Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1223711

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34192
Name: SandRidge Exploration and Production LLC
Address 1: 123 ROBERT S. KERR AVE
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73102 + 6406
Contact Person: Tiffany Golay
Phone: (405) 429-6543
CONTRACTOR: License # 34464
Name: Lariat Services, Inc. dba Chaparral Supply, Hondo Heavy Haul
Wellsite Geologist: Hanna Thornberg
Purchaser:

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☑ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

5/29/2014	6/15/2014	8/26/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-22053-01-00
Spot Description:
SE - SE - SW - SE Sec. 31 Twp. 34 S. R. 8 ☐ East ☑ West
200 Feet from ☐ North / ☑ South Line of Section
1475 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Harper
Lease Name: Rose 3408 Well #: 1-31H
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 1248 Kelly Bushing: 1268
Total Vertical Depth: 9429 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 785 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 12000 ppm Fluid volume: 1640 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Grays Disposal
Lease Name: Unnamed License #: 9999
Quarter W2 Sec. 15 Twp. 24 S. R. 7 ☐ East ☑ West
County: Garfield, OK Permit #: 99999

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 09/26/2014
☑ **Confidential Release Date:** 09/25/2016
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 09/26/2014

[redacted] 1223711

Operator Name: SandRidge Exploration and Production LLC Lease Name: Rose 3408 Well #: 1-31H

Sec. 31 Twp. 34 S. R. 8 ☐ East ☑ West County: Harper

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Spectral Density Dual Spaced Neutron Memory Log
Array Induction Gamma Ray Memory Log

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Base Heebner	3570	
Lansing	3907	
Cottage Grove	4218	
Oswego	4589	
Cherokee	4745	
Verdigris	4778	
Miss Unconformity	5070	

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Conductor	30	20	75	60	Edge Services 10 Sack Grout	6	None
Surface	12.25	9.63	36	785	O-Tex Lite Premium Plus 65/35	380	(6% gel) 2% Calcium Chloride, 1/4 pps C
Intermediate	8.75	7	26	5551	50/50 Poz Premium; Premium	350	4% Gel, .2% FL-17, .1% C-51, .2% C-20,

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☑ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☑ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☑ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
Attached	Attached	Attached	Attached

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 1-31H
Doc ID	1223711

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	9155-9311	1500 gals 15% HCL Acid, 5682 bbls Fresh Slickwater, Running TLTR 92101 bbls	
5	8727-8998	1500 gals 15% HCL Acid, 5342 bbls Fresh Slickwater, Running TLTR 97610 bbls	
5	8438-8609	1500 gals 15% HCL Acid, 5653 bbls Fresh Slickwater, Running TLTR 103407 bbls	
5	8042-8345	1500 gals 15% HCL Acid, 5650 bbls Fresh Slickwater, Running TLTR 109211 bbls	
5	7696-7904	1500 gals 15% HCL Acid, 5660 bbls Fresh Slickwater, Running TLTR 115007 bbls	
5	7326-7590	1500 gals 15% HCL Acid, 5640 bbls Fresh Slickwater, Running TLTR 120752 bbls	
5	7006-7210	1500 gals 15% HCL Acid, 5403 bbls Fresh Slickwater, Running TLTR 126255 bbls	
5	5971-6186	1500 gals 15% HCL Acid, 5682 bbls Fresh Slickwater, Running TLTR 132819 bbls	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 1-31H
Doc ID	1223711

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	5584-5878	1500 gals 15% HCL Acid, 4692 bbls Fresh Slickwater, Running TLTR 137601 bbls	
5	5248-5410	1500 gals 15% HCL Acid, 1267 bbls Fresh Slickwater, Running TLTR 138868 bbls	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 1-31H
Doc ID	1223711

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	30	20	75	60	Edge Services 10 Sack Grout	6	None
Surface	12.25	9.63	36	785	O-Tex Lite Premium Plus 65/35; Premium Plus (Class C)	380	(6% gel) 2% Calcium Chloride, 1/4 pps Cello-Flake, .4% C-41P
Intermediate	8.75	7	26	5551	50/50 Poz Premium; Premium	350	4% Gel, .2% FL-17, .1% C-51, .2% C-20, .1% C-37, .4% C-41P

EDGE SERVICES
580-254-3216
Woodward, OK

INVOICE

DATE	INVOICE #
5/30/2014	4828

BILL TO
SANDRIDGE ENERGY, INC. ATTN: PURCHASING MANAGER 123 ROBERT S. KERR AVENUE OKLAHOMA CITY, OK 73102

REMIT TO
EDGE SERVICES, INC. PO BOX 609 WOODWARD, OK 73802

COUNTY	STARTING D...	WORK ORDER	RIG NUMBER	LEASE NAME	Terms
HARPER, KS	5/30/2014	3665	LARIAT 45	ROSE 3408 1-31H	Due on rec...

Description
DRILLED 60' OF 30" CONDUCTOR HOLE DRILLED 6' OF 76" HOLE FURNISHED AND SET 6' X 6' TINHORN CELLAR FURNISHED 60' OF 20" CONDUCTOR PIPE FURNISHED MUD, WATER, AND TRUCKING FURNISHED WELDER AND MATERIALS FURNISHED 6 YARDS OF 10 SACK GROUT FOR CONDUCTOR HOLE FURNISHED 4 YARDS OF 10 SACK GROUT FOR MOUSE HOLE FURNISHED GROUT PUMP DRILL MOUSE HOLE FURNISHED 80 ' OF 16" CONDUCTOR PIPE TOTAL BID $18,500.00

Sales Tax (6.15%)	$140.34
TOTAL	$18,640.34

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 3797	06/03/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	dridge Exploration & Produc	Bill Torbett

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Rose 3408	1-31H	Surface	CHARLES WOOD

EMP NAME							
CHARLES WOOD		0					
KENNETH ARCHER							
ROY MORRIS							

Form. Name _____ Type: _____

Packer Type _____ Set At _____ 0

Bottom Hole Temp. 80 Pressure _____

Retainer Depth _____ Total Depth 800

	Called Out	On Location	Job Started	Job Completed
Date	6/3/2014	6/3/2014	6/3/2014	6/3/2014
Time	0000	0715	1132	1240

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	0	IR
Centralizers	1	IR
Top Plug	1	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size Grade	From	To	Max. Allow
Casing		36#	9⅝"	Surface	785	1,500
Liner						
Liner						
Tubing			0			
Drill Pipe						
Open Hole			12¼"	Surface	785	Shots/Ft.
Perforations						
Perforations						
Perforations						

Materials

Mud Type	WBM	Density 9	Lb/Gal	
Disp. Fluid	Fresh Water	Density 8.33	Lb/Gal	
Spacer type	Fresh Wate	BBL. 10		8.33
Spacer type		BBL.		
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
6/3	7.0
Total	7.0

Operating Hours

Date	Hours
6/3	1.0
Total	1.0

Description of Job

Surface

Pressures

MAX 1,200 PSI AVG. 200

Average Rates in BPM

MAX 5 AVG 4

Cement Left in Pipe

Feet 43 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	215	TEX Lite Premium Plus 65	(6% Gel) 2% Calcium Chloride - ¼pps Cello-Flake - .4% C-41P	11.11	2.01	12.40
2	165	Premium Plus (Class C)	2% Calcium Chloride - ¼pps Cello-Flake	6.32	1.32	14.80
3	*100	Premium Plus (Class C)	*2% Calcium Chloride on side to use if necessary	*6.32	*1.32	*14.8

Summary

Preflush		Type:		Preflush: BBl	10.00
Breakdown		MAXIMUM	1,500 PSI	Load & Bkdn: Gal - BBl	N/A
		Lost Returns-N	NO	Excess /Return BBl	67
		Actual TOC	SURFACE	Calc. TOC:	SURFACE
Average		Bump Plug PSI:	1,100	Final Circ. PSI:	600
ISP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry BBl	116.0
				Total Volume BBl	182.50

Type:	Fresh Water		
Pad:Bbl -Gal			
Calc.Disp Bbl	58		
Actual Disp.	56.50		
Disp:Bbl	56.50		

CUSTOMER REPRESENTATIVE _____ Bill Torbett

SIGNATURE

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 3825	06/09/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Sandridge Exploration & Production	Bill Torbit

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Rose 3408	1-31H	Intermediate	Mike Hall

EMP NAME

Mike Hall	Eric Parsons		
Cheryl Newton			
Vontray Watkins			
R J Stonehocker			

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 155 Pressure _____

Retainer Depth _____ Total Depth 5,522'

	Called Out	On Location	Job Started	Job Completed
Date	6/9/2014	6/9/2014	6/9/2014	6/9/2014
Time		6:00pm	9:00pm	11:30pm

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Val	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing		26#	7"		Surface		5,000
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			8¾"		Surface	5,522'	Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	WBM	Density 9	Lb/Gal	
Disp. Fluid	Fresh Water	Density 8.33	Lb/Gal	
Spacer type	Fresh Wate	BBL. 20		8.33
Spacer type		BBL.		
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
6/9	4.0
Total	4.0

Operating Hours

Date	Hours
6/9	2.0
Total	2.0

Description of Job

Intermediate

Pressures

MAX 5,000 PSI AVG. 300

Average Rates in BPM

MAX 8 BPM AVG 4

Cement Left in Pipe

Feet 44 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	250	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.2% C-20 - 0.1% C-37 - 0.4% C-41P	6.93	1.43	13.60
2	100	Premium	0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.4% C-41P	5.19	1.19	15.60
3	0	0	0	0.00	0.00	0.00

Summary

Preflush _____ Type: _____

Breakdown _____ MAXIMUM 5,000 PSI

_____ Lost Returns-N NO/FULL

_____ Actual TOC 2,448

Average _____ Bump Plug PSI: 1,740

ISIP _____ 5 Min. _____ 10 Min. _____ 15 Min. _____

Preflush:	BBl	30.00	Type: Gel Spacer
Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
Excess /Return	BBl	N/A	Calc.Disp Bbl 211
Calc. TOC:		2,448	Actual Disp. 211.00
Final Circ.	PSI:	920	Disp:Bbl
Cement Slurry:	BBl	85.0	
Total Volume	BBl	326.00	

CUSTOMER REPRESENTATIVE Bill Torbett

SIGNATURE

Directional Survey Calculations	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
SHL	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5114	200	3868	1476
BHL	9429	89.16	359.56	4716.61	4756.30	723.09	4810.39	0.53	363	4950	4658	666
Miss Entry	5070	75.50	1.38	4728.67	400.27	730.46	506.17	10.77	4719	594	4604	738
Top Perf	5666	90.54	324.14	4758.10	994.43	725.02	1093.10	0.84	4125	1188	4607	732
Bottom Perf	9311	89.72	359.49	4714.84	4638.30	724.17	4694.16	0.76	481	4832	4657	667

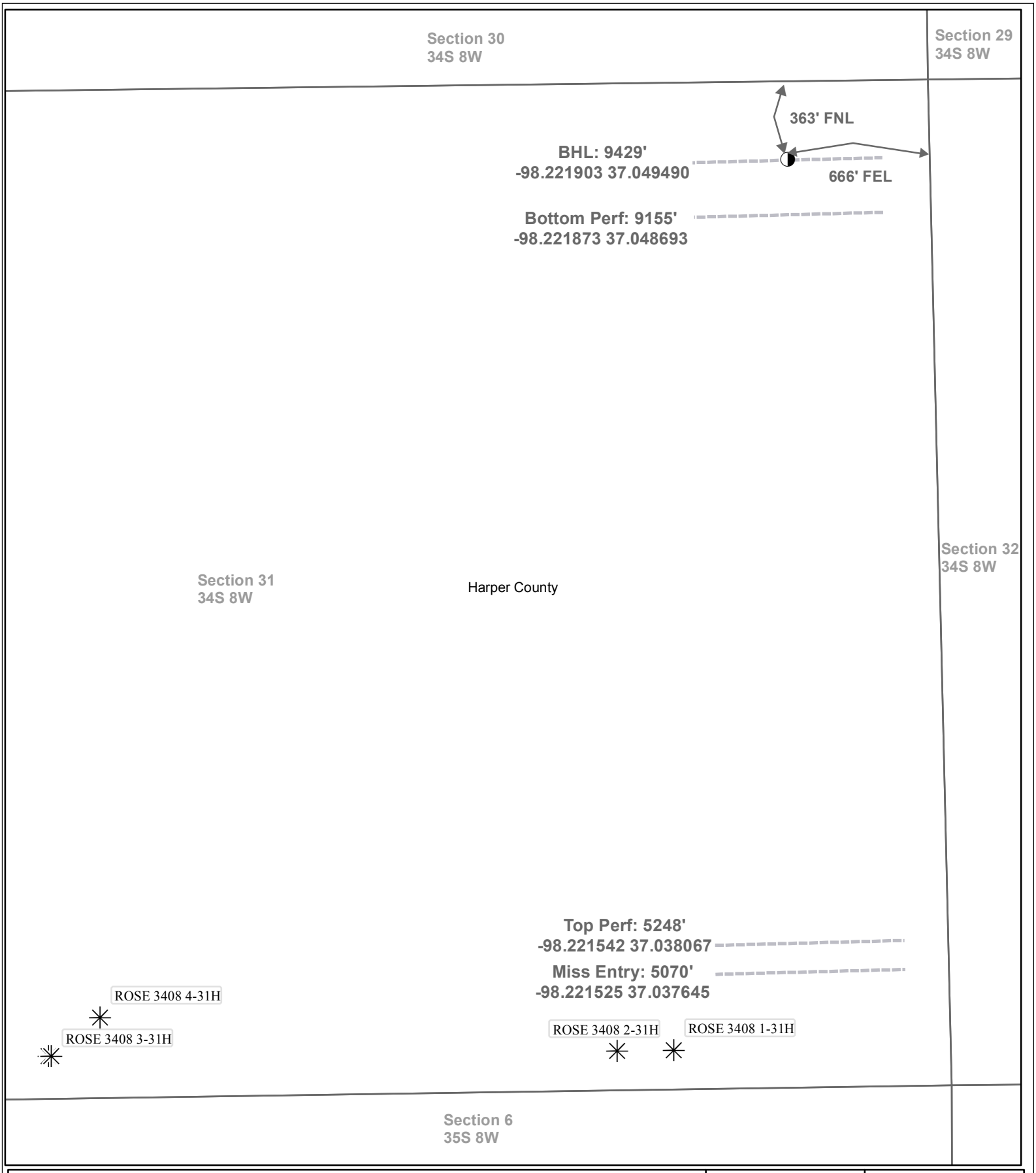
Survey Points		X	Y		X	Y		m
	NW Corner XY Coord	2076724	139861				North Line slope	0.0080812
	SW Corner XY Coord	2076798	134541	Surface XY	2080663	134779	East Line slope	-0.018264
	NE Corner XY Coord	2082045	139904				South Line slope	0.0097305
	SE Corner XY Coord	2082142	134593				West Line slope	-0.0139098

Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
0	0.0	0	0	0	0	0	0	5114	200	3868	1476
244	0.6	344.1	244	1.15	-0.33	1	0.23	5113	202	3868	1476
520	1.3	344.1	520	5.39	-1.53	5	0.26	5108	206	3867	1477
764	0.8	344.1	764	9.6	-2.74	9	0.2	5104	210	3866	1478
959	0.8	344.1	959	12.21	-3.48	12	0.01	5102	213	3865	1479
1,418	0.6	317	1,418	17.05	-5.99	16	0.08	5097	217	3863	1481
1,875	0.2	117.1	1,875	18.43	-6.92	17	0.17	5095	219	3862	1482
2,058	4.5	110.2	2,058	15.81	0.11	16	2.35	5098	216	3869	1475
2,149	7.9	98.7	2,148	13.63	9.64	15	3.96	5100	214	3878	1466
2,241	11.2	109.9	2,239	9.63	24.3	13	4.1	5104	210	3893	1451
2,332	13.8	116	2,328	1.86	42.37	8	3.2	5112	202	3911	1433
2,424	14.9	115.3	2,417	-8	62.93	2	1.21	5122	192	3931	1413
2,514	17.8	114.2	2,503	-18.59	85.94	-5	3.24	5133	181	3954	1390
2,606	17.2	106.7	2,591	-28.27	111.8	-11	2.53	5143	171	3980	1364
2,698	16.7	101.2	2,679	-34.74	137.8	-13	1.82	5150	164	4006	1338
2,789	16.2	101.2	2,766	-39.75	163.07	-15	0.55	5155	159	4031	1313
2,881	16.1	100.1	2,855	-44.48	188.22	-15	0.35	5160	154	4056	1288
2,972	16.8	103	2,942	-49.65	213.46	-17	1.19	5165	149	4081	1263
3,063	15.9	105.3	3,029	-55.9	238.3	-19	1.22	5172	142	4106	1238
3,155	15.5	106.3	3,118	-62.67	262.25	-22	0.52	5179	135	4130	1214
3,247	15.7	107.8	3,206	-69.93	285.9	-26	0.49	5186	128	4153	1191
3,339	14.9	107.3	3,295	-77.25	309.05	-30	0.88	5194	120	4176	1168
3,430	15.8	107.3	3,383	-84.41	332.05	-33	0.99	5201	113	4199	1145
3,521	14.3	105.6	3,471	-91.12	354.7	-36	1.72	5208	106	4222	1123
3,612	15.6	105.3	3,559	-97.37	377.33	-39	1.43	5214	99	4244	1100
3,704	14.3	104.3	3,648	-103.44	400.27	-42	1.44	5221	93	4267	1077
3,795	15.8	102.9	3,735	-108.98	423.24	-44	1.7	5226	87	4290	1054
3,978	17.5	97.9	3,911	-118.33	474.78	-45	1.21	5236	77	4341	1003
4,070	15.6	96.7	3,999	-121.67	500.77	-44	2.1	5240	74	4367	977
4,100	14.7	95.5	4,028	-122.51	508.57	-44	3.18	5240	73	4375	969
4,130	15.1	91.8	4,057	-123	516.26	-43	3.44	5241	72	4383	962
4,161	15.7	83.7	4,087	-122.66	524.47	-42	7.2	5241	73	4391	953
4,191	16.8	74.6	4,116	-121.07	532.69	-39	9.23	5239	74	4399	945
4,222	18.4	69.9	4,145	-118.2	541.6	-35	6.9	5236	77	4408	936
4,252	19.8	63.4	4,173	-114.29	550.99	-30	8.48	5233	81	4417	927
4,283	21	55.9	4,203	-108.83	559.89	-23	9.27	5227	86	4427	918
4,313	23.1	48.4	4,230	-101.9	568.74	-15	11.7	5220	93	4436	909
4,344	24.5	41	4,259	-93.01	577.51	-4	10.63	5212	102	4445	900
4,374	26.4	36	4,286	-82.92	585.51	7	9.56	5201	112	4453	892
4,405	28.1	32.1	4,313	-71.16	593.44	20	7.95	5190	123	4461	883
4,435	29.1	26.6	4,340	-58.65	600.47	33	9.38	5177	136	4468	876
4,466	31.2	22.9	4,366	-44.51	606.97	48	9.04	5163	150	4475	869
4,496	33	21.5	4,392	-29.75	612.98	64	6.49	5149	165	4481	863
4,527	34.5	21.6	4,418	-13.73	619.31	80	4.84	5133	181	4487	857
4,557	36.1	21.7	4,442	2.42	625.72	97	6	5116	197	4494	850
4,588	38.9	21.5	4,467	20.01	632.68	116	8.4	5099	214	4501	843
4,618	41.3	21.5	4,490	37.99	639.77	135	8	5081	232	4509	835
4,649	43.1	21	4,513	57.39	647.31	155	5.91	5062	251	4516	827
4,679	44.8	20.6	4,534	76.86	654.7	175	5.74	5042	271	4524	819
4,710	47.1	20.6	4,556	97.71	662.54	197	7.42	5021	292	4532	811
4,740	49.6	20.8	4,576	118.68	670.47	219	8.35	5001	313	4540	803
4,771	52.3	19.8	4,595	141.26	678.81	242	9.06	4978	335	4549	794
4,801	54.9	18.8	4,613	164.05	686.79	266	9.07	4955	358	4557	786
4,831	57.1	18.4	4,630	187.62	694.72	291	7.42	4932	381	4566	777
4,862	58.7	17.5	4,646	212.6	702.81	317	5.72	4907	406	4574	769
4,892	61	14.9	4,661	237.91	710.04	342	10.72	4882	431	4582	761

High DLS please slow d RIH speed to no greater tha 16.5' per min t hook up the weight line to any dragging

High DLS please slow d RIH speed to

	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
no greater tha	4,923	63.5	12.3	4,676	264.17	716.48	370	10.96	4855	458	4588	754
16.5° per min	4,953	64.8	9.2	4,689	290.8	721.53	397	12.08	4829	484	4594	749
hook up the	4,980	67.7	6.6	4,701	319.01	725.44	425	9.85	4801	512	4598	744
weight line to	5,014	69.9	4.2	4,712	346.85	728.07	453	10.46	4773	540	4601	741
any dragging	5,045	73	2.3	4,722	376.19	729.73	482	11.57	4744	569	4603	739
	5,075	76	1.2	4,730	405.03	730.61	511	10.61	4715	598	4605	738
	5,106	79.4	0.3	4,736	436.36	731.01	541	11.33	4684	629	4605	737
	5,136	82.8	359.6	4,741	464.99	730.98	570	11.57	4655	658	4606	736
	5,166	85.4	359	4,744	494.83	730.62	600	8.89	4625	688	4606	736
	5,196	88.7	358.7	4,746	524.75	730.09	629	4.45	4595	718	4606	736
Top of Tange	5,227	87	358.4	4,748	555.69	729.23	660	1.37	4564	749	4605	736
@ 5227'	5,288	87.3	358.6	4,751	616.6	727.64	720	0.59	4503	810	4605	737
	5,318	87.5	358.9	4,752	646.56	726.98	749	1.2	4473	840	4604	737
	5,349	87.5	359.9	4,753	677.53	726.66	780	3.22	4442	871	4604	737
	5,379	87.7	359.9	4,755	707.5	726.61	809	0.67	4412	901	4605	736
	5,409	88	359.2	4,756	737.48	726.37	839	2.54	4382	931	4605	736
	5,440	88.2	359.7	4,757	768.46	726.07	870	1.74	4351	962	4605	735
Set @	5,470	88.5	359.2	4,758	798.45	725.79	899	1.94	4321	992	4605	735
Btm of Tange	5,499	89.1	359.5	4,758	827.44	725.46	928	2.31	4292	1021	4605	735
@ 5493'	5,584	90	0.1	4,759	912.43	725.16	1,012	1.27	4207	1106	4606	734
	5,675	90.6	359.7	4,758	1,003.43	725	1,102	0.79	4116	1197	4607	732
	5,767	90.6	359.4	4,758	1,095.42	724.28	1,193	0.33	4024	1289	4608	731
	5,859	90.3	358.9	4,757	1,187.41	722.91	1,283	0.63	3932	1381	4608	731
	5,951	90.1	359	4,756	1,279.40	721.23	1,374	0.24	3840	1473	4607	731
	6,042	90.7	359.5	4,756	1,370.38	720.04	1,464	0.86	3749	1564	4607	731
	6,134	90.4	359.3	4,755	1,462.37	719.07	1,554	0.39	3657	1656	4608	730
	6,226	90.7	359.9	4,754	1,554.37	718.43	1,645	0.73	3565	1748	4608	729
	6,317	91.8	0.9	4,752	1,645.34	719.07	1,735	1.63	3474	1839	4610	726
	6,410	92.1	359.6	4,749	1,738.28	719.47	1,827	1.43	3381	1932	4612	724
	6,502	91.4	0.6	4,746	1,830.24	719.63	1,918	1.33	3289	2024	4613	723
	6,594	91.7	0.9	4,744	1,922.20	720.84	2,009	0.46	3197	2116	4616	720
	6,685	91.5	0.7	4,741	2,013.15	722.11	2,099	0.31	3107	2207	4618	717
	6,778	90.2	1.2	4,740	2,106.13	723.65	2,191	1.5	3014	2299	4621	713
	6,869	91.1	359.5	4,739	2,197.12	724.2	2,282	2.11	2923	2390	4623	711
	6,961	91.9	358.6	4,736	2,289.07	722.68	2,372	1.31	2831	2482	4623	711
	7,052	90	358.5	4,735	2,380.02	720.38	2,462	2.09	2740	2573	4622	712
	7,143	90.2	0.6	4,735	2,471.02	719.66	2,552	2.32	2649	2664	4622	711
	7,238	90.2	0.3	4,734	2,566.01	720.41	2,646	0.32	2554	2759	4624	708
	7,332	90.5	0.7	4,734	2,660.01	721.23	2,739	0.53	2460	2853	4627	706
	7,427	90.9	0.6	4,733	2,754.99	722.31	2,833	0.43	2365	2948	4629	703
	7,522	91.2	359.2	4,731	2,849.98	722.14	2,927	1.51	2270	3043	4630	701
	7,617	90.9	358.6	4,729	2,944.94	720.32	3,020	0.71	2175	3138	4630	701
	7,712	90.3	358.2	4,728	3,039.90	717.67	3,114	0.76	2080	3233	4628	702
	7,807	90.1	359.1	4,728	3,134.87	715.43	3,207	0.97	1985	3328	4627	703
	7,902	88.7	357.5	4,729	3,229.82	712.61	3,301	2.24	1890	3423	4626	704
	7,997	89.6	359.6	4,730	3,324.77	710.21	3,394	2.4	1795	3518	4625	705
	8,092	89.3	359.6	4,731	3,419.76	709.54	3,488	0.32	1700	3613	4625	704
	8,187	91.4	1.8	4,730	3,514.74	710.7	3,582	3.2	1605	3708	4628	701
	8,282	91.4	1.7	4,728	3,609.67	713.6	3,676	0.11	1510	3803	4632	696
	8,376	91.1	1.6	4,726	3,703.61	716.31	3,769	0.34	1416	3897	4636	692
	8,472	91.1	0.8	4,724	3,799.57	718.32	3,865	0.83	1320	3993	4639	688
	8,567	91.3	1.1	4,722	3,894.54	719.89	3,959	0.38	1225	4088	4642	685
	8,662	91.7	1.3	4,720	3,989.48	721.88	4,053	0.47	1130	4183	4646	681
	8,756	92.2	2.3	4,717	4,083.38	724.83	4,146	1.19	1036	4277	4650	676
	8,851	90.2	360	4,715	4,178.33	726.74	4,240	3.21	941	4372	4653	673
	8,946	90.8	359.4	4,714	4,273.32	726.24	4,334	0.89	846	4467	4654	671
	9,041	90.2	359.7	4,713	4,368.32	725.5	4,428	0.71	751	4562	4655	670
	9,136	89.4	359.6	4,713	4,463.31	724.92	4,522	0.85	656	4657	4655	669
	9,231	89.3	360	4,714	4,558.31	724.58	4,615	0.43	561	4752	4656	668
	9,326	89.8	359.4	4,715	4,653.30	724.09	4,709	0.82	466	4847	4657	667
	9,390	89.4	359.5	4,716	4,717.30	723.47	4,772	0.64	402	4911	4657	666
	9429	89.16	359.56	4716.61	4756	723	4810.39	0.53	363	4950	4658	666



SANDRIDGE
THE POWER OF US

Actual BH Location

SandRidge Wells

Perf

Sections

Actual Bottom-Hole Location of Rose 3408 1-31H
T&R: 34S 8W
Section: 31, 666' FEL & 363' FNL
-98.221903 37.049490

1 in = 667 ft

0 500 1,000 2,000 Feet

N

Draftsman: Dory Deines	Draft Date: 9/19/2014
Drawing Name/Number: Addendum_Rose 3408 1-31H.mxd	
Coordinate System: NAD 1927 State Plane Kansas South FIPS: 1502	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/15/2014
Job End Date:	9/16/2014
State:	Kansas
County:	Harper
API Number:	15-077-22053-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Rose 3408 #1-31H
Longitude:	-98.22367324
Latitude:	37.03648486
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,716
Total Base Water Volume (gal):	2,176,566
Total Base Non Water Volume:	0

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	Well Operator	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	95.64009	None
40/70 Premium Preferred Sand	Cimarron Acid	Proppant, Scouring, Fill					
			Crystalline Silica (quartz)	14808-60-7	100.00000	2.83314	None
15% Unihibited HCl Acid	Cimarron Acid	Etching, Dissolving, Cleaning					
			Water	7732-18-5	85.00000	0.68257	None
			Hydrochloric Acid	7647-01-0	15.00000	0.12045	None
			Water	7732-18-5	24.00000	0.00016	None
			Methanol	67-56-1	9.00000	0.00006	None
			Tar Bases-quinoline derivs-benzyl chloride/quaternized	72480-70-7	8.40000	0.00006	None
			Ethylene Glycol	107-21-1	8.40000	0.00006	None
			N-Dimethyformamide	68-12-2	8.40000	0.00006	None
			Cinnamaldehyde	104-55-2	8.40000	0.00006	None
			Triethyl Phosphate	78-40-0	8.40000	0.00006	None
			Ethoxylated Nonylphenol	68412-54-4	8.40000	0.00006	None
			Isopropyl Alchohol	67-63-0	8.40000	0.00006	None
			2-Butoxyethanol	111-76-2	8.40000	0.00006	None

40/70 Resin Coated Sand	Cimarron Acid	Proppant, Scouring, Fill					
			Crystalline Silica (quartz)	14808-60-7	97.00000	0.56801	None
Iron Control, Sodium Erythorbate	Cimarron Acid	Iron Control					
			Water	7732-18-5	55.50000	0.02539	None
			Methanol	67-56-1	12.70000	0.00583	None
			Poly(ethlene Oxide)	25322-68-3	9.10000	0.00416	None
			Dinanylphenyl Polyoxyethylene	201602-88-2	9.10000	0.00416	None
			Nonylphenal Polyethylene Glycol Ether	127087-87-0	9.10000	0.00416	None
			Isopropanol	67-63-0	4.60000	0.00208	None
			Sodium Erythorbate	6381-77-7	100.00000	0.00026	None
			Water	7732-18-5	54.50000	0.00020	None
			Polyglycol Ethers	52624-57-4	13.60000	0.00005	None
			Isopropanol	67-63-0	13.60000	0.00005	None
			Methanol	67-56-1	9.00000	0.00003	None
			Glycol Ether EB	111-76-2	9.00000	0.00003	None
FR-986, Cationic Friction Reducer	Cimarron Acid	Friction Reducer					
			Water	7732-18-5	50.00000	0.00595	None
			Hydrochloric Acid	7647-01-0	16.80000	0.00200	None
			Phosphoric Acid	7664-38-2	16.80000	0.00200	None
			Petroleum Hydrotreated Light Distillate	64742-47-8	2.50000	0.00198	None
			Ethylene Glycol	107-21-1	12.70000	0.00151	None
			Methanol	67-56-1	3.60000	0.00043	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)