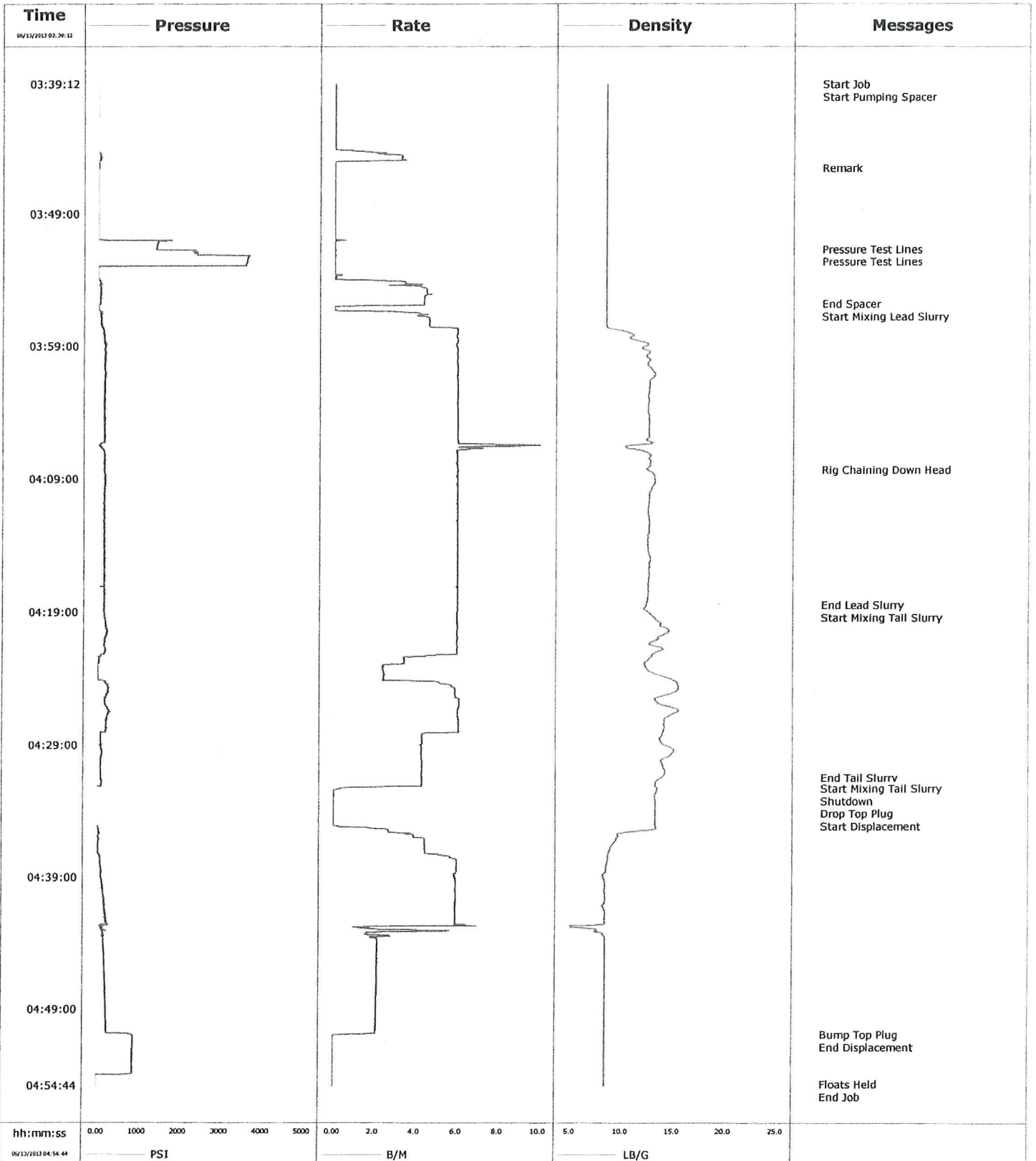


Well	Randell 3319-1-35	Client	Sandridge
Field		SIR No.	C1YQ-00215
Engineer	Charles Jacobs	Job Type	8 5/8" Surface
Country	United States	Job Date	06-13-2013





Cementing Service Report

				Customer Sand Ridge		Job Number 998134	
Well Randell 3319-1-35		Location (legal)		Schlumberger Location Elreno		Job Start Jun/13/2013	
Field		Formation Name/Type		Deviation		Well MD	
County Comanche		State/Province KS		BHP		Well TVD	
Well Master 0631458784		API/UWI 15033217050000		BHST		Pore Press. Gradient	
Rig Name Lamunyon 1		Drilled For Oil & Gas		Service Via Land		Casing/Liner	
Offshore Zone		Well Class New		Well Type Development		Depth, Size, Weight, Grade, Thread	
Drilling Fluid Type		Max. Density		Plastic Viscosity		Tubing/Drill Pipe	
Service Line Cementing		Job Type Cem Surface Casing		Depth, Size, Weight, Grade, Thread			
Max. Allowed Tub. Press		Max. Allowed Ann. Press		WH Connection		Perforations/Open Hole	
						Top, Bottom, No. of Shots, Total Interval	
Service Instructions						Diameter	
Casing/Tubing Secured ☒		1 Hole Vol. Circulated prior to Cement ☒		Casing Tools		Squeeze Job	
Lift Pressure 150 psi		Pipe Rotated ☐ Pipe Reciprocated ☐		Shoe Type Guide		Squeeze Type	
No. Centralizers 5		Top Plugs 1		Bottom Plugs 0		Shoe Depth 924.0 ft	
Cement Head Type Single		Stage Tool Type		Tool Type		Tool Depth	
Job Scheduled For Jun/13/2013		Arrived on Location Jun/13/2013		Leave Location Jun/13/2013		Stage Tool Depth	
						Tail Pipe Size	
						Collar Type Float	
						Tail Pipe Depth	
						Collar Depth 880.0 ft	
						Sqr. Total Vol.	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
06/13/2013	02:47:56					Started Acquisition	
06/13/2013	03:29:11					Stopped Acquisition	
06/13/2013	03:39:08					Started Acquisition	
06/13/2013	03:39:12	-12	0.0	8.47	0.0		
06/13/2013	03:39:14					Start Job	
06/13/2013	03:39:14	-11	0.0	8.47	0.0		
06/13/2013	03:39:16					Start Pumping Spacer	
06/13/2013	03:39:16	-12	0.0	8.47	0.0		
06/13/2013	03:39:56	-12	0.0	8.47	0.0		
06/13/2013	03:42:06	-19	0.0	8.47	0.1		
06/13/2013	03:44:16	-15	1.4	8.46	0.2		
06/13/2013	03:45:33					Remark	
06/13/2013	03:45:33	-1	0.0	8.47	2.4		
06/13/2013	03:46:26	-2	0.0	8.47	2.4		
06/13/2013	03:48:36	-2	0.0	8.47	2.4		
06/13/2013	03:50:46	-2	0.0	8.47	2.4		
06/13/2013	03:51:38					Pressure Test Lines	
06/13/2013	03:51:38	1414	0.0	8.47	2.4		
06/13/2013	03:52:34					Pressure Test Lines	
06/13/2013	03:52:34	3621	0.0	8.47	2.5		
06/13/2013	03:52:56	9	0.0	8.47	2.5		

Well		Field		Job Start	Customer	Job Number
Randell 3319-1-35				Jun/13/2013	Sand Ridge	998134
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
06/13/2013	03:55:46					End Spacer
06/13/2013	03:55:46	60	4.4	8.47	10.0	
06/13/2013	03:55:49					Start Mixing Lead Slurry
06/13/2013	03:55:49	58	4.4	8.47	10.2	
06/13/2013	03:57:16	70	4.6	8.47	14.7	
06/13/2013	03:59:26	187	6.0	12.73	27.2	
06/13/2013	04:01:36	169	6.0	12.70	40.2	
06/13/2013	04:03:46	157	6.0	12.55	53.2	
06/13/2013	04:05:56	157	6.0	12.46	66.1	
06/13/2013	04:08:06	166	6.0	12.54	79.7	
06/13/2013	04:08:15					Rig Chaining Down Head
06/13/2013	04:08:15	149	6.0	12.42	80.6	
06/13/2013	04:10:16	169	6.0	12.71	92.7	
06/13/2013	04:12:26	175	6.0	12.69	105.7	
06/13/2013	04:14:36	159	6.0	12.60	118.7	
06/13/2013	04:16:46	163	6.0	12.59	131.7	
06/13/2013	04:18:28					End Lead Slurry
06/13/2013	04:18:28	165	6.0	12.39	141.9	
06/13/2013	04:18:45					Start Mixing Tail Slurry
06/13/2013	04:18:45	143	6.0	12.17	143.5	
06/13/2013	04:18:56	144	6.0	12.49	144.6	
06/13/2013	04:21:06	172	6.0	13.42	157.6	
06/13/2013	04:23:16	-1	2.4	12.46	167.8	
06/13/2013	04:25:26	186	5.9	13.45	177.1	
06/13/2013	04:27:36	210	6.1	14.20	190.2	
06/13/2013	04:29:46	120	4.3	14.73	200.4	
06/13/2013	04:31:30					End Tail Slurry
06/13/2013	04:31:30	93	4.3	13.82	207.8	
06/13/2013	04:31:56	106	4.3	13.32	209.7	
06/13/2013	04:32:16					Start Mixing Tail Slurry
06/13/2013	04:32:16	-14	0.4	13.56	210.7	
06/13/2013	04:32:17					Shutdown
06/13/2013	04:32:17	-14	0.3	13.54	210.7	
06/13/2013	04:32:19					Drop Top Plug
06/13/2013	04:32:19	-15	0.3	13.51	210.7	
06/13/2013	04:32:20					Start Displacement
06/13/2013	04:32:20	-15	0.3	13.50	210.7	
06/13/2013	04:34:06	-13	0.0	13.35	210.7	
06/13/2013	04:36:16	35	4.5	9.45	214.4	
06/13/2013	04:38:26	102	6.0	8.54	225.8	
06/13/2013	04:40:36	172	5.9	8.47	238.6	
06/13/2013	04:42:46	100	1.2	6.33	251.0	
06/13/2013	04:44:56	187	2.2	8.47	256.0	
06/13/2013	04:47:06	213	2.1	8.47	260.6	
06/13/2013	04:49:16	227	2.1	8.47	265.3	
06/13/2013	04:50:55					Bump Top Plug
06/13/2013	04:50:55	889	0.1	8.47	268.7	
06/13/2013	04:50:56					End Displacement
06/13/2013	04:50:56	890	0.0	8.48	268.7	
06/13/2013	04:51:26	889	0.0	8.48	268.7	
06/13/2013	04:53:36	886	0.0	8.48	268.7	
06/13/2013	04:54:38					Floats Held
06/13/2013	04:54:38	-9	0.0	8.47	268.7	
06/13/2013	04:54:40					End Job

Well Randell 3319-1-35	Field	Job Start Jun/13/2013	Customer Sand Ridge	Job Number 998134
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Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl					
Slurry 5.0	N2	Mud	Maximum Rate 6.0	Total Slurry 180.0	Mud 0.0	Spacer 10.0	N2			
Treating Pressure Summary, psi					Breakdown Fluid					
Maximum 15000	Final 0	Average	Bump Plug to 890	Breakdown	Type	Volume	Density			
Avg. N2 Percent	Designed Slurry Volume		Displacement 56.0 bbl	Mix Water Temp	Cement Circulated to Surface? ☒	Volume 57.0 bbl				
					Washed Thru Perfs ☐	To				
Customer or Authorized Representative Bill Thaomason			Schlumberger Supervisor Charles Jacobs			Circulation Lost ☐	Job Completed ☒			
						-	-			



Cementing Service Report

Customer sandridge				Job Number 998612			
Well Randell 3319-1-35		Location (legal)		Schlumberger Location Elreno		Job Start Jun/20/2013	
Field Comanche		Formation Name/Type		Deviation		Well TVD	
County Comanche		State/Province KS		BHP		Pore Press. Gradient	
Well Master 0631458784		API/UWI 15033217050000		BHST		BHCT	
Rig Name Lamunyon 1		Drilled For Oil & Gas		Service Via Land		Casing/Liner	
Offshore Zone		Well Class New		Well Type Development		Thread	
Drilling Fluid Type		Max. Density		Plastic Viscosity		Tubing/Drill Pipe	
Service Line Cementing		Job Type Cem Prod Casing		Depth,		Size,	
Max. Allowed Tub. Press		Max. Allowed Ann. Press		WH Connection		Weight,	
Service Instructions						Grade	
						Thread	
						Perforations/Open Hole	
						Top,	
						Bottom,	
						No. of Shots	
						Total Interval	
						Diameter	
						Treat Down	
						Displacement	
						Packer Type	
						Packer Depth	
						Tubing Vol.	
						Casing Vol.	
						Annular Vol.	
						Openhole Vol.	
Casing/Tubing Secured ☐		1 Hole Vol. Circulated prior to Cement ☒		Casing Tools		Squeeze Job	
Lift Pressure 778 psi		Shoe Type Guide		Shoe Depth 6120.0 ft		Squeeze Type	
Pipe Rotated ☐		Pipe Reciprocated ☐		Stage Tool Type		Tool Type	
No. Centralizers 12		Top Plugs 1		Bottom Plugs 0		Tool Depth	
Cement Head Type Single		Stage Tool Depth		Collar Type Float		Tail Pipe Size	
Job Scheduled For Jun/20/2013		Arrived on Location Jun/20/2013		Leave Location Jun/20/2013		Tail Pipe Depth	
						Collar Depth 6035.0 ft	
						Sqz. Total Vol.	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
06/20/2013	18:15:42	-15	0.0	8.46	0.0		
06/20/2013	18:15:46					Start Job	
06/20/2013	18:15:46	-15	0.0	8.46	0.0		
06/20/2013	18:15:48					Start Pumping Spacer	
06/20/2013	18:15:48	-15	0.0	8.46	0.0		
06/20/2013	18:17:52	322	3.5	8.50	1.4		
06/20/2013	18:20:02	2451	0.0	8.48	3.0		
06/20/2013	18:20:44					Pressure Test Lines	
06/20/2013	18:20:44	4402	0.0	8.47	3.0		
06/20/2013	18:22:12	4418	0.0	8.47	3.1		
06/20/2013	18:24:22	56	0.0	8.47	3.1		
06/20/2013	18:26:32	299	2.0	8.47	7.4		
06/20/2013	18:28:42	345	4.1	8.46	12.1		
06/20/2013	18:30:52	431	5.9	8.47	23.4		
06/20/2013	18:33:02	592	5.3	12.77	36.1		
06/20/2013	18:35:12	614	5.5	14.02	48.0		
06/20/2013	18:37:22	414	5.6	13.91	60.1		
06/20/2013	18:39:32	234	5.3	12.63	72.2		
06/20/2013	18:40:13					Start Mixing Lead Slurry	
06/20/2013	18:40:13					End Lead Slurry	
06/20/2013	18:40:13	226	5.4	14.11	75.8		

Well			Field	Job Start	Customer	Job Number
Randell 3319-1-35			Comanche	Jun/20/2013	sandridge	998612
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
06/20/2013	18:40:18	242	5.4	14.09	76.3	
06/20/2013	18:41:42	274	5.6	15.96	84.0	
06/20/2013	18:43:52	308	6.0	15.81	96.3	
06/20/2013	18:44:30					End Tail Slurry
06/20/2013	18:44:30	279	6.0	15.07	100.1	
06/20/2013	18:45:17					Shutdown
06/20/2013	18:45:17	-15	0.0	15.06	103.5	
06/20/2013	18:45:20					Drop Top Plug
06/20/2013	18:45:20	-15	0.0	15.06	103.5	
06/20/2013	18:45:21					Start Displacement
06/20/2013	18:45:21	-15	0.0	15.05	103.5	
06/20/2013	18:46:02	-17	0.0	15.03	103.5	
06/20/2013	18:48:12	56	4.0	8.77	104.9	
06/20/2013	18:50:22	83	6.5	10.10	119.1	
06/20/2013	18:52:32	84	6.0	8.47	132.0	
06/20/2013	18:54:42	84	6.0	8.45	145.0	
06/20/2013	18:56:52	163	6.3	8.38	157.7	
06/20/2013	18:59:02	104	5.9	8.47	170.4	
06/20/2013	19:01:12	103	6.1	8.47	183.3	
06/20/2013	19:03:22	108	6.1	8.47	196.5	
06/20/2013	19:05:32	107	6.1	8.47	209.7	
06/20/2013	19:07:42	383	6.0	8.47	222.7	
06/20/2013	19:09:52	282	2.0	8.47	228.6	
06/20/2013	19:12:02	358	2.0	8.47	232.8	
06/20/2013	19:14:12	468	1.9	8.47	237.1	
06/20/2013	19:16:22	566	2.0	8.47	241.3	
06/20/2013	19:18:32	656	1.9	8.47	245.5	
06/20/2013	19:20:42	702	1.9	8.46	249.7	
06/20/2013	19:22:23					Bump Top Plug
06/20/2013	19:22:23	1291	0.4	8.47	253.0	
06/20/2013	19:22:52	1318	0.0	8.47	253.0	
06/20/2013	19:23:18					End Displacement
06/20/2013	19:23:18	1311	0.0	8.47	253.0	
06/20/2013	19:25:02	-10	0.0	8.47	253.0	
06/20/2013	19:25:09					Floats Held
06/20/2013	19:25:09	-13	0.0	8.47	253.0	
06/20/2013	19:25:13					End Job

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 6.0	N2	Mud	Maximum Rate 6.0	Total Slurry 72.0	Mud 0.0	Spacer 0.0	N2	
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 3000	Final 0	Average 120	Bump Plug to 1306	Breakdown	Type	Volume	Density	
Avg. N2 Percent		Designed Slurry Volume 72.0 bbl		Displacement 141.0 bbl	Mix Water Temp 80 degF	Cement Circulated to Surface? ☐		
						Volume 0.0 bbl		
						Washed Thru Perfs ☐		
						To		
Customer or Authorized Representative Bill Thomason			Schlumberger Supervisor Charles Jacobs			Circulation Lost ☐		
						Job Completed ☒		

Fracture Date	7/23/2013
State:	Kansas
County:	Comanche County
API Number:	
Operator Name:	Sandridge Energy
Well Name and Number:	Randell 3319 1-35
Longitude:	
Latitude:	
Long/Lat Projection:	
Production Type:	Oil
True Vertical Depth (TVD):	5,467
Total Water Volume (gal)*:	162,498

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	APC	Carrier / Base Fluid	Water	7732-18-5	100.00%	85.47819%	
Sand (Proppant) lbs	CJES	Proppant	Silica Substrate		100.00%	2.39659%	
pH-23	Economy	Low pH Buffer	Acetic Acid	64-19-7	60.000000%	0.000000%	
pH-25	Economy	High pH Buffer	Potassium Hydroxide	1310-58-3	15.000000%	0.000000%	
pH-29	Economy	High pH Buffer	Sodium Hydroxide	1310-73-2	25.000000%	0.000000%	
BR-31	Economy	Sodium Persulfate	Peroxydisulfuric Acid Disodium Salt	7775-27-1	100.00%	0.00158%	
BR-32	Economy	Gel Breaker	ESTER	N/A	99.00%	0.000000%	
BR-33	Economy	Gel Breaker	ESTER	N/A	99.00%	0.000000%	
BR-34	Economy	Encapsulated Persulfate	Ammonium Persulfate	7727-54-0	60.000000%	0.000000%	
BR-37	Economy	Low Temp Oxidizing Bre	Calcium Peroxide	1305-79-9	30.000000%	0.000000%	
BR-38	Economy	High Temp Oxidizing Bre	Magnesium Peroxide	1335-26-8	30.00%	0.000000%	
Gelbreak-EL2X	Economy	Liquid Enzyme Breaker	Cellulase Enzyme	Mixture	100.00%	0.000000%	
Bio Break 1000	Shrieve	High Temp Gel Breaker	Sodium Chloride	7647-14-5	25.00%	0.000000%	
Bio Break 2000	Shrieve	High Temp Gel Breaker	Sodium Chloride	7647-14-5	25.000000%	0.000000%	
Cat-10	Economy	Breaker Catalyst	Proprietary	N/A	100.00%	0.000000%	
Claymax	Economy	Clay Stabilizer	Proprietary	Mixture	100.00%	0.000000%	
Poly CS39	Poly	Clay Stabilizer	Proprietary	UNK	40.00%	0.01082%	
XL-3	Economy	Borate Crosslink Acceler	Potassium Hydroxide	1310-73-2	25.000000%	0.000000%	
XL-4	Economy	Low pH Crosslinker	Zirconium Complex	Mixture	45.00%	0.000000%	
XL-5	Economy	Zirconate Crosslinker	Zirconium Complex	N/A	60.000000%	0.000000%	
XL-6	Economy	Primary Zirconate Crossl	Zirconium Complex	N/A	30.00%	0.000000%	
XL-7	Economy	Primary Borate Crosslink	Petroleum Distillate Blend	N/A	60.000000%	0.000000%	
GS-101	Economy	Gel Stabilizer	Proprietary	Mixture	100.00%	0.000000%	
MCG-1	Economy	Zirconate Gelling Agent	Polysaccharide Blend	N/A	60.000000%	0.000000%	
NGC-4	Economy	Gelling Agent	Petroleum Distillate Blend	64742-47-8	60.00%	0.18359%	
NGC-4B	Benchmark	Gelling Agent	Petroleum Distillate Blend	64742-47-8	55.000000%	0.000000%	
OGC-7	Economy	Gelling Agent	Petroleum Distillate Blend	NA	60.00%	0.000000%	
SUAG-1	Economy	Acid Gellant	Methanol	67-56-1	100.00%	0.06929%	

