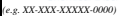


Fracture Start Date/Time:	9/28/15 0:00
Fracture End Date/Time:	10/9/15 0:00
State:	Texas
County:	Upton
API Number:	42-461-11111-0000
Operator Number:	PT Petro
Well Name:	University Red 5021H
Federal Well:	No
Longitude:	-102.0101
Latitude:	32.0101
Long/Lat Projection:	NAD27
True Vertical Depth (TVD):	15,426'
Total Clean Fluid Volume* (gal):	12,703,530



	Total Slurry Mass (Lbs)
	171 509 471

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier/Base Fluid	Water	7732-18-5	100.00%	106,010.958	87.24505%	
HA04-10-15% HCL	Reagent Chemical	Acidizing	Hydrogen Chloride	7647-01-0	15.00%	150,661	0.12399%	
AC1266-Payzone 266	Catalyst	Corrosion Inhibitor	Water	7732-18-5	85.00%	853,744	0.70262%	
			DBBSA	68584-22-5	20.00%	0	0.00000%	
			Methanol	67-56-1	20.00%	0	0.00000%	
			Propargyl Alcohol	107-19-7	20.00%	0	0.00000%	
			Polyoxyalkylenes	Proprietary	20.00%	0	0.00000%	
			2-Hydroxy-1,2,3 Propanetricarboxylic Acid	77-92-9	20.00%	0	0.00000%	
			Acetic Acid	64-19-7	20.00%	0	0.00000%	
ICS-Iron Control	Economy Polymers	Iron Control	Acetic Acid	64-19-7	60.00%	2,886	0.00237%	
			Citic Acid	77-92-9	30.00%	1,443	0.00119%	
C200-Corrosion Inhibitor	Economy Polymers	Corrosion Inhibitor	Water	7732-18-5	60.00%	2,886	0.00237%	
NE-601 N/E Surfactant	FES	Surfactant	Methanol	67-56-1	60.00%	850	0.00070%	
			Methanol	67-56-1	70.00%	655	0.00554%	
			Ethylene Glycol Monobutyl Ether	111-76-2	50.00%	468	0.00039%	
			Diethanolamide	Proprietary	70.00%	655	0.00554%	
LGW01-Liquid Gellant	Economy Polymers	Liquid Gellant	Petroleum Distillates	Proprietary	60.00%	0	0.00000%	
			Polysaccharide Blend	Proprietary	60.00%	0	0.00000%	
EC200-Crosslinker	ASK Chemical	Crosslinker	Potassium Hydroxide	1310-58-3	25.00%	0	0.00000%	
			Ethylene Glycol	107-21-4	25.00%	0	0.00000%	
			Proprietary Component	Proprietary	20.00%	0	0.00000%	
			Proprietary Component	Proprietary	15.00%	0	0.00000%	
			Proprietary Component	Proprietary	10.00%	0	0.00000%	
BR1-AP Breaker	Economy Polymers	AP Breaker	Ammonium Persulfate	7727-54-0	98.00%	17,302	0.01424%	
BREC-High Temp Encap	Economy Polymers	High Temp. Encap Breaker	Ammonium Persulfate	7727-54-0	60.00%	0	0.00000%	
			Cured Acrylic Resin	Proprietary	25.00%	0	0.00000%	
			Silica, Crystalline-Quartz	14808-60-7	15.00%	0	0.00000%	
LEB1-Liquid Enzyme Breaker	Economy Polymers	Liquid Enzyme Breaker	Trade Secret	Proprietary	100.00%	0	0.00000%	
BRXPA-Plexgel XPA Breaker	Chemplex	Breaker	Hydrogen Peroxide	7722-84-1	100.00%	0	0.00000%	
BRM-Liquid Magnesium Breaker	Chemplex	Liquid Magnesium Breaker	Methanol	67-56-1	100.00%	0	0.00000%	
FRB01-Friction Breaker	ASK Chemical	Friction Breaker	Ammonium Persulfate	7727-54-0	100.00%	0	0.00000%	
FR300-Anionic Friction Reducer	Economy Polymers	Anionic Friction Reducer	Trade Secret	Proprietary	100.00%	111,625	0.09187%	
TWLB-MicroEmulsion	CESI Chemical	MicroEmulsion	Citrus Terpenes	68647-72-3	30.00%	0	0.00000%	
			Isopropyl Alcohol	67-63-0	30.00%	0	0.00000%	
NE602-N/E Surfactant	Environmental Energy Serv	N/E Surfactant	Trade Secret	Proprietary	100.00%	0	0.00000%	
BC-50-Liquid Biocide	Colossal Chemical	Liquid Biocide	Triazine Triethanol	4719-04-1	60.00%	0	0.00000%	
			Methanol	67-56-1	5.00%	0	0.00000%	
BC1058-Liquid Biocide	Buckman Lab.	Liquid Biocide	Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione	533-74-4	24.00%	20,654	0.01650%	
			Sodium Hydroxide	1310-73-2	11.00%	9,191	0.00756%	
BC202-25% Glutaraldehyde	ASK Chemical	Biocide (Glutaralehyde)	Glutural	111-30-8	25.00%	0	0.00000%	
			Water	7732-18-5	75.00%	0	0.00000%	
			Methanol	67-56-1	0.25%	0	0.00000%	
BC01-MECTWS Dry Bio S1300-Scale Inhibitor	Economy Polymers	Biocide (Dry)	Dibromo - Nitroterephthionamide	10222-01-2	100.00%	0	0.00000%	
	Colossal Chemical	Scale Inhibitor	Sodium Chloride	7647-14-5	7.00%	5,413	0.00445%	
			Methanol	67-56-1	30.00%	23,198	0.01969%	
SPD400-Scale Inh. (Solid)	Economy Polymers	Scale Inhibitor (Solid)	examethylenetriamine penta methylene phosphonic ac	35657-77-3	60.00%	0	0.00000%	
CS01-Clay Stabilizer	Colossal Chemical	Clay Stabilizer	Methanol	67-56-1	100.00%	0	0.00000%	
K205-KCL Substitute	Colossal Chemical	KCL Substitute	Benzenemethaniminium	56-93-9	13.00%	0	0.00000%	
			Methanol	67-56-1	10.00%	0	0.00000%	
			Ammonium Acetate	631-61-8	40.00%			

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
BAF01-Benzoic Acid Flakes	Sigma-Aldrich	Benzoic Acid Flakes	Benzoic Acid	65-85-0	100.00%	0	0.00000%	
STIMENX-StimOil ENX	CESI Chemical	Surfactant	Isopropyl Alcohol	67-63-0	30.00%	83,884	0.06903%	
AL701-Acidlink 701	Chemplex	Surfactant	Methanol	67-56-1	25.00%	0	0.00000%	
PLX01-Plexsurf WRS	Chemplex	Surfactant	Methanol	67-56-1	12.00%	0	0.00000%	
			2-Butoxyethanol	111-76-2	35.00%	0	0.00000%	
AG104-Acid Gelling Agent	Economy Polymers	Acid Gelling Agent	Methanol	67-56-1	100.00%	0	0.00000%	
O2S-Plexaid OS-30	Chemplex	Oxygen Scavenger	Ammonium Bisulfite	010192-30-0	55.00%	0	0.00000%	
Cortron R-2340	Champion Technologies	Corrosion Inhibitor	Methanol	67-56-1	60.00%	0	0.00000%	
			Acetic Acid	64-19-7	5.00%	0	0.00000%	
			Amines, coco alkyl, acetates	Proprietary	10.00%	0	0.00000%	
Gypton T-390	Champion Technologies	Scale Inhibitor	Methanol	67-56-1	10.00%	0	0.00000%	
			Nonylphenol ethoxylate	Proprietary	10.00%	0	0.00000%	
Bactron K-139	Champion Technologies	Biocide	Glutaraldehyde	111-30-8	5.00%	0	0.00000%	
			Quaternary ammonium compounds, benzyl-C12-16-alkylids	68424-85-1	10.00%	0	0.00000%	
			Ethanol	64-17-5	5.00%	0	0.00000%	
Surfactron 613	Champion Technologies	Corrosion Inhibitor/Surfactant	Quaternary Salt	Proprietary	60.00%	0	0.00000%	
CorrSorb 6000	Baker Hughes	Corrosion Inhibitor	Diatomaceous earth, calcined	91053-39-3	100.00%	0	0.00000%	
			Quaternary ammonium chloride	Proprietary	30.00%	0	0.00000%	
			Acid phosphate ester	Proprietary	10.00%	0	0.00000%	
			Crystalline silica: Quartz	14808-60-7	1.00%	0	0.00000%	
ParaSorb 5000	Baker Hughes	Paraffin Inhibitor	Diatomaceous earth, calcined	91053-39-3	60.00%	0	0.00000%	
			Mineral Oil	8042-47-5	30.00%	0	0.00000%	
			Crystalline silica: Quartz	14808-60-7	1.00%	0	0.00000%	
BioSorb 1250	Baker Hughes	Biocide	Diatomaceous earth, calcined	91053-39-3	60.00%	0	0.00000%	
			Glutaraldehyde	111-30-8	30.00%	0	0.00000%	
			Crystalline silica: Quartz	14808-60-7	1.00%	0	0.00000%	
ScaleSorb 3	Baker Hughes	Scale Inhibitor	Diatomaceous earth, calcined	91053-39-3	100.00%	0	0.00000%	
			Amino Alkyl Phosphonic Acid	Proprietary	30.00%	0	0.00000%	
			Phosphonic Acid	13598-36-2	1.00%	0	0.00000%	
			Crystalline silica: Quartz	14808-60-7	1.00%	0	0.00000%	
FSI2175 Scale Inhibitor	Aegis Chem.	Scale Inhibitor/Iron Chelant	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8	10.00%	0	0.00000%	
S-644 Scale Inhibitor	Aegis Chem.	Scale Inhibitor	Phosphoric Acid	7664-38-2	50.00%	0	0.00000%	
			Hydrochloric Acid	7641-01-0	50.00%	0	0.00000%	
D-305n Surfactant	Aegis Chem.	Surfactant	Methanol	67-56-1	15.00%	0	0.00000%	
Aktivok HaClO2	OxyChem	Oxidizing/Bleaching Agent	Sodium Chlorite	7758-19-2	26.00%	0	0.00000%	
			Sodium Chloride	7647-14-5	3.00%	0	0.00000%	
			Water	7732-18-5	76.00%	0	0.00000%	
RAW - White/Brown Sand	Santral	Proppant	Silica	14808-60-7	100.00%	11,378,160	9.36401%	
CRS - Resin Coated Sand	Santral	Proppant	Silica	14808-60-7	100.00%	2,538,960	2.08952%	
Ceramic - Sinterlite/MG Lite	Sintex	Proppant	Silica	14808-60-7	100.00%	0	0.00000%	