

J4 Fluid Services Products/Services	Product Specifications
Typically Deployed Coiled Tubing – Snubbing Unit Circulating Fluid System Application Equipment for Chemical Blenders	
Portable Chemical Blending Unit (<u>includes mob/demob, fuel, hoses, and all connections</u>) Transported on gooseneck trailer with PU	Twin pump (2000 gpm ea.) Split tank 15/35bbl for CT circulating fluid system maintenance, designed for efficient mixing of powders and liquid suspensions.
Advanced Hybrid Unit (includes fuel, transfer hoses, mob/demob mileage, feed pump and all necessary connections) Transported on gooseneck trailer with PU	On the fly computer controlled chemical injection with twin 10 bbl displacement tanks. Streaming data transmission to any location with an internet connection. (4) Progressive Cavity Hydraulic Chemical injection pumps
Surface Fluid 4x5 Centrifugal Transfer Pump	5 x 4 Detroit Diesel Pump Skids
2, 3 and 4 inch – 20 ft. sections of transfer hose	Brass or Stainless Steel Camloc Connections
High Efficiency Filtration Skid, Y-Strainer, mob/demob mileage with Turbidity Measurement Instrument	Single element/POD - (quick change-out), 3 PODS/Skid, 9 BPM filtration rate. Available from 2-100 micron absolute or nominally rated filtration media
Filtration Cartridges (2, 5, 10, 25, 50 and 100 micron)	High solids loading capability, one cartridge/POD unit, quick change out capability.
Portable Chemical Blender/Filtration Unit Operators and Helpers	Deliver - setup and operate chemical blender system. Manage coiled tubing circulating fluid system chemical and physical properties. Maintain – Monitor on-site fluid and chemical inventory, provide daily cost reporting to company representative and make recommendations to optimize operations
Out of Town Per Diem (If required)	Includes all meals, mileage and lodging accommodations when 24-hour operations and multiple crews are required
2 & 3 inch Priming Pump	Skid mounted pump assembly useful for a variety of fluid transfer and centrifugal pump priming operations
Fluid Engineer	Mud Engineers trained for water and oil base drilling fluid operations
One Ton Truck and Trailer Mileage	Hot Shot Services and Transportation of Filtration Equipment and Chemicals

J4 Fluid Services Products/Services	Product Specifications
Typically Deployed Coiled Tubing – Snubbing Unit Circulating Fluid System Application Additives for Chemical Blenders	
J4 HiVis TM	High viscosity hydroxyethyl cellulose polymer suspension. Dosage rate: 0.25 to 1.0 gal/bbl in saturated KCl, NaCl and CaCl ₂ brines to 250 deg F.
J4 Xanvis L TM (Bio Polymer Liquid High Temperature Gelling Agent for Hi Vis Sweeps)	High purity Xanthan gum with dispersion chemistry which significantly enhances dispersion and solubility. 50% polymer activity by weight. Stable to 320 deg F with oxygen scavenger addition. Liquid dosage rate for Hi Vis Sweeps: 2.5 to 5-gallons/10 bbl
J4 FloGlide TM (Friction Reducer and High Viscosity Sweeps) (Manufactured by Drilling Specialties as HE-150)	High Viscosity, rapid hydration (complete hydration in less than 5 minutes) synthetic polymer, excellent thermal stability, used primarily for high viscosity sweeps in high temperature environment. Typical dosage rate of 3-5 gal/10 bbls is nominal for 100 sec/quart marsh funnel viscosity.
J4 P-1000 TM (Friction Reducer and High Viscosity Sweeps) Highly concentrated very fine particle size distribution suspension resulting in lower treatment dosage rates	High Viscosity, rapid hydration (complete hydration in less than 2 minutes) synthetic polymer, excellent thermal stability, used primarily for high viscosity sweeps in high temperature environment. Typical dosage rate of 2.5 gal/10 bbls is nominal for 100 sec/quart marsh funnel viscosity. Fine particle size distribution enhances rapid and complete polymer hydration.
J4 FloGlide 300 TM (Friction Reducer and High Viscosity Sweeps) (Manufactured by Drilling Specialties as HE-300)	High Viscosity, rapid hydration (complete hydration in less than 2 minutes) synthetic polymer, excellent thermal stability, used primarily for high viscosity sweeps in abnormally high temperature environments. Typical dosage rate of 3-5 gal/10 bbls is nominal for 100 sec/quart marsh funnel viscosity.
FR-500 is a synthetic high molecular weight polyelectrolyte based polyacrylamide	This product is a highly efficient friction reducer when used in water-based hydraulic fracturing and coil tubing circulating fluids and is capable of reducing pressure losses due to friction by amounts in excess of 70%. Typical dosage rates are 0.25 - 2.0 gal/1,000 gal
FR-1350 is an emulsion based system for friction pressure reduction designed for rapid dispersion and polymer hydration	This product is a highly efficient friction reducer when used in water-based hydraulic fracturing and coil tubing circulating fluids in cases where emulsified hydrocarbons are present and is capable of reducing pressure losses due to friction by amounts in excess of 70%. Typical dosage rates are 0.25 - 2.0 gal/1,000 gal

J4 Fluid Services Products/Services	Product Specifications
Single and Multi-Salt Clear Fluid Custom and Stock Blends (filtered to 5 micron nominal when transported in J4 Vacuum Transports)	
J4 KCl Clay Stay™ (Solutions of Potassium Chloride)	High purity anhydrous potassium chloride solutions blended with Victoria, Texas city water, filtered to 5 micron nominal into clean J4 transports
J4 KCl Clay Stay™ (2% KCl Solution)	Commonly used as a solids free workover/completion fluid to inhibit clay swelling and prevent formation damage.
J4 KCl Clay Stay™ (3% KCl Solution)	Commonly used as a solids free workover/completion fluid to inhibit clay swelling and prevent formation damage.
J4 KCl Clay Stay™ (24% KCl Solution)	Concentrated solution commonly used as a base fluid from which dilute solutions are blended. On site usage can help minimize trucking costs if a water well is present
J4 CalChlor™ (11.6 ppg Calcium Chloride solution)	38% saturated solution of Calcium Chloride, base fluid from which custom blended solutions ranging from 8.4 – 11.6 ppg are prepared.
J4 Brine™	10 ppg concentrated solution of sodium chloride, produced from salt domes located on the Texas gulf coast.
J4 LCM Brine	10 ppg NaCl brine with low calcium and magnesium content for scale formation minimization
KCl Substitute	Permanent clay stabilizer, quaternary amine, 8 gallons/100 bbl for 2% KCl equivalent
Calcium Bromide and Zinc Bromides Blends (up to 21.0 ppg)	Pricing Available upon request
J4 Clean Well™	Concentrated blend of surfactants used to clean down-hole tubulars in contact with oil based drilling fluids

J4 Fluid Services Products/Services	Product Specifications
Lubricants, Surfactants and Scavengers	
J4 LiquiBeads (Liquid lubricant and co-polymer beads)	Reduces torque and drag associated with extended reach laterals, fine grade beads average 247 microns, liquid phase has high affinity for metal and bonds with tubular surfaces reducing the coefficient of friction between coil string and casing. Typical concentration less than 1% of total circulating system volume
Beka Lube	Lubricant designed to free stuck coiled tubing strings while working in extended reach laterals.
J4 Thermal Ex™ (Thermal Polymer Extender)	Prevents polymer degradation up to and above 300 °F. Dosage rate: 0.12 – 0.7 gallons/bbl
J4 Foaming Agent	Highly concentrated surfactant, lubricant and fluid rheological stabilizer, liquid dosage rate: 5 – 10 gallons/25 bbl
H ₂ S Scavenger	Concentrated (78-82%) aqueous cyclic tertiary amine solution designed as a sulfide scavenger in aqueous solutions. Dosage rates vary based on H ₂ S presence
Anhydrous Sodium Sulfite Na ₂ SO ₃	Anhydrous oxygen scavenger used as a thermal extender for high viscosity sweeps formulated with HE-150. Typical dosage rates 0.5 -2 lb/bbl dependent on BHST and make-up fluid type.
Specialty Chemicals for Down-hole Tubular Corrosion Protection	
J4 CorHib +™	Film forming amine for high temperature applications Dosage rate: 20 gal/100 bbl (depending on severity of corrosive environment)
J4 OxRid™	70% by weight solution of catalyzed ammonium bisulfate Dosage rate: 5 gal/100 bbl (maintain 100 ppm excess sulphite in circulating systems.
J4 BioRid™	Liquid biocide, based on thiaziazine, effective in controlling sulfate-reducing and acid producing bacteria. Recommended dosage rates are typically 5 gal/100 bbl
J4 Packer Fluid™	A blended product containing 40 % Inhibitor, 30 % Oxygen Scavenger and 30 % Biocide. Dosage rate: 25 gallons/100 bbl (Dependent on severity of corrosive environment)

J4 Fluid Services Products/Services	Product Specifications
Fluid Transportation Services	
Vacuum Trucks with 130 bbl TNEMEC Acid Lined Trailers and 160 bbl (non-acid service)	Kenworth and Peterbilt Tractors with Day Sleepers, C15 Power Plants
Fluid Loss Control and Specialty Pills	
J4 Defoam™	Colorless, synthetic liquid formulation (99% Activity), stable at high temperatures, Dosage rate: 0.1 gal/bbl (dependent on intended use)
J4 Carb™ (Fine, Medium and Coarse)	High purity, highly acid soluble calcium carbonate for fluid loss control Dosage rate: 100 – 400 lbs./bbl (dependent on severity of losses)
J4 Quick Seal	Blend of acid insoluble particles and flakes used for severe fluid loss in combination with acid soluble calcium carbonate in various particle size distributions
Miscellaneous Products and Services	
One Ton Truck and Trailer Mileage	Hot Shot Services and Transportation of Filtration Equipment, Field Crews and Chemicals
J4- Oil and Water Base Mud Displacement Spacer System	Multi-stage engineered displacement spacer system well bore specific design using complex fluid hydraulic modeling software.
Full Service water and oil base drilling fluid services	Services include complete drilling fluid program preparation by experienced engineering staff with access to in-house and external data base of Eagle Ford wells drilled. Products include all dry and liquid additives, product delivery and setup/rig down required from spud in to extended reach lateral drilling and re-entry of Austin Chalk wells to access Eagle Ford Shale. Drilling fluid engineers are available for 24-hour services or drive-by checks.

Eagle Ford Shale Acid Toe Valve Preps Products and Services Effective January 1, 2014

J4 Fluid Services Products and Services	Unit Price	Product Specifications
J4 Vacuum Truck for HCl delivery		130 bbl. specialized DOT Acid Vacuum Truck Transport with HCl acid resistant lining
J4 Acid Safety Location Coordinator		Location Engineering and Safety Supervisor (Coordinates activities with Company Representative and all service company representatives on the application of acid solutions)
15% Hydrochloric Acid Solution		FOB J4 Facility in Victoria, Texas (42,000 gallon storage capacity)
11% Hydrochloric Acid Solution		FOB J4 Facility in Victoria, Texas (42,000 gallon storage capacity)
High Temperature Acid Corrosion Inhibitor CORNOX 242ES		Dosage requirements 30 gal/1000 gallons (in cases where 72 hours of protection are required with BHST of 325 deg F) Dosage rates will be adjusted dependent on protection time requirements and thermal gradient variations.
High Temperature Acid Corrosion Intensifier CORNOX 291		Dosage requirements 20 gal/1000 gallons (in cases where 72 hours of protection are required with BHST of 325 deg F) Dosage rates will be adjusted dependent on protection time requirements and thermal gradient variations.
Plexbreak 150 Non-Emulsifier		Designed to eliminate emulsions from forming during acid spend and formation fluid inter-action. Typical dosage rate of 1 gal/1000 gal
Disposal of HCl Solutions		(Lazy-B Disposal, Victoria or other customer approved TRC permitted site)
Soda Ash for HCl Neutralization		Dosage requirements dependent on volume and concentration of residual acid solutions in post frac operations

Eagle Ford Shale Acid Products and Services for Massive Hydraulic Fracturing Operations Effective January 1, 2014

Products and Services	Unit Price	Product Specifications
500 bbl Mobile Hydrochloric Acid Service Frac Tanks		22 mil Tnemic lined hydrochloric acid storage tanks
Environmental Service Charge		Tank cleaning fee adjustable, based on actual third party cleaning charges related to severity of residual chemical internal surface deposits.
Mobilization/Demobilization with J4 Winch Trucks		For tank transport from J4 Victoria Facility to well site, well site to tank cleaning facility back to J4 Facility or well to well transport.
Neutralization of Acid Residuals (post frac – Pre demob) if required		Neutralization Chemical Delivery
		Acid Fluid/Safety Engineer for conducting neutralization/transfer and acid blending operations
Soda Ash for hydrochloric acid neutralization		Dosage requirements dependent on volume and concentration of residual acid solutions in post frac operations
J4 Vacuum Truck Acid Transfer		Specialized DOT Acid Vacuum Truck Transport
Disposal of Neutralized acid solutions		(Lazy- B Disposal, Victoria TX) or other TRC permitted site
Disposal of Acid Solutions		(Lazy- B Disposal, Victoria TX) or other TRC permitted site



Company Contact Information:

Hank Reeves, VP-Managing Director
(361) 877 9062. hreeves@j4fluidservices.com

Bryan Tipton, Field Sales Representative
(361) 571-4190. btipton@j4fluidservices.com

Scott Park, Acid Engineering Supervisor
(361) 649-2641. spark@j4fluidservices.com

Chad Smith, Computer Hardware and Software Engineer
(361) 935-0337. csmith@j4fluidservices.com

Lester Ellison, HSE Manager
(361) 920 8022. lellison@j4fluidservices.com

Lupe Villareal, Transportation Manager
(361) 218-2571. lvillareal@j4fluidservices.com

Rachel Barrera, Field Sales Representative
(361) 571 4105. rbarrera@j4fluidservices.com

Sherry Walls, Office Manager
(361) 485 2700. swalls@j4fluidservices.com