	Cationic Polyacrylamide Emulsion
JETSLICK C200	Cationic polymer emulsion formulated for medium brine and fresh water (monovalent salts) applications where a Total Dissolved Solid (TDS) ppm is 200,000.	Cationic Polyacrylamide Emulsion
JETSLICK C250	Cationic polymer emulsion formulated for produced water & higher brine (divalent salts) water applications where Total Dissolved Solid (TDS) ppm is 250,000.	Cationic Polyacrylamide Emulsion
GELLING AGENTS		
CMC	Fast-hydrating, polyanionic powder for slurry component or dry on-the-fly application. Designed for continuous mix frac process and near zero gel damage.	Carboxymethyl Cellulose Powder
CMHPG	Fast-hydrating, polyanionic powder for slurry component or dry on-the-fly application. Designed for continuous mix frac process and near zero gel damage.	Carboxymethyl Hydroxyethyl Cellulose Powder
G4045	Fast-hydrating, high viscosity guar powder for slurry component or dry on-the-fly application. Compatible with borate crosslinkers & conventional breaker systems.	Guar Gum 40-45 Powder
G4550	Ultra fast-hydrating, high viscosity guar powder for slurry component or dry on-the-fly application. Compatible with borate XL & conventional breaker systems.	Guar Gum 45-50 Powder
JET-GEL 4045	4.0 ppg mineral oil & 40/45 fast hydrating guar gum. Used to gel water for friction reduction. Compatible with boron crosslinkers. Hydration pre-tested via well brine.	Guar 40-45 Slurry
JET-GEL 4550	4.0 ppg mineral oil & 45/50 fast hydrating guar gum. Used to gel water for friction reduction. Compatible with boron crosslinkers. Hydration pre-tested via well brine.	Guar 45-50 Slurry
JET-GEL CMC	4.0 ppg mineral oil slurry of CMC. Designed to gel for friction reduction at a highly cleaner rate, while maintaining compatibility with most crosslinkers.	CMC Slurry
JET-GEL CMHPG	4.0 ppg mineral oil slurry of CMHPG. Designed to achieve ultra hydration rates of 80% within 1 min. Used to gel water for friction reduction. Compatible with zirc XL's.	CMHPG Slurry
GEL STABILIZERS		
GELBRACE-HT1	Aqueous based sodium thiosulfate, nonionic solution. Designed to aid in the stabilization of polymers and crosslinked gels susceptible to thermal degradation.	Sodium Thiosulfate
GELBRACE-HT2	Aqueous based ammonium thiosulfate, nonionic solution. Designed to aid in the stabilization of polymers and crosslinked gels susceptible to thermal degradation.	Ammonium Thiosulfate
GELBRACE-HT3	Aqueous based triethanolamine solution. Designed to aid in the stabilization of polymers and crosslinked gels susceptible to thermal degradation.	85% Triethanolamine

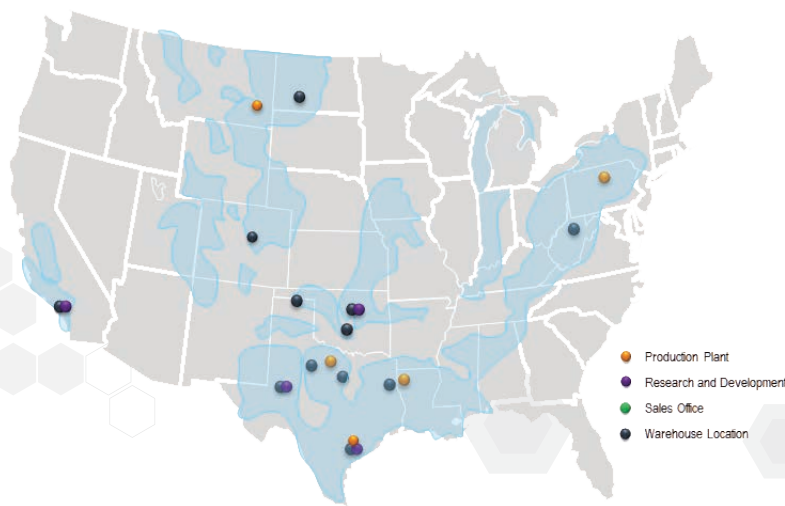
PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
NON-EMULSIFIERS		
NE-749N	Nonionic non-emulsifier; effective historically within a large number of crude oils, typically giving exceptionally clean aqueous phases of emulsion breaks.	Nonionic Surfactants in Alcohol
NE-750N	Winterized, nonionic non-emulsifier; effective historically within a large number of crude oils, typically giving exceptionally clean aqueous phases of emulsion breaks.	Nonionic, Conventional and Fluorinated Surfactants
NE-770C	Cationic non-emulsifier. Versatile within acidizing and fracturing applications provides a rapid breaking and wettability for specific crude oils.	Cationic Quaternary Amines
NE-800N	Nonionic non-emulsifier provides excellent low surface tension to below 29 dynes/cm for fracturing fluids.	Nonionic Surfactants and Mutual Solvents
SCALE INHIBITORS		
JETGUARD SI-830	Water-soluble, aqueous solution effective against carbonate, gypsum and barium scales in high salinities over 100k mg/L and high temperatures up to 400° F.	Proprietary Blend
JETGUARD SI-860	Water-soluble, aqueous solution particularly effective against calcium carbonate. Also effective as a stand-alone batch injection scale remover.	Anionic Polyamine Phosphonate Blend
JETGUARD SI-898	Water-soluble, aqueous solution particularly effective against barium sulfate. For aluminum and stainless steel field applications.	Anionic Polyamine Phosphonate Blend
JETGUARD SI-900	Water-soluble, anionic phosphonate solution effective against calcium carbonate, calcium sulfate and barium sulfate within stimulation or stand-alone treatment.	Anionic Phosphonate Blend
JETGUARD SI-927	Water-soluble, aqueous solution for prevention of calcium carbonate, calcium sulfate and barium sulfate. For aluminum and stainless steel field applications.	Acrylate Polymer / Phosphate Ester Blend
JETGUARD SI-960	Environmentally friendly low dosage application particularly effective against barium sulfate scales at saline up to 100k mg/L and 300° F.	Anionic Polymeric Blend
JETGUARD SI-960W	Winterized version of JETGUARD SI-960.	Anionic Polymeric Blend
JETGUARD SI-997	Environmentally friendly low dosage application against calcium carbonate, calcium sulfate and barium sulfate scales at salines up to 100k mg/L and 400° F.	Anionic Polymeric Blend

OUR FOOTPRINT

Specialty locations throughout USA!

- We support each oil & gas shale play throughout the United States. We even export product for international application.

Each one of our locations has a specific function within our footprint, enabling our entire operations to be as efficient as possible for your needs.



PRODUCT	PRODUCT DESCRIPTION	CHEMISTRY
SURFACTANTS/ FLOWBACK AND WATER RECOVERY AIDS		
SURFLOW 781A-WR	Anionic blend provides low surface tensions and negligible absorption rock. Promotes load recovery, particularly within tighter formation, gas well applications.	Fluorosurfactants
SURFLOW 790N-ME	Winterized nonionic micro-emulsion with environmentally friendly components for low absorption on reservoir rock. Improves water recovery of oil or gas wells.	Proprietary Blend
SURFLOW 792N	Nonionic blend improves fluid recovery and assists in release of bound oil near reservoir rock. Surface tension <30 dynes/cm in fresh water and 2% KCL.	Ethoxylated Alcohol Surfactants
SURFLOW 794N-WR	Nonionic blend provides low surface tensions below 20 dynes/cm. Promotes load recovery, particularly within tighter formation, gas well applications.	Fluorosurfactants
SURFLOW 810N	Designed to improve fluid recovery, prevent emulsions & assist in release of bound oil near reservoir rock. Surface tension <30 dynes/cm in fresh water or 2% KCL.	Ethoxylated Alcohol Surfactants
SURFLOW 833N-ME	Nonionic micro-emulsion for gel and slickwater. Provides low interfacial tension and absorption to rock. Has high flash point and is capable as a stand alone NE.	Proprietary Blend
SURFLOW nano846	Nano-surfactant supports nano-particle emulsion. Product contains no nonylphenols, no methanol and is non-flammable. Surface tension as low as 27 dynes/cm.	Proprietary Blend

IMPROVED OIL RECOVERY

Revised wettability for water-rock and oil-rock applications.

- We incorporate a proven, novel suite of flowback aids and (non-emulsifying) surfactants specific to the reservoir rock formation and crude oil type. Our systematic approach results in enhanced hydrocarbon recovery, adding return-on-investment value within both conventional and unconventional shale plays.

