Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1241263

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 # 34445
Name: Keen Energy Services LLC
Wellsite Geologist: Ray Tichenor
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 #:

10/24/2014	11/21/2014	1/12/2015
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-22108-01-00
Spot Description:
S2 - S2 - S2 - SE Sec. 34 Twp. 34 S. R. 8 ☐ East ☑ West
235 Feet from ☐ North / ☑ South Line of Section
1320 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: Randy 3508 Well #: 1-3H 1L
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 1263 Kelly Bushing: 1286
Total Vertical Depth: 4808 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 770 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: 39000 ppm Fluid volume: 7050 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: NEMAHA
Lease Name: Unnamed License #: 99999
Quarter NW Sec. 15 Twp. 4 S. R. 7 ☐ East ☑ West
County: Garfield, OK Permit #: 623842

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: 02/19/2015
☑ **Confidential Release Date:** 02/18/2017
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ I ☐ II ☐ III **Approved by:** NAOMI JAMES **Date:** 02/19/2015

[redacted]

1241263

Operator Name: SandRidge Exploration and Production LLC Lease Name: Randy 3508 Well #: 1-3H 1L

Sec. 34 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:

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

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

Name	Top	Datum
Base Heebner	3520	
Lansing	3879	
Cottage Grove	4143	
Oswego	4519	
Cherokee	4702	
Miss Unconformity	5033	

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	100	Edge Services 10 sack grout	8	none
Surface	12.25	9.63	36	770	O-Tex Class C	490	2% Calcium Chloride, .25 pps Cello Flak
Intermediate	8.75	7	26	5564	O-Tex Class A	340	4% gel, .2% FL-17, .1% C-51, .3% 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

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	Randy 3508 1-3H 1L
Doc ID	1241263

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	100	Edge Services 10 sack grout	8	none
Surface	12.25	9.63	36	770	O-Tex Class C	490	2% Calcium Chloride, .25 pps Cello Flake
Intermediate	8.75	7	26	5564	O-Tex Class A	340	4% gel, .2% FL-17, .1% C-51, .3% C-20, .1% C-37, .2% X-Air

EDGE SERVICES
Woodward OK

INVOICE

DATE	INVOICE #
10/27/2014	5207

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	10/24/2014	3812	LATSHAW 27	RANDY 3508 1-3H	Due on rec ..

Description
DRILLED 80' OF 30" CONDUCTOR HOLE
DRILLED 6' OF 76" HOLE
FURNISHED AND SET 6' X 6' TINHORN CELLAR
FURNISHED 80' OF 20" CONDUCTOR PIPE
FURNISHED MUD, WATER, AND TRUCKING
FURNISHED WELDER AND MATERIALS
FURNISHED 8 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 85' OF 16" CONDUCTOR PIPE FOR MOUSEHOLE
TOTAL BID $20,250.00

Job Number: DC14217
Well Name: RANDY 3508 1-3H
Code: 850-010
Amount: 20,491.51
Co. Man: John Fortune
Co. Man Sig.:
Notes:

Sales Tax (6.15%)	$241.51
TOTAL	**$20,491.51**

O-Tex Pumping, LLC

7303 N. Highway 81
Duncan, OK 73533

Phone # (580) 255-3111

Invoice

Date:	Invoice #:
11/9/2014	0000017806

Bill To
Sandridge Exploration & Production 123 Robert S Kerr Ave Oklahoma City, OK 73102-6406

Description of Work
HARPER,COUNTY KS AFE DC14217 API 15-077-22108-01-00
Job Type: Surface (New Well Only)

Field Receipt	Terms	Service Date	Due Date	AFE No	Lease/Well Name
SOK4438	Net 30	11/5/2014	12/9/2014	AFE DC14217	RANDY 3508 1-3H

Item	Description	U/M	Qty	Price Each	Amount	Disc %	Disc Amt	Net Amount
ML001	Pickup Mileage	UNTMIL	100	4.26	426.00	60.00%	-255.60	170.40
ML002	Pump Truck/Heavy Vehicle Mileage	UNTMIL	100	7.32	732.00	60.00%	-439.20	292.80
ML003	Bulk Cement Delivery/Return	MILE	1,178	2.95	3,475.10	60.00%	-2,085.06	1,390.04
MX001	Bulk Material Mixing Service Charge	SCF	516	3.27	1,687.32	60.00%	-1,012.39	674.93
CC001	Pump Charge 0-1000'	4-HRS	1	2,038.61	2,038.61	60.00%	-1,223.17	815.44
CC015	Pump Charge Additional Hours	UNTHRS	5	588.06	2,940.30	35.00%	-1,029.11	1,911.19
ML014	Fuel Surcharge *	JOB	1	653.40	653.40	100.00%	-653.40	0.00
AE014	Environmental Fee*	JOB	1	228.69	228.69	100.00%	-228.69	0.00
PC003	Employee/Supervisor Retention/perdiem	PR/MAN	5	1,306.80	6,534.00	90.00%	-5,880.60	653.40
JM001	Data Acquisition System	JOB	1	1,437.48	1,437.48	60.00%	-862.49	574.99
AE002	Cement Head with manifold	JOB	1	1,176.12	1,176.12	60.00%	-705.67	470.45
AE003	Circulation Equipment(40' of equipment)	JOB	1	1,633.50	1,633.50	60.00%	-980.10	653.40
CL017	9 5/8" Top Rubber Plug	EACH	1	338.80	338.80	35.00%	-118.58	220.22
CP001	C (Premium Plus Cement) (94 lbs/ft3)	94SACK	490	30.80	15,092.02	53.00%	-7,998.77	7,093.25
CP010	Cello Flake	LBS	123	4.20	516.60	53.00%	-273.80	242.80
CP018	Calcium Chloride	LBS	921	1.22	1,123.62	53.00%	-595.52	528.10
CP031	Sugar	LBS	50	3.39	169.50	0.00%	0.00	169.50

Subtotal Amount	**********
Sales Tax	**********
Discount Amount	**********
Payment/Credit Amount	**********
Total Net Amount	**********

Contact: Sandridge Exploration & Production

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 4478	11/14/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Sandridge Exploration & Production	Jerry Bias

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Randy 3508	1-3H	Intermediate	ROGER I.

EMP NAME		
STEPHEN RODRIGUEZ		0
ROGER IBARRA		
HAROLD HAYDEN		
CHRIS LOONEY		

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 155 Pressure _____

Retainer Depth _____ Total Depth 5564

	Called Out	On Location	Job Started	Job Completed
Date	11/13/2014	11/13/2014	11/13/2014	11/14/2014
Time	1900	2130	2200	1145

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	0	IR
Centralizers	0	IR
Top Plug	1	IR
HEAD	1	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	NEW	26#	7"		Surface	5,573	5,000
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			8¾"		Surface	5,564	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	Caustic	BBL. 10		8.40
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
11/13	
Total	0.0

Operating Hours

Date	Hours
11/14	
Total	0.0

Description of Job

Intermediate

Pressures

MAX 5,000 PSI AVG. 500

Average Rates in BPM

MAX 8 BPM AVG 6

Cement Left in Pipe

Feet 43 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	245	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.3% C-20 - 0.1% C-37 - 0.2% X-Air	6.93	1.43	13.60
2	90	Premium	0.2% FL-17 - 0.1% C-51 - 0.15% C-20 - 0.2% X-Air	5.19	1.19	15.60
3	0	0	0	0.00	0.00	0.00

Summary

Preflush	10	Type:	Caustic	Preflush: BBl	30.00
Breakdown		MAXIMUM	5,000 PSI	Load & Bkdn: Gal - BBl	N/A
		Lost Returns-N	NO/FULL	Excess /Return BBl	N/A
		Actual TOC		Calc. TOC:	
Average		Bump Plug PSI:		Final Circ. PSI:	
ISIP	5 Min.	10 Min	15 Min	Cement Slurry BBl	81.0
				Total Volume BBl	323.00

Type: Gel Spacer

Pad:Bbl -Gal N/A

Calc.Disp Bbl 212

Actual Disp. 212.00

Disp:Bbl

CUSTOMER REPRESENTATIVE _____ SIGNATURE

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 4527	11/23/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	dridge Exploration & Produc	Vince Brown

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Randy 3508	1-3H	Misc Pumping	B.RODRIGUEZ

EMP NAME							
B. RODRIGUEZ		0					
S.STROMER							
0.00							
0.00							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 150 Pressure _____

Retainer Depth _____ Total Depth 0

	Called Out	On Location	Job Started	Job Completed
Date	11/23/2014	11/23/2014	11/23/2014	11/23/2014
Time	0700	1230	1430	1530

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		11.6#	4½"	Surface	0	1,500
Liner						
Liner						
Tubing			4"			
Drill Pipe						
Open Hole			6 1/8"	Surface	9,847'	Shots/Ft.
Perforations						
Perforations						
Perforations						

Materials

Mud Type	WBM	Density	9	Lb/Gal	
Disp. Fluid	Fresh Water	Density	8.33	Lb/Gal	
Spacer type	resh 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
11/23	4.0
Total	4.0

Operating Hours

Date	Hours
11/23	1.0
Total	1.0

Description of Job

Misc Pumping

Pressures

MAX 1,500 PSI AVG. 2400

Average Rates in BPM

MAX 6 BPM AVG 5

Cement Left in Pipe

Feet _____ Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives		W/Rq.	Yield	Lbs/Gal
1	0	0		0	0.00	0.00	0.00
2	0	0		0	0.00	0.00	0.00
3	0	0		0	0.00	0.00	0.00

Summary

Preflush		Type:		Preflush:	BBl	10.00	Type: 0
Breakdown		MAXIMUM	1,500 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl		Calc.Disp Bbl
		Actual TOC	SURFACE	Calc. TOC:		SURFACE	Actual Disp.
Average		Bump Plug PSI:		Final Circ.	PSI:		Disp:Bbl
ISIP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry:	BBl		
				Total Volume	BBl	10.00	

CUSTOMER REPRESENTATIVE _____ SIGNATURE

Sandridge Energy

Harper County (NAD-27)
Sec 34-T34S-R08W
Randy 3508 1-3H 1L

Wellbore #1

Survey: Drillright MWD Surveys

Standard Survey Report

02 December, 2014

DrillRight

Survey Report

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Randy 3508 1-3H 1L
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1281.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1281.0usft
Well:	Randy 3508 1-3H 1L	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Project Harper County (NAD-27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

Site Sec 34-T34S-R08W

Site Position:		**Northing:**	134,692.00 usft	**Latitude:**	37° 2' 10.114 N
From:	Map	**Easting:**	2,092,733.00 usft	**Longitude:**	98° 10' 56.389 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.20 °

Well Randy 3508 1-3H 1L

Well Position	**+N/-S**	0.0 usft	**Northing:**	134,965.00 usft	**Latitude:**	37° 2' 12.676 N
	+E/-W	0.0 usft	**Easting:**	2,096,704.00 usft	**Longitude:**	98° 10' 7.405 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	1,263.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/23/2014	4.37	65.07	51,545

Design Wellbore #1

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	169.22

Survey Program **Date** 12/2/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
953.0	10,160.0	Drillright MWD Surveys (Wellbore #1)	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
770.0	0.00	0.00	770.0	0.0	0.0	0.0	0.00	0.00	0.00
953.0	0.40	336.00	953.0	0.6	-0.3	-0.6	0.22	0.22	0.00
1,014.0	1.70	9.90	1,014.0	1.7	-0.2	-1.7	2.27	2.13	55.57
1,105.0	4.20	15.40	1,104.9	6.2	0.9	-5.9	2.76	2.75	6.04
1,196.0	5.60	9.70	1,195.5	13.8	2.6	-13.1	1.63	1.54	-6.26
1,287.0	7.50	8.50	1,285.9	24.1	4.2	-22.8	2.09	2.09	-1.32
1,378.0	6.60	9.70	1,376.2	35.1	5.9	-33.4	1.00	-0.99	1.32
1,470.0	9.10	7.90	1,467.4	47.5	7.8	-45.2	2.73	2.72	-1.96
1,561.0	10.00	6.20	1,557.1	62.5	9.7	-59.6	1.04	0.99	-1.87
1,652.0	9.20	6.90	1,646.8	77.6	11.4	-74.1	0.89	-0.88	0.77

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Randy 3508 1-3H 1L
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1281.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1281.0usft
Well:	Randy 3508 1-3H 1L	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,745.0	8.30	9.80	1,738.7	91.6	13.4	-87.4	1.08	-0.97	3.12
1,837.0	9.40	12.40	1,829.7	105.4	16.2	-100.6	1.27	1.20	2.83
1,928.0	8.70	10.50	1,919.5	119.5	19.0	-113.8	0.84	-0.77	-2.09
2,019.0	8.90	14.50	2,009.4	133.0	22.1	-126.6	0.71	0.22	4.40
2,111.0	10.50	9.00	2,100.1	148.2	25.1	-140.9	2.01	1.74	-5.98
2,201.0	10.00	6.40	2,188.7	164.1	27.3	-156.1	0.76	-0.56	-2.89
2,292.0	9.60	13.80	2,278.4	179.3	30.0	-170.5	1.45	-0.44	8.13
2,386.0	8.70	12.50	2,371.2	193.9	33.4	-184.2	0.98	-0.96	-1.38
2,481.0	9.10	8.60	2,465.0	208.3	36.1	-197.9	0.76	0.42	-4.11
2,575.0	7.80	7.20	2,558.0	222.0	38.0	-211.0	1.40	-1.38	-1.49
2,669.0	9.30	16.80	2,651.0	235.6	41.0	-223.8	2.20	1.60	10.21
2,764.0	9.20	14.80	2,744.7	250.3	45.1	-237.4	0.35	-0.11	-2.11
2,860.0	8.70	12.20	2,839.6	264.8	48.6	-251.0	0.67	-0.52	-2.71
2,954.0	11.10	12.90	2,932.2	280.6	52.2	-265.9	2.56	2.55	0.74
3,048.0	11.30	10.90	3,024.4	298.4	55.9	-282.7	0.46	0.21	-2.13
3,143.0	10.80	9.60	3,117.6	316.3	59.2	-299.7	0.59	-0.53	-1.37
3,237.0	9.70	9.10	3,210.1	332.8	61.9	-315.4	1.17	-1.17	-0.53
3,331.0	9.10	8.20	3,302.8	348.0	64.2	-329.9	0.66	-0.64	-0.96
3,426.0	7.80	4.90	3,396.8	361.9	65.8	-343.2	1.46	-1.37	-3.47
3,521.0	6.20	358.70	3,491.1	373.4	66.3	-354.4	1.86	-1.68	-6.53
3,615.0	5.30	353.10	3,584.6	382.8	65.6	-363.8	1.13	-0.96	-5.96
3,710.0	4.50	5.70	3,679.3	390.9	65.5	-371.7	1.41	-0.84	13.26
3,804.0	4.00	6.90	3,773.0	397.8	66.2	-378.4	0.54	-0.53	1.28
3,836.0	3.50	6.10	3,805.0	399.9	66.5	-380.4	1.57	-1.56	-2.50
3,867.0	2.00	9.90	3,835.9	401.4	66.7	-381.8	4.87	-4.84	12.26
3,899.0	0.40	121.50	3,867.9	401.8	66.8	-382.3	6.81	-5.00	348.75
3,930.0	2.80	173.40	3,898.9	401.0	67.0	-381.4	8.30	7.74	167.42
3,962.0	4.80	177.60	3,930.8	398.9	67.2	-379.3	6.31	6.25	13.13
3,993.0	6.90	178.00	3,961.7	395.8	67.3	-376.2	6.78	6.77	1.29
4,025.0	8.40	178.90	3,993.4	391.5	67.4	-372.0	4.70	4.69	2.81
4,056.0	10.20	180.60	4,024.0	386.5	67.4	-367.1	5.87	5.81	5.48
4,088.0	11.80	180.60	4,055.4	380.4	67.4	-361.1	5.00	5.00	0.00
4,119.0	13.40	178.20	4,085.6	373.6	67.4	-354.4	5.43	5.16	-7.74
4,151.0	15.20	178.10	4,116.6	365.7	67.7	-346.6	5.63	5.63	-0.31
4,183.0	16.80	180.00	4,147.4	356.9	67.8	-337.9	5.26	5.00	5.94
4,214.0	18.70	178.30	4,176.9	347.5	68.0	-328.6	6.35	6.13	-5.48
4,246.0	20.40	176.00	4,207.1	336.8	68.5	-318.0	5.83	5.31	-7.19
4,277.0	21.90	175.70	4,236.0	325.6	69.3	-306.9	4.85	4.84	-0.97
4,309.0	23.40	176.50	4,265.5	313.3	70.2	-294.7	4.79	4.69	2.50
4,340.0	25.60	176.60	4,293.7	300.5	70.9	-281.9	7.10	7.10	0.32
4,372.0	28.30	176.70	4,322.2	286.0	71.8	-267.5	8.44	8.44	0.31
4,403.0	30.60	176.20	4,349.2	270.8	72.7	-252.4	7.46	7.42	-1.61
4,435.0	32.80	177.30	4,376.5	254.0	73.7	-235.8	7.11	6.88	3.44
4,467.0	35.10	177.60	4,403.0	236.2	74.5	-218.1	7.21	7.19	0.94

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Randy 3508 1-3H 1L
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1281.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1281.0usft
Well:	Randy 3508 1-3H 1L	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,498.0	38.50	177.60	4,427.8	217.6	75.2	-199.7	10.97	10.97	0.00
4,530.0	42.10	176.50	4,452.2	197.0	76.3	-179.2	11.47	11.25	-3.44
4,561.0	44.90	176.20	4,474.7	175.7	77.7	-158.0	9.06	9.03	-0.97
4,593.0	47.90	175.80	4,496.8	152.5	79.3	-135.0	9.42	9.38	-1.25
4,624.0	50.80	176.60	4,517.0	129.1	80.9	-111.7	9.56	9.35	2.58
4,656.0	52.50	177.30	4,536.8	104.0	82.2	-86.8	5.58	5.31	2.19
4,688.0	54.30	178.50	4,555.9	78.4	83.1	-61.4	6.38	5.63	3.75
4,751.0	59.60	180.00	4,590.3	25.6	83.8	-9.4	8.65	8.41	2.38
4,845.0	59.90	179.20	4,637.6	-55.6	84.4	70.4	0.80	0.32	-0.85
4,908.0	58.90	178.70	4,669.7	-109.8	85.4	123.9	1.73	-1.59	-0.79
4,940.0	58.60	178.80	4,686.3	-137.2	86.0	150.9	0.97	-0.94	0.31
4,971.0	60.60	178.60	4,702.0	-163.9	86.6	177.2	6.48	6.45	-0.65
5,002.0	63.70	179.70	4,716.4	-191.3	87.0	204.2	10.48	10.00	3.55
5,034.0	67.00	179.80	4,729.8	-220.4	87.1	232.8	10.32	10.31	0.31
5,066.0	70.20	180.90	4,741.5	-250.2	86.9	262.0	10.50	10.00	3.44
5,097.0	73.60	180.70	4,751.1	-279.7	86.5	290.9	10.98	10.97	-0.65
5,128.0	76.00	180.50	4,759.2	-309.6	86.2	320.2	7.77	7.74	-0.65
5,160.0	78.80	180.40	4,766.2	-340.8	85.9	350.8	8.76	8.75	-0.31
5,191.0	80.50	180.00	4,771.8	-371.3	85.8	380.8	5.63	5.48	-1.29
5,223.0	83.00	179.60	4,776.4	-403.0	85.9	411.9	7.91	7.81	-1.25
5,317.0	85.60	178.80	4,785.7	-496.5	87.2	504.0	2.89	2.77	-0.85
5,412.0	85.80	179.00	4,792.8	-591.2	89.1	597.4	0.30	0.21	0.21
5,514.0	86.30	178.40	4,799.8	-692.9	91.4	697.8	0.76	0.49	-0.59
5,588.0	86.50	178.60	4,804.5	-766.7	93.3	770.7	0.38	0.27	0.27
5,710.0	90.10	176.00	4,808.1	-888.5	99.1	891.4	3.64	2.95	-2.13
5,800.0	93.00	171.90	4,805.7	-978.0	108.5	981.0	5.58	3.22	-4.56
5,892.0	93.50	168.10	4,800.5	-1,068.4	124.5	1,072.8	4.16	0.54	-4.13
5,982.0	93.00	163.90	4,795.4	-1,155.6	146.2	1,162.5	4.69	-0.56	-4.67
6,073.0	91.40	160.50	4,791.9	-1,242.1	174.0	1,252.8	4.13	-1.76	-3.74
6,167.0	89.90	158.50	4,790.8	-1,330.2	206.9	1,345.4	2.66	-1.60	-2.13
6,262.0	89.80	159.00	4,791.0	-1,418.7	241.3	1,438.8	0.54	-0.11	0.53
6,357.0	90.10	159.40	4,791.1	-1,507.5	275.1	1,532.4	0.53	0.32	0.42
6,452.0	90.60	159.30	4,790.5	-1,596.4	308.6	1,626.0	0.54	0.53	-0.11
6,547.0	91.10	159.70	4,789.1	-1,685.4	341.9	1,719.6	0.67	0.53	0.42
6,641.0	90.40	158.00	4,787.9	-1,773.0	375.8	1,812.0	1.96	-0.74	-1.81
6,735.0	89.50	157.50	4,788.0	-1,860.0	411.4	1,904.2	1.10	-0.96	-0.53
6,829.0	89.70	156.40	4,788.6	-1,946.5	448.2	1,996.0	1.19	0.21	-1.17
6,923.0	89.60	155.70	4,789.2	-2,032.4	486.3	2,087.5	0.75	-0.11	-0.74
7,019.0	89.50	158.30	4,790.0	-2,120.8	523.8	2,181.3	2.71	-0.10	2.71
7,114.0	89.80	157.50	4,790.6	-2,208.8	559.6	2,274.5	0.90	0.32	-0.84
7,208.0	90.30	157.10	4,790.5	-2,295.5	595.8	2,366.5	0.68	0.53	-0.43
7,303.0	91.00	156.70	4,789.4	-2,382.9	633.1	2,459.3	0.85	0.74	-0.42
7,398.0	90.30	159.10	4,788.3	-2,470.9	668.8	2,552.4	2.63	-0.74	2.53

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Randy 3508 1-3H 1L
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1281.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1281.0usft
Well:	Randy 3508 1-3H 1L	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,494.0	90.20	159.30	4,787.9	-2,560.7	702.9	2,646.9	0.23	-0.10	0.21
7,589.0	90.60	160.60	4,787.2	-2,649.9	735.5	2,740.7	1.43	0.42	1.37
7,684.0	89.60	158.80	4,787.1	-2,739.0	768.5	2,834.4	2.17	-1.05	-1.89
7,778.0	91.90	161.00	4,785.8	-2,827.2	800.8	2,927.1	3.39	2.45	2.34
7,873.0	89.10	164.70	4,785.0	-2,918.0	828.8	3,021.5	4.88	-2.95	3.89
7,967.0	90.70	167.10	4,785.2	-3,009.1	851.7	3,115.3	3.07	1.70	2.55
8,062.0	89.80	168.90	4,784.8	-3,102.1	871.4	3,210.3	2.12	-0.95	1.89
8,156.0	89.00	170.70	4,785.7	-3,194.6	888.1	3,304.3	2.10	-0.85	1.91
8,277.0	90.20	170.80	4,786.6	-3,314.0	907.5	3,425.2	1.00	0.99	0.08
8,372.0	88.80	171.90	4,787.4	-3,407.9	921.8	3,520.2	1.87	-1.47	1.16
8,466.0	89.10	171.60	4,789.1	-3,500.9	935.3	3,614.1	0.45	0.32	-0.32
8,561.0	89.50	170.70	4,790.3	-3,594.8	949.9	3,709.0	1.04	0.42	-0.95
8,655.0	88.10	167.90	4,792.3	-3,687.1	967.3	3,803.0	3.33	-1.49	-2.98
8,750.0	89.80	170.60	4,794.0	-3,780.4	985.0	3,897.9	3.36	1.79	2.84
8,844.0	90.80	175.00	4,793.5	-3,873.7	996.8	3,991.7	4.80	1.06	4.68
8,938.0	89.10	180.20	4,793.6	-3,967.5	1,000.8	4,084.7	5.82	-1.81	5.53
9,033.0	89.20	183.10	4,795.0	-4,062.5	998.0	4,177.5	3.05	0.11	3.05
9,128.0	89.80	183.30	4,795.8	-4,157.3	992.7	4,269.6	0.67	0.63	0.21
9,222.0	87.70	183.80	4,797.9	-4,251.1	986.9	4,360.7	2.30	-2.23	0.53
9,317.0	88.50	183.30	4,801.0	-4,345.9	981.0	4,452.7	0.99	0.84	-0.53
9,412.0	89.60	183.50	4,802.6	-4,440.7	975.4	4,544.8	1.18	1.16	0.21
9,507.0	90.10	183.80	4,802.9	-4,535.5	969.3	4,636.8	0.61	0.53	0.32
9,601.0	89.70	183.40	4,803.0	-4,629.3	963.4	4,727.8	0.60	-0.43	-0.43
9,697.0	90.30	182.20	4,803.0	-4,725.2	958.8	4,821.1	1.40	0.63	-1.25
9,791.0	90.20	181.80	4,802.6	-4,819.1	955.5	4,912.8	0.44	-0.11	-0.43
9,885.0	90.70	181.40	4,801.9	-4,913.1	952.8	5,004.6	0.68	0.53	-0.43
9,980.0	91.70	181.60	4,799.9	-5,008.0	950.4	5,097.4	1.07	1.05	0.21
10,075.0	92.20	180.60	4,796.7	-5,103.0	948.5	5,190.3	1.18	0.53	-1.05
10,100.0	92.40	180.20	4,795.6	-5,128.0	948.4	5,214.8	1.79	0.80	-1.60
10,160.0	92.40	180.20	4,793.1	-5,187.9	948.2	5,273.7	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
770.0	770.0	0.0	0.0	Tie in Survey
953.0	953.0	0.6	-0.3	First Drillright MWD Survey
10,100.0	4,795.6	-5,128.0	948.4	Last Drillright MWD Survey
10,160.0	4,793.1	-5,187.9	948.2	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

34) Pump down at 3-9 BPM (slow down going into liner). Correlate GR above TOL to SCHLUMBERGER SPECTRAL DENSITY DUAL SPACED NEUTRON MEMORY LOG DATED 22-NOV-2014. Record TOL on down pass. Use correlated TOL tie-in for remainder of stages. Set CFP and perforate the MISSISSIPPI (Stage 1) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 1 - Lat #1							
Set plug at		10,100'		P Sleeve	10,127' OH packer		9,748'
10,073'	-	10,075'	5	spf	2'	10	holes
10,004'	-	10,006'	5	spf	2'	10	holes
9,952'	-	9,954'	5	spf	2'	10	holes
9,864'	-	9,866'	5	spf	2'	10	holes
9,770'	-	9,772'	5	spf	2'	10	holes
TOTAL					10'	50	holes

Lat #1	Fluid (bbls)	Total White Proppant (#)
Totals	63,883	1,834,400

STAGE 1 Lat #1								
Top perf @ 9,770 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	750	18					0.9
Slickwater	60	42880	1021					17.0
Slickwater	60	32160	766	40/70	White	0.25	8040	12.8
Slickwater	60	14900	355					5.9
Slickwater	60	32160	766	40/70	White	0.50	16080	12.8
Slickwater	60	14900	355					5.9
Slickwater	60	32160	766	40/70	White	0.75	24120	12.8
Slickwater	60	14900	355					5.9
Slickwater	60	32160	766	40/70	White	1.00	32160	12.8
Slickwater	60	16791	400					6.7
TOTAL		233,761	5,566				80,400	93.4

35) PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 2) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 2 - Lat #1							
Set plug at		9,724'		OH Packers @	9,748'	-	9,376'
9,694'	-	9,696'	5	spf	2'	10	holes
9,644'	-	9,646'	5	spf	2'	10	holes
9,578'	-	9,580'	5	spf	2'	10	holes
9,496'	-	9,498'	5	spf	2'	10	holes
9,403'	-	9,405'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH logging CCL. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 2) as follows:

STAGE 2 - Lat #1								
Top perf @ 9,403 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	750	18					0.9
Slickwater	60	39680	945					15.7
Slickwater	60	29760	709	40/70	White	0.25	7440	11.8
Slickwater	60	14900	355					5.9
Slickwater	60	29760	709	40/70	White	0.50	14880	11.8
Slickwater	60	14900	355					5.9
Slickwater	60	29760	709	40/70	White	0.75	22320	11.8
Slickwater	60	14900	355					5.9
Slickwater	60	29760	709	40/70	White	1.00	29760	11.8
Slickwater	60	16552	394					6.6
TOTAL		220,722	5,255				74,400	88.2

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 3) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 3 - Lat #1							
Set plug at		9,356'	OH Packers @		9,376'	-	9,000'
9,334'	-	9,336'	5	spf	2'	10	holes
9,245'	-	9,247'	5	spf	2'	10	holes
9,178'	-	9,180'	5	spf	2'	10	holes
9,112'	-	9,114'	5	spf	2'	10	holes
9,058'	-	9,060'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 3) as follows:

STAGE 3 - Lat #1								
			Top perf @	9,058 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	500	12					0.6
Slickwater	60	40107	955					15.9
Slickwater	60	30080	716	40/70	White	0.25	7520	11.9
Slickwater	60	14900	355					5.9
Slickwater	60	30080	716	40/70	White	0.50	15040	11.9
Slickwater	60	14900	355					5.9
Slickwater	60	30080	716	40/70	White	0.75	22560	11.9
Slickwater	60	14900	355					5.9
Slickwater	60	30080	716	40/70	White	1.00	30080	11.9
Slickwater	60	16327	389					6.5
TOTAL		221,954	5,285				75,200	88.5

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 4) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 4 - Lat #1							
Set plug at		9,024'	OH Packers @		9,000'	-	8,630'
8,962'	-	8,964'	5	spf	2'	10	holes
8,910'	-	8,912'	5	spf	2'	10	holes
8,818'	-	8,820'	5	spf	2'	10	holes
8,716'	-	8,718'	5	spf	2'	10	holes
8,657'	-	8,659'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 4) as follows:

STAGE 4 - Lat #1								
			Top perf @	8,657 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	500	12					0.6
Slickwater	70	39467	940					13.4
Slickwater	70	29600	705	40/70	White	0.25	7400	10.1
Slickwater	70	14900	355					5.1
Slickwater	70	29600	705	40/70	White	0.50	14800	10.1
Slickwater	70	14900	355					5.1
Slickwater	70	29600	705	40/70	White	0.75	22200	10.1
Slickwater	70	14900	355					5.1
Slickwater	70	29600	705	40/70	White	1.00	29600	10.1
Slickwater	70	16066	383					5.5
TOTAL		219,133	5,217				74,000	75.0

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 5) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 5 - Lat #1							
Set plug at		8,610'	OH Packers @		8,630'	-	8,254'
8,574'	-	8,576'	5	spf	2'	10	holes
8,516'	-	8,518'	5	spf	2'	10	holes
8,418'	-	8,420'	5	spf	2'	10	holes
8,354'		8,356'	5	spf	2'	10	holes
8,291'	-	8,293'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 5) as follows:

STAGE 5 - Lat #1								
Top perf @ 8,291 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	70	40107	955					13.6
Slickwater	70	30080	716	40/70	White	0.25	7520	10.2
Slickwater	70	14900	355					5.1
Slickwater	70	30080	716	40/70	White	0.50	15040	10.2
Slickwater	70	14900	355					5.1
Slickwater	70	30080	716	40/70	White	0.75	22560	10.2
Slickwater	70	14900	355					5.1
Slickwater	70	30080	716	40/70	White	1.00	30080	10.2
Slickwater	70	15828	377					5.4
TOTAL		221,205	5,267				75,200	75.5

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 6) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 6 - Lat #1							
Set plug at		8,232'	OH Packers @		8,254'	-	7,887'
8,208'	-	8,210'	5	spf	2'	10	holes
8,130'	-	8,132'	5	spf	2'	10	holes
8,038'	-	8,040'	5	spf	2'	10	holes
7,982'	-	7,984'	5	spf	2'	10	holes
7,923'	-	7,925'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 6) as follows:

STAGE 6 - Lat #1								
Top perf @ 7,923 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	80	39147	932					11.7
Slickwater	80	29360	699	40/70	White	0.25	7340	8.7
Slickwater	80	14900	355					4.4
Slickwater	80	29360	699	40/70	White	0.50	14680	8.7
Slickwater	80	14900	355					4.4
Slickwater	80	29360	699	40/70	White	0.75	22020	8.7
Slickwater	80	14900	355					4.4
Slickwater	80	29360	699	40/70	White	1.00	29360	8.7
Slickwater	80	15589	371					4.6
TOTAL		217,125	5,170				73,400	64.8

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 7) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 7 - Lat #1							
Set plug at		7,868'	OH Packers @		7,887'	-	7,515'
7,846'	-	7,848'	5	spf	2'	10	holes
7,746'	-	7,748'	5	spf	2'	10	holes
7,690'	-	7,692'	5	spf	2'	10	holes
7,640'	-	7,642'	5	spf	2'	10	holes
7,544'	-	7,546'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 7) as follows:

STAGE 7 - Lat #1								
Top perf @ 7,544 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	80	39680	945					11.8
Slickwater	80	29760	709	40/70	White	0.25	7440	8.9
Slickwater	80	14900	355					4.4
Slickwater	80	29760	709	40/70	White	0.50	14880	8.9
Slickwater	80	14900	355					4.4
Slickwater	80	29760	709	40/70	White	0.75	22320	8.9
Slickwater	80	14900	355					4.4
Slickwater	80	29760	709	40/70	White	1.00	29760	8.9
Slickwater	80	15342	365					4.6
TOTAL		219,012	5,215				74,400	65.4

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 8) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 8 - Lat #1							
Set plug at		7,486'	OH Packers @		7,515'	-	7,139'
7,447'	-	7,449'	5	spf	2'	10	holes
7,385'	-	7,387'	5	spf	2'	10	holes
7,289'	-	7,291'	5	spf	2'	10	holes
7,230'	-	7,232'	5	spf	2'	10	holes
7,177'	-	7,179'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 8) as follows:

STAGE 8 - Lat #1								
Top perf @ 7,177 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	90	40107	955					10.6
Slickwater	90	30080	716	40/70	White	0.25	7520	8.0
Slickwater	90	14900	355					3.9
Slickwater	90	30080	716	40/70	White	0.50	15040	8.0
Slickwater	90	14900	355					3.9
Slickwater	90	30080	716	40/70	White	0.75	22560	8.0
Slickwater	90	14900	355					3.9
Slickwater	90	30080	716	40/70	White	1.00	30080	8.0
Slickwater	90	15103	360					4.0
TOTAL		220,480	5,250				75,200	58.6

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 9) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 9 - Lat #1							
Set plug at		7,114'	OH Packers @		7,139'	-	6,782'
7,088'	-	7,090'	5	spf	2'	10	holes
7,012'	-	7,014'	5	spf	2'	10	holes
6,935'	-	6,937'	5	spf	2'	10	holes
6,880'	-	6,882'	5	spf	2'	10	holes
6,823'	-	6,825'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 9) as follows:

STAGE 9 - Lat #1								
Top perf @ 6,823 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	90	38080	907					10.1
Slickwater	90	28560	680	40/70	White	0.25	7140	7.6
Slickwater	90	14900	355					3.9
Slickwater	90	28560	680	40/70	White	0.50	14280	7.6
Slickwater	90	14900	355					3.9
Slickwater	90	28560	680	40/70	White	0.75	21420	7.6
Slickwater	90	14900	355					3.9
Slickwater	90	28560	680	40/70	White	1.00	28560	7.6
Slickwater	90	14872	354					3.9
TOTAL		212,142	5,051				71,400	56.4

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 10) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 10 - Lat #1							
Set plug at		6,756'	OH Packers @		6,782'	-	6,368'
6,728'	-	6,730'	5	spf	2'	10	holes
6,630'	-	6,632'	5	spf	2'	10	holes
6,565'	-	6,567'	5	spf	2'	10	holes
6,503'	-	6,505'	5	spf	2'	10	holes
6,408'	-	6,410'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 10) as follows:

STAGE 10 - Lat #1								
Top perf @ 6,408 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	44160	1051					11.0
Slickwater	96	33120	789	40/70	White	0.25	8280	8.2
Slickwater	96	14900	355					3.7
Slickwater	96	33120	789	40/70	White	0.50	16560	8.2
Slickwater	96	14900	355					3.7
Slickwater	96	33120	789	40/70	White	0.75	24840	8.2
Slickwater	96	14900	355					3.7
Slickwater	96	33120	789	40/70	White	1.00	33120	8.2
Slickwater	96	14602	348					3.6
TOTAL		236,192	5,624				82,800	58.8

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 11) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

STAGE 11 - Lat #1							
Set plug at		6,310'	OH Packers @		6,368'	-	5,969'
6,274'	-	6,276'	5	spf	2'	10	holes
6,186'	-	6,188'	5	spf	2'	10	holes
6,109'	-	6,111'	5	spf	2'	10	holes
6,046'	-	6,048'	5	spf	2'	10	holes
5,990'	-	5,992'	5	spf	2'	10	holes
TOTAL					10'	50	holes

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 11) as follows:

STAGE 11 - Lat #1								
			Top perf @	5,990 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	42560	1013					10.6
Slickwater	96	31920	760	40/70	White	0.25	7980	7.9
Slickwater	96	14900	355					3.7
Slickwater	96	31920	760	40/70	White	0.50	15960	7.9
Slickwater	96	14900	355					3.7
Slickwater	96	31920	760	40/70	White	0.75	23940	7.9
Slickwater	96	14900	355					3.7
Slickwater	96	31920	760	40/70	White	1.00	31920	7.9
Slickwater	96	14330	341					3.6
TOTAL		229,520	5,465				79,800	57.2

PU lubricator and tools. Equalize lubricator to WHP and monitor for leaks. RIH w/ 4-1/2" Halliburton 8K FUSION CFP on Baker 10 setting tool w/ standard charge, 2-3/4" perforating guns (15 gram, 0.40" EHD, 40.5" TTP, 60 degree phasing) and 2-3/4" CCL. Pump down at 3-9 bpm . Set CFP and perforate the MISSISSIPPI (Stage 12) as follows:
NOTE: DO NOT EXCEED 10 BPM DURING ANY PUMP DOWN OPERATION.

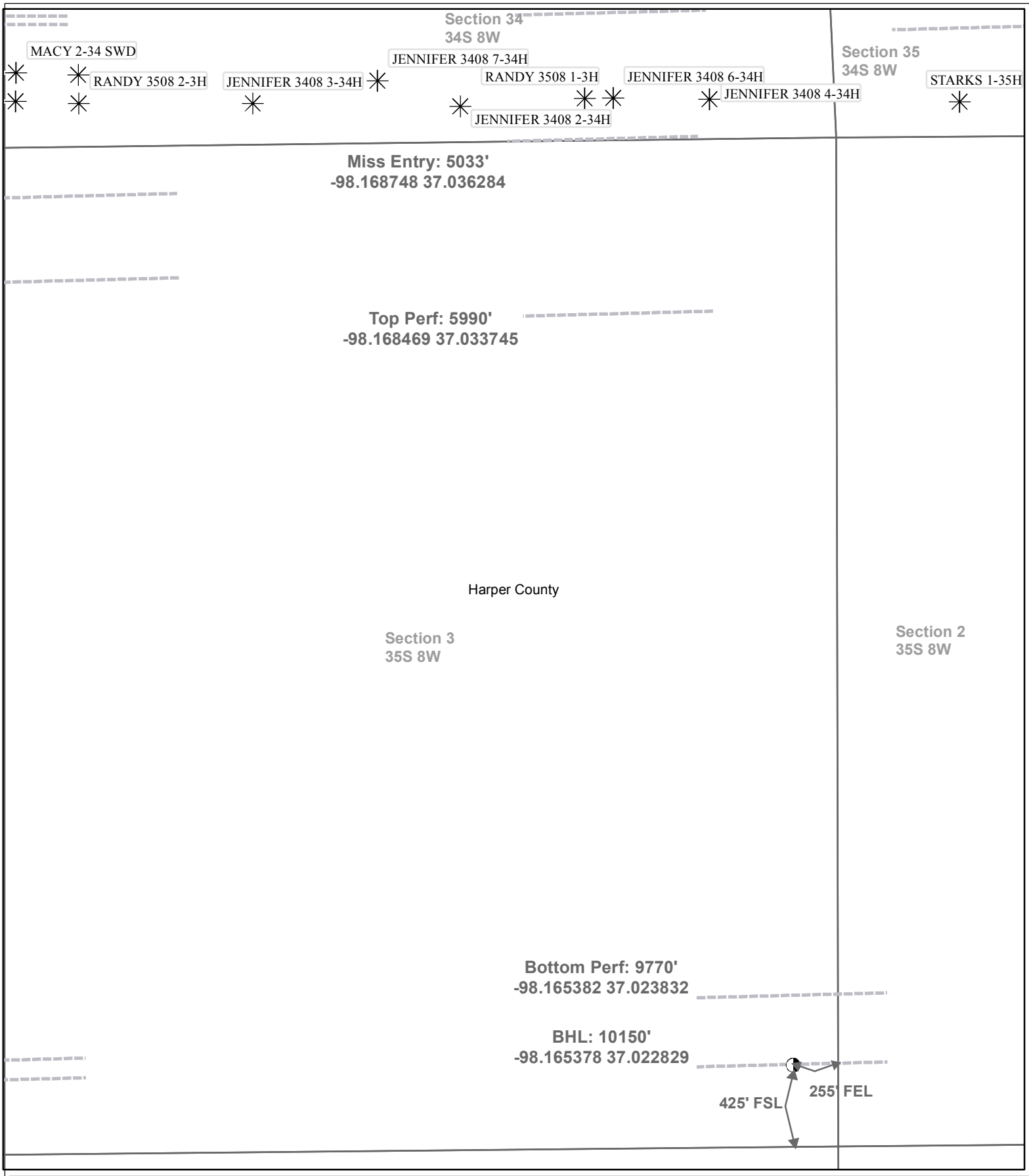
STAGE 12- Lat #1								
Set plug at		5,920'	OH Packer @		5,969'	Csg @	5,564'	
5,874'	-	5,876'	5	spf	2'	10	holes	
5,820'	-	5,822'	5	spf	2'	10	holes	
5,758'	-	5,760'	5	spf	2'	10	holes	
5,684'	-	5,686'	5	spf	2'	10	holes	
5,618'	-	5,620'	5	spf	2'	10	holes	
TOTAL					10'	50	holes	

POH. Drop CFP ball and pump down at a max rate of 10 bpm. Frac MISSISSIPPI (Stage 12) as follows:

STAGE 12- Lat #1								
			Top perf @	5,618 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop		Prop Con	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	43200	1029					10.7
Slickwater	96	32400	771	40/70	White	0.25	8100	8.0
Slickwater	96	14900	355					3.7
Slickwater	96	32400	771	40/70	White	0.50	16200	8.0
Slickwater	96	14900	355					3.7
Slickwater	96	32400	771	40/70	White	0.75	24300	8.0
Slickwater	96	14900	355					3.7
Slickwater	96	32400	771	40/70	White	1.00	32400	8.0
Slickwater	96	14088	335					3.5
TOTAL		231,838	5,520				81,000	57.7

Lat #1	Fluid (bbls)	Total White Proppant (#)
Totals	63,883	917,200

36) Suck manifold and iron dry with vacuum truck. RDMO frac crew and EWL. Transfer bottoms to 7 frac tanks and top off same 7 tanks via water transfer for CTDO. Utilize remaining 7 frac tanks for emergency water storage during CTDO. **NOTE: Leave copy of post job frac reports for foreman in charge of CTDO.**



SANDRIDGE
THE POWER OF US

Actual BH Location

SandRidge Wells

Perf

Sections

Actual Bottom-Hole Location of Randy 3508 1-3H 1L
T&R: 35S 8W
Section: 3, 255' FEL & 425' FSL
-98.165378 37.022829

1 in = 667 ft

0 500 1,000 2,000 Feet

N

Draftsman: Dory Deines	Draft Date: 2/3/2015
Drawing Name/Number: Addendum_Randy 3508 1-3H 1L.mxd	
Coordinate System: NAD 1927 State Plane Kansas South FIPS: 1502	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/11/2014
Job End Date:	12/12/2014
State:	Kansas
County:	Harper
API Number:	15-077-22108-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Randy 3508 #1-3H 1L
Longitude:	-98.16872000
Latitude:	37.03685000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,808
Total Base Water Volume (gal):	2,606,268
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	95.04093	None
40/70 Preferred Sand	CAF	Proppant, Scouring, Fill					
			Crystalline Silica (quartz)	14808-60-7	100.00000	3.95418	None
15% Unihibited HCl Acid	CAF	Etching, Dissolving, Cleaning					
			Water	7732-18-5	85.00000	0.33321	None
			Hydrochloric Acid	7647-01-0	15.00000	0.05880	None
C102	Bosque Disposal Systems, LLC	Oxidizer					
			Chlorine Dioxide	10049-04-4	15.00000	0.26534	
SI-2	CAF	Scale Inhibitor					
			Water	7732-18-5	50.00000	0.00509	None
			Phosphoric Acid	7664-38-2	16.80000	0.00171	None
			Hydrochloric Acid	7647-01-0	16.80000	0.00171	None
			Ethylene Glycol	107-21-1	12.70000	0.00130	None
			Methanol	67-56-1	3.60000	0.00037	None
FR-1	CAF	Friction Reducer					
			Petroleum Hydrotreated Light Distillate	64742-47-8	2.50000	0.00178	None

CIA-1	CAF	Acid Corrosion Inhibitor					
			Water	7732-18-5	24.00000	0.00008	None
			Methanol	67-56-1	9.00000	0.00003	None
			N-Dimethyformamide	68-12-2	8.40000	0.00003	None
			Tar Bases-quinoline derivs-benzyl chloride/quaternized	72480-70-7	8.40000	0.00003	None
			Isopropyl Alchohol	67-63-0	8.40000	0.00003	None
			Triethyl Phosphate	78-40-0	8.40000	0.00003	None
			Ethoxylated Nonylphenol	68412-54-4	8.40000	0.00003	None
			2-Butoxyethanol	111-76-2	8.40000	0.00003	None
			Ethylene Glycol	107-21-1	8.40000	0.00003	None
			Cinnamaldehyde	104-55-2	8.40000	0.00003	None
NE-1	CAF	Non Emulsifier					
			Water	7732-18-5	54.50000	0.00009	None
			Polyglycol Ethers	52624-57-4	13.60000	0.00002	None
			Methanol	67-56-1	9.00000	0.00002	None
			Glycol Ether EB	111-76-2	9.00000	0.00002	None
IC-3	CAF	Iron Control					
			Sodium Erythorbate	6381-77-7	100.00000	0.00013	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)