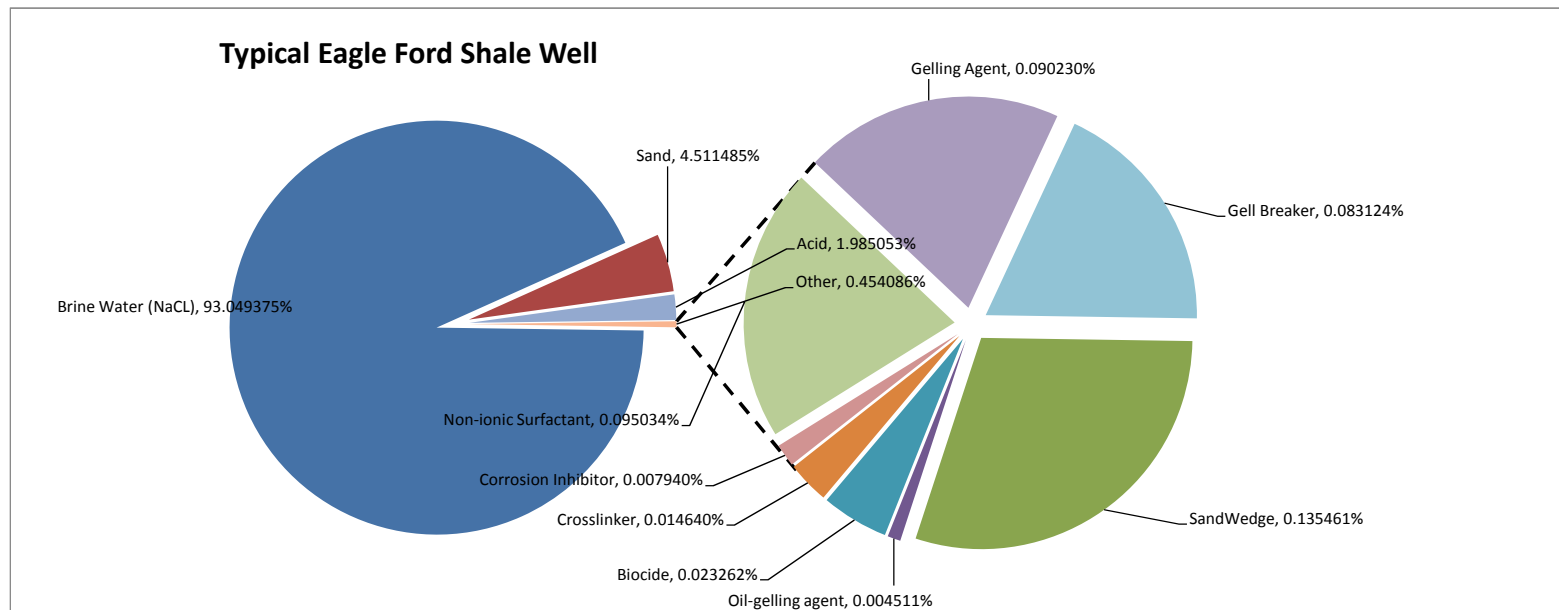


**Typical Eagle Ford Shale Well**

Product Name	Additive	Purpose	Use and Dilution	Volume per well (11 Stages), gal	Overall %
Brine Water (NaCl)	Carrier Fluid	Creates fracture network in shale and carries sand to the formation	Approximately 2 millions gallons	2,062,500	93.049375%
Sand	Sand	Enables fractures to remain open and allow gas to escape into the well bore	Approximately 2.2 millions pounds	100,000.00	4.511485%
SandWedge	Sand coating	Conductivity enhancement - chemically modifies the surface of the proppant grains system		3,000.00	0.135345%
MO-67	Oil-gelling agent	Oil-based fluid that can enhance fracture stimulation		100.00	0.004511%
BE-9	Biocide	Eliminates bacteria in water sources		515.62	0.023262%
CL-31/CL-28	Crosslinker	Crosslinker		324.50	0.014640%
15% HCL	Acid	Dissolves cement and minerals in the perforations (non-diluted)		44,000.00	1.985053%
HAI-404M™	Corrosion Inhibitor	Protects casing		176.00	0.007940%
LoSurf-300D	Non-ionic Surfactant	Enhances mobilization of liquid hydrocarbons		2,106.50	0.095034%
WG-36	Gelling Agent	Adds viscosity to the fluid		2,000.00	0.090230%
VICON NF	Gell Breaker	Reduces viscosity of the fluid		1,842.50	0.083124%



Common Name & Supplier	Supplier Chemical Name	Common Description	Hazardous Components listed on MSDS	Purpose	Hazardous Component Weight % of Chemical	Component loading gal/1000	Gal Hazardous Component / stage	Concentration Hazardous Component of Total Stage Fluid		
								by % Vol	by % Weight	ppm
15% HCl (Halliburton Energy Services)	15% HCL	HCL	Hydrochloric acid	Dissolves cement and minerals in the perforations (non-diluted)						
	HAI-404M™	Corrosion Inhibitor	Aldehyde	Protecting casing	10 - 30%					
			Chloromethylnaphthalene quinoline quaternary amine		5 - 10%					
			Methanol		10 - 30%					
			Isopropanol		10 - 30%					
<b>TOTAL</b>								-	-	-
Biocide (Halliburton Energy Services)	BE-9	Biocide	Tributyl tetradecyl phosphonium chloride	Eliminates bacteria in water sources	5 - 10%					
<b>TOTAL</b>								-	-	-
Additive (Halliburton Energy Services)	MO-67	Oil-gelling agent	Sodium hydroxide	Oil-based fluid that can enhance fracturestimulation	10 - 30%					
<b>TOTAL</b>								-	-	-
Non-ionic Surfactant (Halliburton Energy Services)	LoSurf-300D	Non-ionic Surfactant	Ethanol	Used as a nonemulsifier	30 - 60%					
			Heavy aromatic petroleum naphtha		10 - 30%					
			Naphthalene		1 - 5%					
			1,2,4 Trimethylbenzene		0 - 1%					
			Poly(oxy-1,2-ethanedyl), alpha-(4-nonylphenyl)-omega-hydroxy- branched		1 - 5%					
<b>TOTAL</b>								-	-	-
Crosslinker (Halliburton Energy Services)	CL-28M	Crosslinker	Borate salts	Crosslinker	30 - 60%					
	CL-31		Crystalline silica, quartz		1 - 5%					
			Potassium metaborate		30 - 60%					
			Potassium hydroxide		< 5%					
Gelling Agent (Halliburton Energy Services)	WG-36	Gelling Agent	Guar gum	Adds viscosity to fluid	60 - 100%					
Gell Breaker (Halliburton Energy Services)	VICON NF BREAKER	Enzyme gel breaker	Chlorous acid, sodium salt	Reduces the viscosity of the fluid	8 - 10%					
			Sodium chloride		10 - 30%					
			<b>TOTAL</b>							