Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1235278

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: Trey Boardman
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 #:

9/9/2014	10/5/2014	10/19/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-22088-01-00
Spot Description:
SW SW SE SE Sec. 34 Twp. 34 S. R. 8 ☐ East ☑ West
235 Feet from ☐ North / ☑ South Line of Section
1170 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: Jennifer 3408 Well #: 6-34H
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 1264 Kelly Bushing: 1287
Total Vertical Depth: 4787 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 650 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: ppm Fluid volume: bbls
Dewatering method used:

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

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: 01/07/2015
☑ **Confidential Release Date:** 01/06/2017
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 01/07/2015

[redacted] 1235278

Operator Name: SandRidge Exploration and Production LLC Lease Name: Jennifer 3408 Well #: 6-34H

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 Neutron Gamma Ray

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

Name	Top	Datum
Base Heebner	3525	
Lansing	3856	
Cottage Grove	4129	
Oswego	4500	
Cherokee	4691	
Miss Unconformity	5049	

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	22	20	75	90	Edge 10 sack grout	8	none
Surface	12.25	9.63	36	650	O-tex Lite Premium Plus 65/35;	380	(6% gel) 2% Calcium Chloride, 1/4 pps C
Intermediate	8.75	7	26	5544	50/50 Poz Premium; Premium	335	4% gel, .2% FL-17, .1% C-51, .15% 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. 11/4/2014

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	Jennifer 3408 6-34H
Doc ID	1235278

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	22	20	75	90	Edge 10 sack grout	8	none
Surface	12.25	9.63	36	650	O-tex Lite Premium Plus 65/35; Premium Plus (Class C)	380	(6% gel) 2% Calcium Chloride, 1/4 pps Cello-Flake, .2% X-Air
Intermediate	8.75	7	26	5544	50/50 Poz Premium; Premium	335	4% gel, .2% FL-17, .1% C-51, .15% C-20, .1% C-37, .2% X-Air

EDGE SERVICES
Woodward, OK

INVOICE

DATE	INVOICE #
9/11/2014	5092

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	9/9/2014	3981	LATSHAW #27	JENNIFER 3408 6-34H	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 TOTAL BID $20.150.00

Sales Tax (6.5%)	$172.06
TOTAL	$20,322.06

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 4233	09/23/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	dridge Exploration & Produc	Jerry Bias

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Jennifer 3408	6-34H	Surface	Brett Armer

EMP NAME							
Brett Armer		0					
Cheryl Newton							
Flo Helkena							
0.00							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 80 Pressure _____

Retainer Depth _____ Total Depth 655

	Called Out	On Location	Job Started	Job Completed
Date	9/22/2014	9/22/2014	9/23/2014	9/23/2014
Time	1430	1800	0200	0300

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		36#	9 5/8"	Surface	655	1,500
Liner						
Liner						
Tubing			0			
Drill Pipe						
Open Hole			12¼"	Surface	650	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
9/22	6.0
9/23	4.5
Total	10.5

Operating Hours

Date	Hours
9/23	1.0
Total	1.0

Description of Job

Surface

Pressures

MAX 1,500 PSI AVG.

Average Rates in BPM

MAX 6 BPM AVG

Cement Left in Pipe

Feet 40 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 - 0.2% X-Air	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	0	0	0	0.00	0.00	0.00

Summary

Preflush _____ Type: _____

Breakdown _____ MAXIMUM 1,500 PSI

_____ Lost Returns-N NO/FULL

_____ Actual TOC SURFACE

Average _____ Bump Plug PSI: _____

SIP _____ 5 Min. _____ 10 Min. _____ 15 Min. _____

Preflush:	BBl	10.00	Type: Fresh Water
Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
Excess /Return	BBl	50	Calc.Disp Bbl 48
Calc. TOC:		SURFACE	Actual Disp. 48.00
Final Circ.	PSI:	250	Disp:Bbl 48.00
Cement Slurry:	BBl	116.0	
Total Volume	BBl	174.00	

CUSTOMER REPRESENTATIVE _____

SIGNATURE

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 4264	09/29/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Sandridge Exploration & Production	Vince Brown

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Jennifer 3408	6-34H	Intermediate	Brett Armer

EMP NAME		EMP NAME	
Brett Armer		James Derry	
Cody Bonitz			
Chris Looney			
Flo Helkena			

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 155 Pressure _____

Retainer Depth _____ Total Depth 5553

	Called Out	On Location	Job Started	Job Completed
Date	9/29/2014	9/29/2014	9/29/2014	9/29/2014
Time	1000	1300	1722	1840

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	5,553	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.	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
9/29	7.0
Total	7.0

Operating Hours

Date	Hours
9/29	1.5
Total	1.5

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 45 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	230	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.15% C-20 - 0.1% C-37 - 0.2% X-Air	6.93	1.43	13.60
2	105	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	Type: Gel Spacer
Breakdown		MAXIMUM	5,000 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl	N/A	Calc.Disp Bbl 212
		Actual TOC		Calc. TOC:			Actual Disp. 212.00
Average		Bump Plug PSI:		Final Circ.	PSI:	1,300	Disp:Bbl 212.00
ISIP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry:	BBl	80.0	
				Total Volume	BBl	322.00	

CUSTOMER REPRESENTATIVE _____ SIGNATURE

Sandridge Energy

Harper County (NAD-27)
Sec 34-T34S-R08W
Jennifer 3408 6-34H

Wellbore #1

Design: Wellbore #1

Standard Survey Report

08 October, 2014

Survey Report

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Jennifer 3408 6-34H
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1286.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1286.0usft
Well:	Jennifer 3408 6-34H	**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 Jennifer 3408 6-34H

Well Position	**+N/-S**	0.0 usft	**Northing:**	134,967.00 usft	**Latitude:**	37° 2' 12.700 N
	+E/-W	0.0 usft	**Easting:**	2,096,584.00 usft	**Longitude:**	98° 10' 8.885 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	1,264.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/3/2014	4.39	65.08	51,560

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	359.19

Survey Program **Date** 10/8/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
678.0	9,306.0	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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
678.0	1.20	240.10	678.0	-3.5	-6.2	-3.5	0.18	0.18	0.00
First Drillright MWD Survey									
892.0	0.80	230.60	891.9	-5.6	-9.3	-5.5	0.20	-0.19	-4.44
1,164.0	0.60	216.30	1,163.9	-8.0	-11.6	-7.8	0.10	-0.07	-5.26
1,225.0	1.20	194.70	1,224.9	-8.8	-11.9	-8.7	1.11	0.98	-35.41
1,286.0	2.20	181.40	1,285.9	-10.6	-12.1	-10.4	1.75	1.64	-21.80
1,350.0	3.80	174.80	1,349.8	-14.0	-11.9	-13.8	2.55	2.50	-10.31
1,444.0	4.00	179.90	1,443.6	-20.3	-11.7	-20.2	0.43	0.21	5.43
1,539.0	3.60	176.80	1,538.3	-26.6	-11.5	-26.5	0.47	-0.42	-3.26

Survey Report

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Jennifer 3408 6-34H
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1286.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1286.0usft
Well:	Jennifer 3408 6-34H	**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)
1,634.0	3.70	185.80	1,633.2	-32.7	-11.6	-32.5	0.61	0.11	9.47
1,728.0	4.30	178.70	1,726.9	-39.2	-11.9	-39.0	0.83	0.64	-7.55
1,823.0	4.30	178.20	1,821.7	-46.3	-11.7	-46.2	0.04	0.00	-0.53
1,918.0	4.00	171.80	1,916.4	-53.2	-11.1	-53.0	0.58	-0.32	-6.74
2,013.0	3.70	167.00	2,011.2	-59.4	-9.9	-59.3	0.46	-0.32	-5.05
2,107.0	4.60	180.00	2,104.9	-66.2	-9.2	-66.0	1.38	0.96	13.83
2,202.0	4.50	176.20	2,199.7	-73.7	-9.0	-73.5	0.33	-0.11	-4.00
2,297.0	4.10	172.60	2,294.4	-80.8	-8.3	-80.6	0.51	-0.42	-3.79
2,391.0	3.90	167.80	2,388.2	-87.2	-7.2	-87.1	0.41	-0.21	-5.11
2,485.0	3.70	171.60	2,481.9	-93.3	-6.1	-93.3	0.34	-0.21	4.04
2,580.0	3.50	166.20	2,576.8	-99.2	-4.9	-99.1	0.41	-0.21	-5.68
2,674.0	3.70	184.10	2,670.6	-105.0	-4.5	-104.9	1.21	0.21	19.04
2,768.0	3.60	184.10	2,764.4	-111.0	-4.9	-110.9	0.11	-0.11	0.00
2,863.0	3.50	184.40	2,859.2	-116.8	-5.3	-116.8	0.11	-0.11	0.32
2,958.0	3.50	182.90	2,954.0	-122.6	-5.7	-122.5	0.10	0.00	-1.58
3,053.0	3.00	177.70	3,048.9	-128.0	-5.7	-127.9	0.61	-0.53	-5.47
3,147.0	3.40	171.60	3,142.7	-133.2	-5.2	-133.1	0.56	0.43	-6.49
3,242.0	3.90	176.70	3,237.5	-139.2	-4.6	-139.2	0.63	0.53	5.37
3,337.0	4.60	184.50	3,332.3	-146.3	-4.8	-146.2	0.95	0.74	8.21
3,431.0	3.80	183.90	3,426.0	-153.1	-5.3	-153.0	0.85	-0.85	-0.64
3,526.0	3.10	180.50	3,520.8	-158.8	-5.5	-158.7	0.77	-0.74	-3.58
3,620.0	3.70	175.00	3,614.7	-164.4	-5.3	-164.3	0.73	0.64	-5.85
3,715.0	2.80	179.30	3,709.5	-169.8	-5.0	-169.7	0.98	-0.95	4.53
3,810.0	3.40	175.80	3,804.4	-174.9	-4.7	-174.8	0.66	0.63	-3.68
3,905.0	4.30	149.60	3,899.2	-180.8	-2.7	-180.7	2.05	0.95	-27.58
3,936.0	6.10	134.90	3,930.1	-183.0	-1.0	-182.9	7.18	5.81	-47.42
3,968.0	6.50	118.00	3,961.9	-185.0	1.8	-185.0	5.91	1.25	-52.81
3,999.0	7.50	96.00	3,992.6	-186.0	5.4	-186.1	9.16	3.23	-70.97
4,031.0	8.80	77.00	4,024.3	-185.7	9.9	-185.8	9.29	4.06	-59.38
4,063.0	10.00	58.30	4,055.9	-183.7	14.6	-183.9	10.20	3.75	-58.44
4,095.0	10.80	43.10	4,087.4	-180.0	19.0	-180.3	8.90	2.50	-47.50
4,126.0	12.20	29.50	4,117.8	-175.1	22.6	-175.4	9.81	4.52	-43.87
4,157.0	14.10	19.40	4,147.9	-168.7	25.5	-169.0	9.60	6.13	-32.58
4,189.0	16.10	11.10	4,178.8	-160.6	27.6	-161.0	9.19	6.25	-25.94
4,220.0	18.90	4.90	4,208.4	-151.4	28.9	-151.8	10.84	9.03	-20.00
4,252.0	21.90	2.80	4,238.4	-140.3	29.6	-140.7	9.65	9.38	-6.56
4,284.0	25.00	1.60	4,267.8	-127.6	30.1	-128.0	9.80	9.69	-3.75
4,315.0	28.00	359.90	4,295.5	-113.7	30.3	-114.1	9.98	9.68	-5.48
4,347.0	30.80	358.70	4,323.4	-98.0	30.1	-98.4	8.94	8.75	-3.75
4,378.0	33.60	358.00	4,349.6	-81.5	29.6	-81.9	9.11	9.03	-2.26
4,410.0	36.40	357.80	4,375.8	-63.2	28.9	-63.6	8.76	8.75	-0.63
4,441.0	39.20	357.60	4,400.3	-44.2	28.2	-44.6	9.04	9.03	-0.65
4,472.0	41.80	357.20	4,423.9	-24.1	27.3	-24.5	8.43	8.39	-1.29

Survey Report

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Jennifer 3408 6-34H
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1286.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1286.0usft
Well:	Jennifer 3408 6-34H	**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)
4,504.0	44.40	356.10	4,447.2	-2.3	26.0	-2.6	8.46	8.13	-3.44
4,535.0	47.00	355.30	4,468.9	19.9	24.3	19.5	8.59	8.39	-2.58
4,567.0	49.50	354.70	4,490.2	43.7	22.2	43.3	7.94	7.81	-1.88
4,599.0	52.00	355.30	4,510.4	68.3	20.1	68.0	7.95	7.81	1.88
4,630.0	54.60	355.70	4,529.0	93.1	18.1	92.8	8.45	8.39	1.29
4,662.0	57.80	356.10	4,546.8	119.6	16.2	119.4	10.05	10.00	1.25
4,693.0	60.50	356.90	4,562.7	146.2	14.6	146.0	8.99	8.71	2.58
4,757.0	61.30	356.80	4,593.8	202.0	11.5	201.8	1.26	1.25	-0.16
4,851.0	61.40	356.50	4,638.9	284.4	6.7	284.3	0.30	0.11	-0.32
4,883.0	61.40	356.20	4,654.2	312.4	4.9	312.3	0.82	0.00	-0.94
4,915.0	61.70	356.20	4,669.4	340.5	3.1	340.4	0.94	0.94	0.00
4,946.0	62.40	356.70	4,683.9	367.8	1.4	367.8	2.67	2.26	1.61
4,978.0	64.30	356.90	4,698.3	396.4	-0.2	396.3	5.96	5.94	0.63
5,010.0	66.40	357.70	4,711.6	425.4	-1.6	425.4	6.94	6.56	2.50
5,042.0	67.70	358.40	4,724.1	454.9	-2.6	454.9	4.53	4.06	2.19
5,074.0	69.70	358.90	4,735.7	484.7	-3.3	484.7	6.42	6.25	1.56
5,105.0	72.60	359.30	4,745.8	514.0	-3.8	514.0	9.43	9.35	1.29
5,137.0	75.90	359.20	4,754.4	544.8	-4.2	544.8	10.32	10.31	-0.31
5,169.0	79.70	359.20	4,761.2	576.1	-4.6	576.1	11.88	11.88	0.00
5,232.0	85.90	358.80	4,769.1	638.5	-5.7	638.6	9.86	9.84	-0.63
5,327.0	86.50	358.70	4,775.4	733.3	-7.8	733.3	0.64	0.63	-0.11
5,421.0	87.20	358.70	4,780.6	827.1	-9.9	827.2	0.74	0.74	0.00
5,529.0	88.20	358.60	4,784.9	935.0	-12.4	935.1	0.93	0.93	-0.09
5,590.0	89.20	358.30	4,786.3	996.0	-14.1	996.1	1.71	1.64	-0.49
5,681.0	89.60	358.20	4,787.2	1,086.9	-16.9	1,087.1	0.45	0.44	-0.11
5,772.0	89.90	358.80	4,787.6	1,177.9	-19.3	1,178.1	0.74	0.33	0.66
5,863.0	90.70	359.00	4,787.2	1,268.9	-21.0	1,269.1	0.91	0.88	0.22
5,954.0	89.50	358.50	4,787.0	1,359.9	-23.0	1,360.0	1.43	-1.32	-0.55
6,045.0	90.40	358.60	4,787.1	1,450.8	-25.3	1,451.0	1.00	0.99	0.11
6,136.0	90.00	358.00	4,786.8	1,541.8	-28.0	1,542.0	0.79	-0.44	-0.66
6,227.0	90.20	358.00	4,786.6	1,632.7	-31.2	1,633.0	0.22	0.22	0.00
6,319.0	90.40	358.90	4,786.1	1,724.7	-33.7	1,725.0	1.00	0.22	0.98
6,411.0	90.00	358.00	4,785.8	1,816.7	-36.1	1,817.0	1.07	-0.43	-0.98
6,501.0	91.20	358.10	4,784.8	1,906.6	-39.2	1,907.0	1.34	1.33	0.11
6,591.0	91.00	358.00	4,783.1	1,996.5	-42.3	1,996.9	0.25	-0.22	-0.11
6,682.0	89.90	357.50	4,782.4	2,087.5	-45.8	2,087.9	1.33	-1.21	-0.55
6,777.0	91.20	357.30	4,781.5	2,182.4	-50.1	2,182.8	1.38	1.37	-0.21
6,871.0	91.90	357.50	4,779.0	2,276.2	-54.4	2,276.8	0.77	0.74	0.21
6,965.0	91.00	358.50	4,776.6	2,370.1	-57.7	2,370.7	1.43	-0.96	1.06
7,060.0	93.00	358.20	4,773.3	2,465.0	-60.4	2,465.6	2.13	2.11	-0.32
7,154.0	92.10	358.40	4,769.1	2,558.9	-63.2	2,559.5	0.98	-0.96	0.21
7,249.0	91.10	358.10	4,766.4	2,653.8	-66.1	2,654.5	1.10	-1.05	-0.32
7,344.0	89.40	359.20	4,766.0	2,748.8	-68.3	2,749.5	2.13	-1.79	1.16

Survey Report

Company:	Sandridge Energy	**Local Co-ordinate Reference:**	Well Jennifer 3408 6-34H
Project:	Harper County (NAD-27)	**TVD Reference:**	KB @ 1286.0usft
Site:	Sec 34-T34S-R08W	**MD Reference:**	KB @ 1286.0usft
Well:	Jennifer 3408 6-34H	**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)
7,438.0	89.80	358.40	4,766.7	2,842.8	-70.3	2,843.5	0.95	0.43	-0.85
7,532.0	89.90	359.20	4,766.9	2,936.7	-72.3	2,937.5	0.86	0.11	0.85
7,627.0	89.80	359.50	4,767.2	3,031.7	-73.4	3,032.5	0.33	-0.11	0.32
7,721.0	90.10	359.30	4,767.2	3,125.7	-74.3	3,126.5	0.38	0.32	-0.21
7,815.0	90.00	359.40	4,767.2	3,219.7	-75.4	3,220.5	0.15	-0.11	0.11
7,910.0	90.20	357.70	4,767.0	3,314.7	-77.8	3,315.4	1.80	0.21	-1.79
8,004.0	89.90	359.30	4,766.9	3,408.6	-80.3	3,409.4	1.73	-0.32	1.70
8,099.0	91.20	358.90	4,766.0	3,503.6	-81.8	3,504.4	1.43	1.37	-0.42
8,194.0	91.90	359.50	4,763.4	3,598.6	-83.1	3,599.4	0.97	0.74	0.63
8,288.0	93.20	359.70	4,759.2	3,692.5	-83.7	3,693.3	1.40	1.38	0.21
8,382.0	92.50	359.50	4,754.6	3,786.4	-84.4	3,787.2	0.77	-0.74	-0.21
8,477.0	88.90	358.60	4,753.4	3,881.3	-86.0	3,882.2	3.91	-3.79	-0.95
8,572.0	91.00	359.60	4,753.5	3,976.3	-87.5	3,977.1	2.45	2.21	1.05
8,666.0	90.50	2.30	4,752.3	4,070.3	-85.9	4,071.1	2.92	-0.53	2.87
8,760.0	91.50	1.90	4,750.6	4,164.2	-82.5	4,165.0	1.15	1.06	-0.43
8,855.0	91.40	1.30	4,748.2	4,259.1	-79.8	4,259.8	0.64	-0.11	-0.63
8,950.0	90.80	359.60	4,746.4	4,354.1	-79.1	4,354.8	1.90	-0.63	-1.79
9,044.0	91.70	359.00	4,744.3	4,448.1	-80.2	4,448.8	1.15	0.96	-0.64
9,138.0	91.00	358.40	4,742.1	4,542.0	-82.4	4,542.7	0.98	-0.74	-0.64
9,233.0	91.50	357.80	4,740.1	4,637.0	-85.5	4,637.7	0.82	0.53	-0.63
9,256.0	91.60	358.00	4,739.4	4,659.9	-86.3	4,660.7	0.97	0.43	0.87
Last Drillright MWD Survey									
9,306.0	91.60	358.00	4,738.0	4,709.9	-88.1	4,710.7	0.00	0.00	0.00
Projection to TD - PBHL Jennifer 6-34H									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
678.0	678.0	-3.5	-6.2	First Drillright MWD Survey
9,256.0	4,739.4	4,659.9	-86.3	Last Drillright MWD Survey
9,306.0	4,738.0	4,709.9	-88.1	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

STAGE 1								
			Port @	9,241 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	750	18					0.9
Slickwater	70	17211	410					5.9
Slickwater	70	12800	305	40/70	0.25	Garnet	3200	4.4
Slickwater	70	3150	75					1.1
Slickwater	70	13000	310	40/70	0.50	Genoa	6500	4.4
Slickwater	70	3150	75					1.1
Slickwater	70	12933	308	40/70	0.75	Genoa	9700	4.4
Slickwater	70	3150	75					1.1
Slickwater	70	9700	231	40/70	1.00	Genoa	9700	3.3
Slickwater	70	3150	75					1.1
Slickwater	70	3200	76	40/70	1.00	Garnet	3200	1.1
Slickwater	70	13314	317					4.5
TOTAL		95,508	2,274				32,300	33.1

Frac the MISSISSIPPI (Stage 2) as follows:
Drop 2.000" ball. Reduce rate to 5-10bpm as +/- 214 bbls (50 bbls before ball seats).

STAGE 2								
			Port @	9,095 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	500	12					0.6
Slickwater	75	15467	368					4.9
Slickwater	75	11600	276	40/70	0.25	Garnet	2900	3.7
Slickwater	75	3150	75					1.0
Slickwater	75	11600	276	40/70	0.50	Genoa	5800	3.7
Slickwater	75	3150	75					1.0
Slickwater	75	11600	276	40/70	0.75	Genoa	8700	3.7
Slickwater	75	3150	75					1.0
Slickwater	75	8700	207	40/70	1.00	Genoa	8700	2.8
Slickwater	75	3150	75					1.0
Slickwater	75	2900	69	40/70	1.00	Garnet	2900	0.9
Slickwater	75	13219	315					4.2
TOTAL		88,186	2,100				29,000	28.4

Frac the MISSISSIPPI (Stage 3) as follows:
Drop 2.063" ball. Reduce rate to 5-10bpm as +/- 212 bbls (50 bbls before ball seats).

STAGE 3								
			Port @	8,950 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	80	15544	370					4.6
Slickwater	80	11600	276	40/70	0.25	Garnet	2900	3.5
Slickwater	80	3150	75					0.9
Slickwater	80	11600	276	40/70	0.50	Genoa	5800	3.5
Slickwater	80	3150	75					0.9
Slickwater	80	11733	279	40/70	0.75	Genoa	8800	3.5
Slickwater	80	3150	75					0.9
Slickwater	80	8800	210	40/70	1.00	Genoa	8800	2.6
Slickwater	80	3150	75					0.9
Slickwater	80	2900	69	40/70	1.00	Garnet	2900	0.9
Slickwater	80	13124	312					3.9
TOTAL		88,151	2,099				29,200	26.5

Frac the MISSISSIPPI (Stage 4) as follows:
Drop 2.125" ball. Reduce rate to 5-10bpm as +/- 210 bbls (50 bbls before ball seats).

STAGE 4								
			Port @	8,804 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	85	15389	366					4.3
Slickwater	85	11600	276	40/70	0.25	Garnet	2900	3.2
Slickwater	85	3150	75					0.9
Slickwater	85	11600	276	40/70	0.50	Genoa	5800	3.2
Slickwater	85	3150	75					0.9
Slickwater	85	11467	273	40/70	0.75	Genoa	8600	3.2
Slickwater	85	3150	75					0.9
Slickwater	85	8600	205	40/70	1.00	Genoa	8600	2.4
Slickwater	85	3150	75					0.9
Slickwater	85	2900	69	40/70	1.00	Garnet	2900	0.8
Slickwater	85	13029	310					3.6
TOTAL		87,435	2,082				28,800	24.7

Frac the MISSISSIPPI (Stage 5) as follows:
Drop 2.188" ball. Reduce rate to 5-10bpm as +/- 207 bbls (50 bbls before ball seats).

STAGE 5								
			Port @	8,618 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	90	15011	357					4.0
Slickwater	90	11200	267	40/70	0.25	Garnet	2800	3.0
Slickwater	90	3150	75					0.8
Slickwater	90	11200	267	40/70	0.50	Genoa	5600	3.0
Slickwater	90	3150	75					0.8
Slickwater	90	11333	270	40/70	0.75	Genoa	8500	3.0
Slickwater	90	3150	75					0.8
Slickwater	90	8500	202	40/70	1.00	Genoa	8500	2.2
Slickwater	90	3150	75					0.8
Slickwater	90	2800	67	40/70	1.00	Garnet	2800	0.7
Slickwater	90	12908	307					3.4
TOTAL		85,802	2,043				28,200	22.9

Frac the MISSISSIPPI (Stage 6) as follows:
Drop 2.250" ball. Reduce rate to 5-10bpm as +/- 205 bbls (50 bbls before ball seats).

STAGE 6								
			Port @	8,519 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	95	15467	368					3.9
Slickwater	95	11600	276	40/70	0.25	Garnet	2900	2.9
Slickwater	95	3150	75					0.8
Slickwater	95	11600	276	40/70	0.50	Genoa	5800	2.9
Slickwater	95	3150	75					0.8
Slickwater	95	11600	276	40/70	0.75	Genoa	8700	2.9
Slickwater	95	3150	75					0.8
Slickwater	95	8700	207	40/70	1.00	Genoa	8700	2.2
Slickwater	95	3150	75					0.8
Slickwater	95	2900	69	40/70	1.00	Garnet	2900	0.7
Slickwater	95	12844	306					3.2
TOTAL		87,561	2,085				29,000	22.2

Frac the MISSISSIPPI (Stage 7) as follows:
Drop 2.313" ball. Reduce rate to 5-10bpm as +/- 203 bbls (50 bbls before ball seats).

STAGE 7								
			Port @	8,374 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15544	370					3.7
Slickwater	100	11600	276	40/70	0.25	Garnet	2900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11600	276	40/70	0.50	Genoa	5800	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11733	279	40/70	0.75	Genoa	8800	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8800	210	40/70	1.00	Genoa	8800	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	2900	69	40/70	1.00	Garnet	2900	0.7
Slickwater	100	12749	304					3.0
TOTAL		87,776	2,090				29,200	21.1

Frac the MISSISSIPPI (Stage 8) as follows:
Drop 2.375" ball. Reduce rate to 5-10bpm as +/- 201 bbls (50 bbls before ball seats).

STAGE 8								
			Port @	8,229 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15467	368					3.7
Slickwater	100	11600	276	40/70	0.25	Garnet	2900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11600	276	40/70	0.50	Genoa	5800	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11600	276	40/70	0.75	Genoa	8700	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8700	207	40/70	1.00	Genoa	8700	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	2900	69	40/70	1.00	Garnet	2900	0.7
Slickwater	100	12655	301					3.0
TOTAL		87,372	2,080				29,000	21.0

Frac the MISSISSIPPI (Stage 9) as follows:
Drop 2.438" ball. Reduce rate to 5-10bpm as +/- 198 bbls (50 bbls before ball seats).

STAGE 9								
			Port @	8,038 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15389	366					3.7
Slickwater	100	11600	276	40/70	0.25	Garnet	2900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11600	276	40/70	0.50	Genoa	5800	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11467	273	40/70	0.75	Genoa	8600	2.7
Slickwater	100	3150	75					0.8
Slickwater	100	8600	205	40/70	1.00	Genoa	8600	2.0
Slickwater	100	3150	75					0.8
Slickwater	100	2900	69	40/70	1.00	Garnet	2900	0.7
Slickwater	100	12531	298					3.0
TOTAL		86,937	2,070				28,800	20.9

Frac the MISSISSIPPI (Stage 10) as follows:
Drop 2.500" ball. Reduce rate to 5-10bpm as +/- 196 bbls (50 bbls before ball seats).

STAGE 10								
			Port @	7,896 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15322	365					3.6
Slickwater	100	11600	276	40/70	0.25	Garnet	2900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11400	271	40/70	0.50	Genoa	5700	2.7
Slickwater	100	3150	75					0.8
Slickwater	100	11467	273	40/70	0.75	Genoa	8600	2.7
Slickwater	100	3150	75					0.8
Slickwater	100	8600	205	40/70	1.00	Genoa	8600	2.0
Slickwater	100	3150	75					0.8
Slickwater	100	2900	69	40/70	1.00	Garnet	2900	0.7
Slickwater	100	12438	296					3.0
TOTAL		86,577	2,061				28,700	20.9

Frac the MISSISSIPPI (Stage 11) as follows:
Drop 2.563" ball. Reduce rate to 5-10bpm as +/- 194 bbls (50 bbls before ball seats).

STAGE 11								
			Port @	7,795 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15856	378					3.8
Slickwater	100	12000	286	40/70	0.25	Garnet	3000	2.9
Slickwater	100	3150	75					0.8
Slickwater	100	11800	281	40/70	0.50	Genoa	5900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11867	283	40/70	0.75	Genoa	8900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8900	212	40/70	1.00	Genoa	8900	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	3000	71	40/70	1.00	Garnet	3000	0.7
Slickwater	100	12372	295					2.9
TOTAL		88,645	2,111				29,700	21.3

Frac the MISSISSIPPI (Stage 12) as follows:
Drop 2.625" ball. Reduce rate to 5-10bpm as +/- 192 bbls (50 bbls before ball seats).

STAGE 12								
			Port @	7,647 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15856	378					3.8
Slickwater	100	12000	286	40/70	0.25	Garnet	3000	2.9
Slickwater	100	3150	75					0.8
Slickwater	100	11800	281	40/70	0.50	Genoa	5900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11867	283	40/70	0.75	Genoa	8900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8900	212	40/70	1.00	Genoa	8900	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	3000	71	40/70	1.00	Garnet	3000	0.7
Slickwater	100	12276	292					2.9
TOTAL		88,549	2,108				29,700	21.3

Frac the MISSISSIPPI (Stage 13) as follows:
Drop 2.688" ball. Reduce rate to 5-10bpm as +/- 189 bbls (50 bbls before ball seats).

STAGE 13								
			Port @	7,499 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15611	372					3.7
Slickwater	100	11600	276	40/70	0.25	Garnet	2900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11800	281	40/70	0.50	Genoa	5900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	11733	279	40/70	0.75	Genoa	8800	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8800	210	40/70	1.00	Genoa	8800	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	2900	69	40/70	1.00	Garnet	2900	0.7
Slickwater	100	12180	290					2.9
TOTAL		87,474	2,083				29,300	21.1

Frac the MISSISSIPPI (Stage 14) as follows:
Drop 2.750" ball. Reduce rate to 5-10bpm as +/- 186 bbls (50 bbls before ball seats).

STAGE 14								
			Port @	7,304 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15922	379					3.8
Slickwater	100	12000	286	40/70	0.25	Garnet	3000	2.9
Slickwater	100	3150	75					0.8
Slickwater	100	12000	286	40/70	0.50	Genoa	6000	2.9
Slickwater	100	3150	75					0.8
Slickwater	100	11867	283	40/70	0.75	Genoa	8900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8900	212	40/70	1.00	Genoa	8900	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	3000	71	40/70	1.00	Garnet	3000	0.7
Slickwater	100	12053	287					2.9
TOTAL		88,592	2,109				29,800	21.3

Frac the MISSISSIPPI (Stage 15) as follows:
Drop 2.813" ball. Reduce rate to 5-10bpm as +/- 185 bbls (50 bbls before ball seats).

STAGE 15								
			Port @	7,203 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	15922	379					3.8
Slickwater	100	12000	286	40/70	0.25	Garnet	3000	2.9
Slickwater	100	3150	75					0.8
Slickwater	100	12000	286	40/70	0.50	Genoa	6000	2.9
Slickwater	100	3150	75					0.8
Slickwater	100	11867	283	40/70	0.75	Genoa	8900	2.8
Slickwater	100	3150	75					0.8
Slickwater	100	8900	212	40/70	1.00	Genoa	8900	2.1
Slickwater	100	3150	75					0.8
Slickwater	100	3000	71	40/70	1.00	Garnet	3000	0.7
Slickwater	100	11987	285					2.9
TOTAL		88,526	2,108				29,800	21.3

Frac the MISSISSIPPI (Stage 16) as follows:
Drop 2.875" ball. Reduce rate to 5-10bpm as +/- 183 bbls (50 bbls before ball seats).

STAGE 16								
			Port @	7,055 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10744	256					2.6
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8000	190	40/70	0.50	Genoa	4000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8133	194	40/70	0.75	Genoa	6100	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	6100	145	40/70	1.00	Genoa	6100	1.5
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11891	283					2.8
TOTAL		67,718	1,612				20,200	16.4

Frac the MISSISSIPPI (Stage 17) as follows:
Drop 2.938" ball. Reduce rate to 5-10bpm as +/- 181 bbls (50 bbls before ball seats).

STAGE 17								
			Port @	6,957 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10211	243					2.4
Slickwater	100	7600	181	40/70	0.25	Garnet	1900	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7600	181	40/70	0.50	Genoa	3800	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7733	184	40/70	0.75	Genoa	5800	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	5800	138	40/70	1.00	Genoa	5800	1.4
Slickwater	100	3150	75					0.8
Slickwater	100	1900	45	40/70	1.00	Garnet	1900	0.5
Slickwater	100	11827	282					2.8
TOTAL		65,521	1,560				19,200	15.8

Frac the MISSISSIPPI (Stage 18) as follows:
Drop 3.000" ball. Reduce rate to 5-10bpm as +/- 180 bbls (50 bbls before ball seats).

STAGE 18								
			Port @	6,865 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	9600	229					2.3
Slickwater	100	7200	171	40/70	0.25	Garnet	1800	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	7200	171	40/70	0.50	Genoa	3600	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	7200	171	40/70	0.75	Genoa	5400	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	5400	129	40/70	1.00	Genoa	5400	1.3
Slickwater	100	3150	75					0.8
Slickwater	100	1800	43	40/70	1.00	Garnet	1800	0.4
Slickwater	100	11767	280					2.8
TOTAL		63,017	1,500				18,000	15.2

Frac the MISSISSIPPI (Stage 19) as follows:
Drop 3.063" ball. Reduce rate to 5-10bpm as +/- 178 bbls (50 bbls before ball seats).

STAGE 19								
			Port @	6,767 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10744	256					2.6
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8000	190	40/70	0.50	Genoa	4000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8133	194	40/70	0.75	Genoa	6100	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	6100	145	40/70	1.00	Genoa	6100	1.5
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11703	279					2.8
TOTAL		67,530	1,608				20,200	16.3

Frac the MISSISSIPPI (Stage 20) as follows:
Drop 3.125" ball. Reduce rate to 5-10bpm as +/- 205 bbls (50 bbls before ball seats).

STAGE 20								
			Port @	6,667 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10522	251					2.5
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	7800	186	40/70	0.50	Genoa	3900	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	7867	187	40/70	0.75	Genoa	5900	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	5900	140	40/70	1.00	Genoa	5900	1.4
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11638	277					2.8
TOTAL		66,577	1,585				19,700	16.1

Frac the MISSISSIPPI (Stage 21) as follows:
Drop 3.188" ball. Reduce rate to 5-10bpm as +/- 203 bbls (50 bbls before ball seats).

STAGE 21								
			Port @	6,573 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10211	243					2.4
Slickwater	100	7600	181	40/70	0.25	Garnet	1900	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7600	181	40/70	0.50	Genoa	3800	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7733	184	40/70	0.75	Genoa	5800	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	5800	138	40/70	1.00	Genoa	5800	1.4
Slickwater	100	3150	75					0.8
Slickwater	100	1900	45	40/70	1.00	Garnet	1900	0.5
Slickwater	100	11577	276					2.8
TOTAL		65,271	1,554				19,200	15.8

Frac the MISSISSIPPI (Stage 22) as follows:
Drop 3.250" ball. Reduce rate to 5-10bpm as +/- 201 bbls (50 bbls before ball seats).

STAGE 22								
			Port @	6,481 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	9744	232					2.3
Slickwater	100	7200	171	40/70	0.25	Garnet	1800	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	7400	176	40/70	0.50	Genoa	3700	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7333	175	40/70	0.75	Genoa	5500	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	5500	131	40/70	1.00	Genoa	5500	1.3
Slickwater	100	3150	75					0.8
Slickwater	100	1800	43	40/70	1.00	Garnet	1800	0.4
Slickwater	100	11517	274					2.7
TOTAL		63,344	1,508				18,300	15.3

Frac the MISSISSIPPI (Stage 23) as follows:
Drop 3.313" ball. Reduce rate to 5-10bpm as +/- 198 bbls (50 bbls before ball seats).

STAGE 23								
			Port @	6,381 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	9744	232					2.3
Slickwater	100	7200	171	40/70	0.25	Garnet	1800	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	7400	176	40/70	0.50	Genoa	3700	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7333	175	40/70	0.75	Genoa	5500	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	5500	131	40/70	1.00	Genoa	5500	1.3
Slickwater	100	3150	75					0.8
Slickwater	100	1800	43	40/70	1.00	Garnet	1800	0.4
Slickwater	100	11452	273					2.7
TOTAL		63,279	1,507				18,300	15.3

Frac the MISSISSIPPI (Stage 24) as follows:
Drop 3.375" ball. Reduce rate to 5-10bpm as +/- 196 bbls (50 bbls before ball seats).

STAGE 24								
			Port @	6,295 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10056	239					2.4
Slickwater	100	7600	181	40/70	0.25	Garnet	1900	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7600	181	40/70	0.50	Genoa	3800	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7467	178	40/70	0.75	Genoa	5600	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	5600	133	40/70	1.00	Genoa	5600	1.3
Slickwater	100	3150	75					0.8
Slickwater	100	1900	45	40/70	1.00	Garnet	1900	0.5
Slickwater	100	11396	271					2.7
TOTAL		64,469	1,535				18,800	15.6

Frac the MISSISSIPPI (Stage 25) as follows:
Drop 3.438" ball. Reduce rate to 5-10bpm as +/- 205 bbls (50 bbls before ball seats).

STAGE 25								
			Port @	6,195 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	9744	232					2.3
Slickwater	100	7200	171	40/70	0.25	Garnet	1800	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	7400	176	40/70	0.50	Genoa	3700	1.8
Slickwater	100	3150	75					0.8
Slickwater	100	7333	175	40/70	0.75	Genoa	5500	1.7
Slickwater	100	3150	75					0.8
Slickwater	100	5500	131	40/70	1.00	Genoa	5500	1.3
Slickwater	100	3150	75					0.8
Slickwater	100	1800	43	40/70	1.00	Garnet	1800	0.4
Slickwater	100	11331	270					2.7
TOTAL		63,158	1,504				18,300	15.3

Frac the MISSISSIPPI (Stage 26) as follows:
Drop 3.500" ball. Reduce rate to 5-10bpm as +/- 203 bbls (50 bbls before ball seats).

STAGE 26								
			Port @	6,102 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10744	256					2.6
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8000	190	40/70	0.50	Genoa	4000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8133	194	40/70	0.75	Genoa	6100	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	6100	145	40/70	1.00	Genoa	6100	1.5
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11270	268					2.7
TOTAL		67,097	1,598				20,200	16.2

Frac the MISSISSIPPI (Stage 27) as follows:
Drop 3.563" ball. Reduce rate to 5-10bpm as +/- 201 bbls (50 bbls before ball seats).

STAGE 27								
			Port @	6,002 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10744	256					2.6
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8000	190	40/70	0.50	Genoa	4000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8133	194	40/70	0.75	Genoa	6100	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	6100	145	40/70	1.00	Genoa	6100	1.5
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11205	267					2.7
TOTAL		67,032	1,596				20,200	16.2

Frac the MISSISSIPPI (Stage 28) as follows:
Drop 3.625" ball. Reduce rate to 5-10bpm as +/- 198 bbls (50 bbls before ball seats).

STAGE 28								
			Port @	5,904 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10522	251					2.5
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	7800	186	40/70	0.50	Genoa	3900	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	7867	187	40/70	0.75	Genoa	5900	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	5900	140	40/70	1.00	Genoa	5900	1.4
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11141	265					2.7
TOTAL		66,080	1,573				19,700	16.0

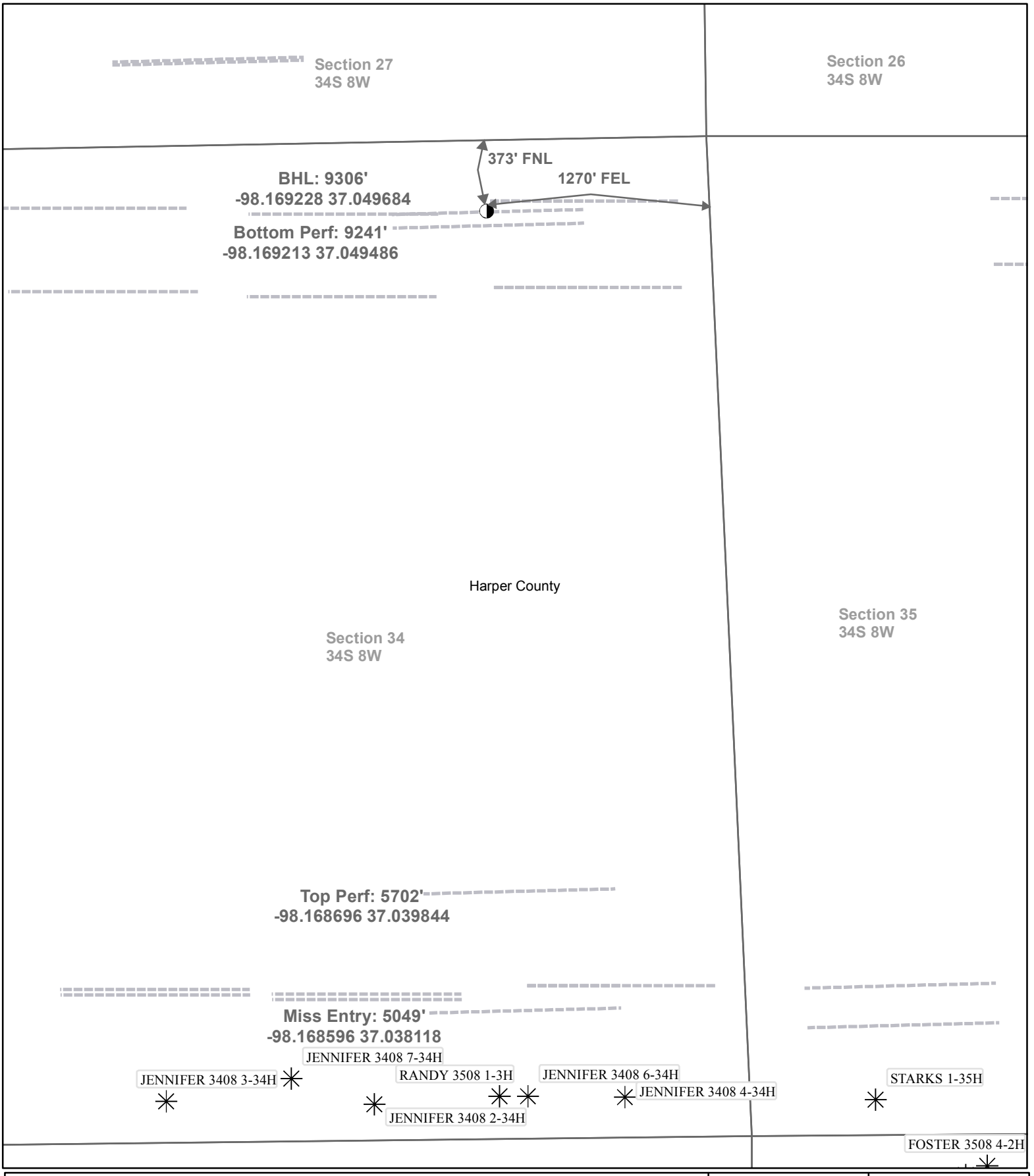
Frac the MISSISSIPPI (Stage 29) as follows:
Drop 3.688" ball. Reduce rate to 5-10bpm as +/- 196 bbls (50 bbls before ball seats).

STAGE 29								
			Port @	5,803 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	10667	254					2.5
Slickwater	100	8000	190	40/70	0.25	Garnet	2000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8000	190	40/70	0.50	Genoa	4000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	8000	190	40/70	0.75	Genoa	6000	1.9
Slickwater	100	3150	75					0.8
Slickwater	100	6000	143	40/70	1.00	Genoa	6000	1.4
Slickwater	100	3150	75					0.8
Slickwater	100	2000	48	40/70	1.00	Garnet	2000	0.5
Slickwater	100	11076	264					2.6
TOTAL		66,593	1,586				20,000	16.1

Frac the MISSISSIPPI (Stage 30) as follows:
Drop 3.750" ball. Reduce rate to 5-10bpm as +/- 205 bbls (50 bbls before ball seats).

STAGE 30								
			Port @	5,702 '				
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	100	22256	530					5.3
Slickwater	100	16800	400	40/70	0.25	Garnet	4200	4.0
Slickwater	100	3150	75					0.8
Slickwater	100	16600	395	40/70	0.50	Genoa	8300	4.0
Slickwater	100	3150	75					0.8
Slickwater	100	16667	397	40/70	0.75	Genoa	12500	4.0
Slickwater	100	3150	75					0.8
Slickwater	100	12500	298	40/70	1.00	Genoa	12500	3.0
Slickwater	100	3150	75					0.8
Slickwater	100	4200	100	40/70	1.00	Garnet	4200	1.0
Slickwater	100	11010	262					2.6
TOTAL		112,883	2,688				41,700	27.1

TOTAL FRAC JOB VOLUMES:	56,016	bbls	752,499	lbs, Prop



SANDRIDGE THE POWER OF US

Actual BH Location

SandRidge Wells

Perf

Sections

Actual Bottom-Hole Location of Jennifer 3408 6-34H
T&R: 34S 8W
Section: 34, 1270' FEL & 373' FNL
-98.169228 37.049684

1 in = 667 ft

0 500 1,000 2,000 Feet

N

Draftsman: Dory Deines	Draft Date: 12/15/2014
Drawing Name/Number: Addendum_Jennifer 3408 6-34H.mxd	
Coordinate System: NAD 1927 State Plane Kansas South FIPS: 1502	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/16/2014
Job End Date:	10/17/2014
State:	Kansas
County:	Harper
API Number:	15-077-22088-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Jennifer 3408 6-34H
Longitude:	-98.16820778
Latitude:	37.03685649
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,750
Total Base Water Volume (gal):	2,506,308
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	Archer	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	95.82227	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	3.45031	None
C102	Bosque Disposal Systems, LLC	Oxidizer					
			Chlorine Dioxide	10049-04-4	15.00000	0.27928	
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.05492	None
			Methyl Alcohol	67-56-1	80.00000	0.00043	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00008	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00095	None
			Citric Acid	77-92-9	30.00000	0.00057	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.00097	None
			Alcohol Ethoxylate Surfactants	NA	10.00000	0.00010	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.							
		Other Chemicals					
			Water	7732-18-5		0.04165	
			Aliphatic Hydrocarbon	64742-47-8		0.02083	
			Anionic Polymer	N/A		0.02083	
			Water	7732-18-5		0.00825	
			Oxyalkylated Alcohol	68002-97-1		0.00347	
			Polyol Ester	N/A		0.00347	
			Acrylic Polymer	28205-96-1		0.00137	
			Sodium Salt of Phosphate Ester	68131-72-6		0.00137	
			Polyglycol Ester	N/A		0.00069	
			Water	7732-18-5		0.00066	
			Alcohol Ethoxylate Surfactants	N/A		0.00008	
			Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00007	
			n-olefins	N/A		0.00004	
			Propargyl Alcohol	107-19-7		0.00003	
			WATER	7732-18-5			
			Cinnamic Aldehyde	104-55-2			
			Water	7732-18-5			
			Surfactant	N/A			
			Acetic Acid	64-19-7			
			Buffer	N/A			
			TRADE SECRET	N/A			
			ISOPROPANOL	67-63-0			
			METHANOL	67-56-1			

* 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)