

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1238511  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

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 #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1238511

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> 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 <i>(Amount and Kind of Material Used)</i>	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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Nicole 3406 2-33H
Doc ID	1238511

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	5260-5366		
1	5312-5314	Frac Sleeve	
1	5364-5366		
1	5585-5587		
1	5728-5730		
1	5828-5830		
1	5928-5930		
1	6029-6031		
1	6130-6132		
1	6277-6279		
1	6421-6423		
1	6564-6566		
1	6712-6714		
1	6856-6858		
1	7001-7003		
1	7143-7145		
1	7337-7339		
1	7433-7435		
1	7617-7619		
1	7761-7763		
1	7908-7910		
1	8056-8058		
1	8204-8206		
1	8350-8352		

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Nicole 3406 2-33H
Doc ID	1238511

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
1	8497-8499		
1	8645-8647		
1	8787-8789		
1	8930-8932		
1	9077-9079		





SandRidge Energy  
Nicole #3406 2-33H  
Comanche County, KS.

## 1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Nicole #3406 2-33H Surface Casing.

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 2500 psi. After a successful test we began the job by pumping 10 bbls of preflush spacer. We then mixed and pumped the following cements:

83 Bbls (230 sacks) of 12.7 ppg Lead slurry:  
Class A poz Blend Yeild 1.87  
6% Gel  
2% CC  
¼# Floseal

32 Bbls (150 sacks) of 15.6 ppg Tail slurry  
Class A Yeild 1.20  
2% CC  
¼ # Floseal

The top plug was then released and displaced with 51 Bbls of fresh water. The plug bumped and pressured up to 1100 psi. Pressure was released and floats held.

All real time data is shown on the graph in the attachment section.

Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestions are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs.



SandRidge Energy  
Nicole 3406 2-33H  
Harper County, KS.

## 1.0 Executive Summary

Allied Oil & Gas Services would like to thank you for the award of the provision of cementing products and services on the well Nicole #3406 2-33H Intermediate Casing.

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 3500 psi. After a successful test we began the job by pumping 30 Bbls of Super Flush spacer. We then mixed and pumped the following cements:

62.34 Bbls (250 sacks) of 13.6 ppg Lead slurry:  
50:50 Class A:Poz Blend – 1.4 Yield  
2.0% Gel  
0.4% FL-160  
0.1% SA-51

21.01 Bbls (100 sacks) of 15.6 ppg Tail slurry:  
Class A - 1.18 Yield  
0.8% FL-160  
0.2% CD-31

The top plug was then released and displaced with 210 Bbl of fresh water. The plug bumped and pressured up to 1550 psi. Pressure was released and floats held.

Due to technical difficulties a chart could not be generated for this job.

Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestion are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs



**INVOICE**

DATE	INVOICE #
9/22/2014	5110

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

<b>REMIT TO</b>
EDGE SERVICES, INC. PO BOX 609 WOODWARD, OK. 73802

COUNTY	STARTING D...	WORK ORDER	RIG NUMBER	LEASE NAME	Terms
HARPER, KS	9/16/2014	3984	NOMAC 52	NICOLE 3406 2-33H	Due on rec...

Description

DRILLED 100' OF 30" CONDUCTOR HOLE  
 DRILLED 7' OF 76" HOLE  
 FURNISHED AND SET 6' X 6' TINHORN CELLAR  
 FURNISHED 100' OF 20" CONDUCTOR PIPE  
 FURNISHED MUD, WATER, AND TRUCKING  
 FURNISHED WELDER AND MATERIALS  
 FURNISHED 10 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 50' OF 16" CONDUCTOR PIPE

TOTAL BID \$21,250.00

<b>Sales Tax (6.15%)</b>	\$251.66
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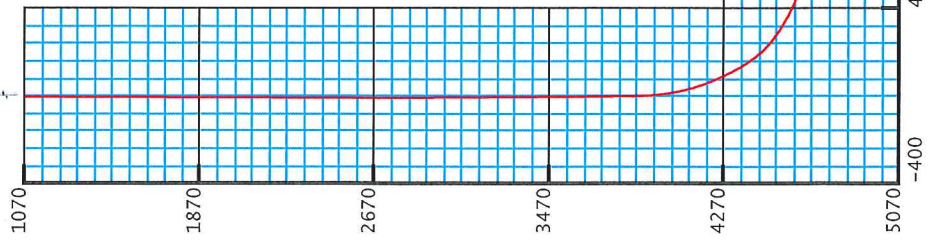
<b>TOTAL</b>	\$21,501.66
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**Weatherford**  
 Nicole 3406 2-33H  
 Nomac 52  
 Harper County, KS  
 X= 2155239.00'  
 Y= 140350.00'  
 Plan 3 vs Actual

XB: 131.9'  
 GL: 1299'



**Plan Data for Nicole 3406 2-33H**

Plan Point Information:  
 Dogleg Severity Unit: °/100.00ft  
 MD (USft) Inc (°) Az (°) TVD (USft) +N/-S (USft) +E/-W (USft) VSec (USft) DLS Toolface (°) (DLSU)

7220.00	90.42	181.22	4688.60	-2776.25	482.96	2780.04	3.17	134.2
7283.00	90.42	181.22	4688.13	-2839.24	481.62	2843.01	0.00	0.0
7452.00	87.50	179.52	4691.20	-3008.22	480.54	3011.98	2.00	210.3
7591.24	87.50	179.52	4697.27	-3147.28	481.71	3151.05	0.00	0.0
7716.24	90.00	179.52	4700.00	-3272.24	482.77	3276.01	2.00	360.0
9163.05	90.00	179.52	4700.00	-4719.00	495.00	4722.82	0.00	0.0

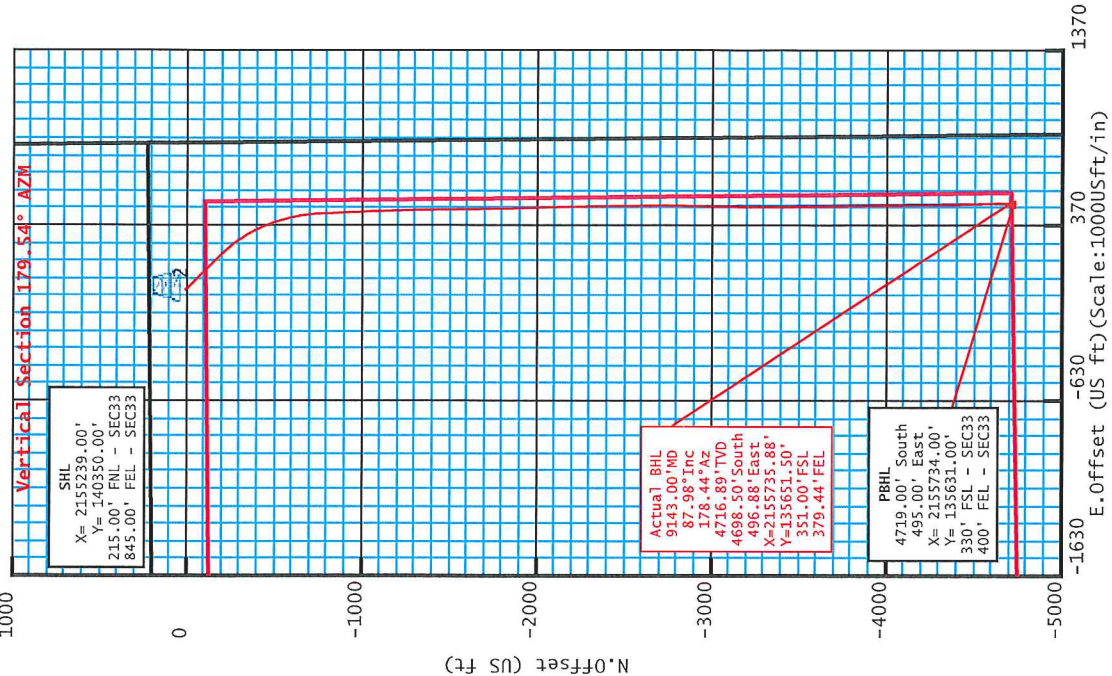
Target Set Information:  
 Name: Nicole 3406 2-33H T3  
 Name (USft) TVD (USft) Northing (USft) Easting (USft) Lat (°/'") Long (°/'")

PBHL 4700.00 135631.00 2155734.00 37°2'16.6" -97°57'59.4"

**Plan Data for Nicole 3406 2-33H**  
 Field: SandRidge Energy - Harper County, KS S NAD 27 US FT  
 Map Unit: USFT Vertical Reference Datum (VRD): Mean Sea Level  
 Projected Coordinate System: NAD27 / Kansas South  
 Well: Nicole 3406 2-33H  
 Type: Main-Well  
 File Number:  
 Plan Folder: P1  
 Vertical Section: Position offset of origin from Site centre:  
 +N/-S: 0.00USft  
 +E/-W: 0.00USft  
 Magnetic Parameters:  
 Model: Field Strength: Declination: Dip: Date:  
 BCGM 51555(nT) 4.44° 65.18° 2014-09-16

Planned By: Lando Hiler Date: 10/02/2014  
 Weatherford Drilling Services  
 6525 N Meridian St, #201  
 Oklahoma City, OK 73116  
 +1.405.773.1100 Main  
 +1.405.773.1887 Fax

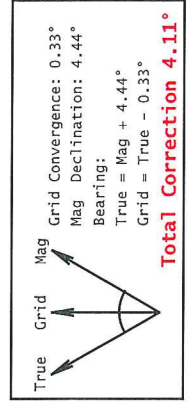
Nicole 3406 2-33H  
 Nicole 3406 2-33H — Actual —  
 Proj to TD  
 9143.00' MD  
 87.98° Inc  
 178.44° Az  
 4716.89' TVD  
 4698.50' South  
 496.88' East  
 X=2155735.88'  
 Y=135651.50'



**Vertical Section 179.54° AZM**  
 SHL  
 X= 2155239.00'  
 Y= 140350.00'  
 215.00' FNL - SEC33  
 845.00' FEL - SEC33

**Actual BHL**  
 9143.00' MD  
 87.98° Inc  
 178.44° Az  
 4716.89' TVD  
 4698.50' South  
 496.88' East  
 X=2155735.88'  
 Y=135651.50'  
 351.00' FSL  
 379.44' FEL

**PBHL**  
 4719.00' South  
 495.00' East  
 X= 2155734.00'  
 Y= 135631.00'  
 330' FSL - SEC33  
 400' FEL - SEC33



Nicole 3406 2-33H

<b>Field Name</b>	Map Units : US ft Vertical Reference Datum (VRD) : Mean Sea Level Projected Coordinate System : NAD27 / Kansas South Comment :	Company Name : SandRidge Energy
SandRidge Energy - Harper County, KS S NAD 27 US FT		
<b>Site Name</b>	Units : US ft Position Site TVD Reference : GL Elevation above Mean Sea Level:1331.00 US ft Comment :	North Reference : Grid Northing : 140350.00 US ft Easting : 2155239.00 US ft Convergence Angle : 0.33 Latitude : 37° 3' 3.24" Longitude : -97° 58' 5.16"
Nicole 3406 2-33H		
<b>Slot Name</b>	Position (Offsets relative to Site Centre)	
Nicole 3406 2-33H	+N / -S : 0.00 US ft +E / -W : 0.00 US ft Slot TVD Reference : Ground Elevation Elevation above Mean Sea Level : 1331.00 US ft Comment :	Northing :140350.00 US ft Easting :2155239.00 US ft Latitude : 37°3'3.24" Longitude : -97°58'5.16"
<b>Well Name</b>	Type : Main well Rig Height <i>Drill Floor</i> : 19.00 US ft Relative to Mean Sea Level: 1350.00 US ft Closure Distance : 4724.7 US ft Vertical Section (Position of Origin Relative to Site ) +N / -S : 0.00 US ft	UWI : Comment : Closure Azimuth : 173.963° +E / -W : 0.00 US ft Az :179.54°
Nicole 3406 2-33H		

## 5D Survey Report

**Target Set:**

**Name :** Nicole 3406 2-33H T3      **Number of Targets :** 1

**Comment :**

TargetName:	Position (Relative to Site centre)		
PBHL	+N / +S : -4719.00US ft	Northing : 135631.00 US ft	Latitude : 37°2'16.55"
Shape:	+E / -W : 495.00 US ft	Easting : 2155734.00US ft	Longitude : -97°57'59.39"
Cuboid	TVD (Drill Floor) : 4700.00 US ft		
	SS : -3350.00 US ft		
	Orientation	Azimuth : 0.00°	Inclination : 0.00°
	Dimensions	Length : 20.00 US ft	Breadth : 20.00 US ft      Height : 20.00 US ft

**Survey Name :**Definitive Survey

**Date :** 16/Sep/2014      **Survey Tool :**      **Comment :**      **Company :**

**Magnetic Model**

**Model Name:** BGGM      **Date:** 16/Sep/2014      **Field Strength:** 51555.1 nT      **Declination:** 4.44°      **Dip:** 65.18°

**Survey Tool Ranges**

Name	Start MD (us ft)	End MD (us ft)	Source Survey
Inc Only 3deg_WFTR	0.00	500.00	SRE RIG SVYS
MWD	500.00	9143.00	WFT/MWD SVYS

**Well path created using minimum curvature**

Survey Points (Relative to Site centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	2	
250.00	0.60	324.47	250.00	1.07	-0.76	-1.07	0.24	First SRE Rig Svy	
500.00	0.40	324.47	499.99	2.84	-2.03	-2.86	0.08	Last SRE Rig Svy	
790.00	0.16	324.47	789.98	3.99	-2.85	-4.02	0.08		
1231.00	0.29	354.90	1230.98	5.61	-3.31	-5.63	0.04		
1724.00	0.79	90.68	1723.96	6.81	-0.02	-6.81	0.18		
2211.00	0.63	37.40	2210.93	8.90	4.96	-8.86	0.13		
2696.00	0.35	222.08	2695.92	9.92	5.59	-9.87	0.20		
3193.00	0.56	226.40	3192.91	7.11	2.81	-7.09	0.04		
3637.00	0.40	187.52	3636.89	4.08	1.04	-4.07	0.08		
3762.00	0.07	189.74	3761.89	3.57	0.97	-3.56	0.26		
3794.00	0.10	136.46	3793.89	3.53	0.98	-3.53	0.25		

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Drill Floor)								
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Comment
3825.00	0.88	119.72	3824.89	3.40	1.21	-3.39	2.53	
3857.00	2.89	124.11	3856.87	2.82	2.09	-2.80	6.29	
3888.00	4.84	126.42	3887.80	1.61	3.79	-1.58	6.31	
3920.00	6.71	125.63	3919.63	-0.28	6.40	0.34	5.85	
3951.00	8.21	126.72	3950.37	-2.66	9.64	2.74	4.86	
3983.00	9.84	130.57	3981.97	-5.81	13.55	5.92	5.43	
4014.00	11.69	132.84	4012.43	-9.67	17.87	9.81	6.12	
4046.00	13.91	136.28	4043.63	-14.65	22.90	14.83	7.33	
4077.00	16.64	135.48	4073.53	-20.51	28.59	20.74	8.83	
4109.00	19.71	133.89	4103.93	-27.52	35.69	27.80	9.72	
4140.00	22.59	134.45	4132.84	-35.31	43.71	35.66	9.31	
4171.00	25.34	134.34	4161.17	-44.12	52.71	44.54	8.87	
4203.00	27.90	135.18	4189.77	-54.22	62.89	54.72	8.09	
4234.00	30.12	135.48	4216.88	-64.91	73.46	65.50	7.18	
4266.00	31.98	135.17	4244.29	-76.65	85.06	77.33	5.83	
4298.00	33.35	135.40	4271.23	-88.92	97.21	89.70	4.30	
4329.00	34.95	134.85	4296.89	-101.25	109.49	102.13	5.26	
4361.00	37.01	135.10	4322.78	-114.54	122.79	115.52	6.45	
4392.00	39.28	134.64	4347.16	-128.05	136.36	129.14	7.38	
4423.00	41.63	134.76	4370.75	-142.19	150.65	143.40	7.58	
4454.00	44.18	135.50	4393.45	-157.15	165.54	158.47	8.38	
4485.00	46.75	136.02	4415.19	-172.98	180.95	174.43	8.38	
4517.00	49.92	136.49	4436.46	-190.25	197.48	191.83	9.97	
4548.00	52.97	136.60	4455.78	-207.85	214.15	209.56	9.84	
4580.00	56.27	137.89	4474.31	-227.01	231.85	228.86	10.82	
4611.00	58.57	139.93	4491.00	-246.69	249.02	248.69	9.26	
4642.00	60.20	142.64	4506.79	-267.51	265.69	269.63	9.18	
4674.00	61.39	144.77	4522.40	-290.02	282.22	292.28	6.90	
4706.00	62.82	147.15	4537.37	-313.46	298.05	315.84	7.95	
4737.00	64.04	148.57	4551.24	-336.93	312.80	339.43	5.68	
4769.00	65.50	150.81	4564.88	-361.92	327.40	364.54	7.80	
4800.00	67.04	153.06	4577.36	-386.96	340.75	389.69	8.30	
4831.00	68.49	155.40	4589.09	-412.80	353.22	415.63	8.41	
4863.00	69.45	157.46	4600.57	-440.18	365.16	443.10	6.72	
4894.00	70.46	159.28	4611.20	-467.25	375.90	470.25	6.41	
4926.00	71.85	160.72	4621.54	-495.71	386.25	498.79	6.08	
4957.00	74.21	162.91	4630.59	-523.87	395.50	527.03	10.18	
4989.00	75.88	163.98	4638.84	-553.51	404.31	556.73	6.14	
5020.00	77.72	166.42	4645.92	-582.68	412.01	585.97	9.69	
5052.00	78.90	168.39	4652.41	-613.26	418.84	616.61	7.07	
5083.00	80.11	170.08	4658.05	-643.21	424.54	646.59	6.63	

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Drill Floor)								
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment
5115.00	81.07	172.10	4663.29	-674.39	429.43	677.82	6.91	
5148.00	82.43	173.96	4668.02	-706.81	433.39	710.26	6.94	
5180.00	83.90	175.87	4671.83	-738.45	436.20	741.93	7.50	
5211.00	84.26	177.94	4675.03	-769.24	437.87	772.73	6.74	
5243.00	84.47	177.87	4678.17	-801.06	439.03	804.56	0.69	
5274.00	84.75	177.46	4681.08	-831.90	440.29	835.41	1.60	
5306.00	84.89	177.29	4683.97	-863.74	441.75	867.26	0.69	
5337.00	84.97	177.35	4686.71	-894.58	443.19	898.11	0.32	
5369.00	85.25	177.27	4689.44	-926.43	444.69	929.97	0.91	
5400.00	85.45	177.22	4691.95	-957.29	446.17	960.84	0.66	
5432.00	85.60	177.60	4694.45	-989.16	447.62	992.73	1.27	
5463.00	85.87	177.10	4696.75	-1020.04	449.04	1023.62	1.83	
5495.00	86.43	177.62	4698.90	-1051.94	450.52	1055.52	2.39	
5523.00	87.62	177.81	4700.36	-1079.88	451.63	1083.47	4.30	
5609.00	88.52	178.25	4703.25	-1165.78	454.58	1169.39	1.16	
5672.00	88.77	178.69	4704.74	-1228.74	456.27	1232.36	0.80	
5736.00	90.86	178.99	4704.95	-1292.72	457.56	1296.35	3.30	
5799.00	91.73	179.23	4703.53	-1355.70	458.54	1359.33	1.43	
5863.00	90.06	179.21	4702.53	-1419.68	459.41	1423.32	2.61	
5926.00	90.26	179.17	4702.35	-1482.67	460.30	1486.32	0.32	
5988.00	90.62	179.17	4701.87	-1544.66	461.20	1548.32	0.58	
6052.00	90.37	178.90	4701.32	-1608.65	462.28	1612.31	0.57	
6115.00	89.82	178.70	4701.22	-1671.64	463.60	1675.31	0.93	
6177.00	89.63	178.76	4701.51	-1733.62	464.97	1737.30	0.32	
6240.00	90.00	178.82	4701.72	-1796.61	466.30	1800.29	0.59	
6303.00	89.94	178.78	4701.75	-1859.59	467.62	1863.29	0.11	
6366.00	90.26	178.64	4701.64	-1922.58	469.04	1926.28	0.55	
6429.00	89.88	178.60	4701.56	-1985.56	470.56	1989.27	0.61	
6492.00	90.25	178.52	4701.49	-2048.54	472.14	2052.26	0.60	
6556.00	90.37	178.33	4701.15	-2112.51	473.90	2116.25	0.35	
6619.00	91.23	178.42	4700.27	-2175.48	475.69	2179.23	1.37	
6682.00	91.36	178.50	4698.84	-2238.44	477.38	2242.20	0.24	
6745.00	89.88	179.06	4698.16	-2301.42	478.72	2305.19	2.51	
6779.00	89.51	179.23	4698.34	-2335.42	479.23	2339.19	1.20	
6841.00	90.70	179.68	4698.23	-2397.41	479.82	2401.19	2.05	
6905.00	91.89	179.79	4696.78	-2461.40	480.11	2465.17	1.87	
6968.00	91.33	179.50	4695.01	-2524.37	480.50	2528.15	1.00	
7031.00	91.19	178.60	4693.63	-2587.35	481.55	2591.13	1.45	
7094.00	91.96	179.01	4691.89	-2650.31	482.86	2654.10	1.38	
7157.00	91.81	179.79	4689.82	-2713.27	483.52	2717.06	1.26	
7220.00	90.42	181.22	4688.60	-2776.25	482.96	2780.04	3.17	

## SD Survey Report

Survey Points (Relative to Site centre, TVD relative to Drill Floor)								
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Comment
7283.00	90.70	181.72	4687.98	-2839.23	481.35	2843.00	0.91	
7346.00	90.14	180.83	4687.52	-2902.21	479.95	2905.97	1.67	
7409.00	88.88	180.37	4688.06	-2965.20	479.29	2968.95	2.13	
7472.00	88.68	180.55	4689.40	-3028.19	478.78	3031.93	0.43	
7535.00	90.00	181.62	4690.12	-3091.17	477.59	3094.90	2.70	
7598.00	89.02	181.12	4690.66	-3154.15	476.08	3157.87	1.75	
7662.00	88.53	181.16	4692.03	-3218.12	474.81	3221.83	0.77	
7725.00	87.76	180.23	4694.07	-3281.08	474.04	3284.78	1.92	
7788.00	87.07	179.96	4696.91	-3344.02	473.94	3347.71	1.18	
7851.00	87.63	178.85	4699.82	-3406.94	474.59	3410.64	1.97	
7914.00	88.39	178.64	4702.01	-3469.89	475.97	3473.60	1.25	
7977.00	88.88	178.69	4703.51	-3532.86	477.44	3536.57	0.78	
8040.00	89.30	179.15	4704.51	-3595.84	478.63	3599.56	0.99	
8104.00	90.63	179.18	4704.55	-3659.83	479.56	3663.56	2.08	
8166.00	89.51	179.08	4704.48	-3721.82	480.50	3725.56	1.81	
8229.00	88.60	179.47	4705.52	-3784.81	481.30	3788.55	1.57	
8292.00	88.18	178.81	4707.29	-3847.77	482.24	3851.52	1.24	
8356.00	90.07	179.24	4708.26	-3911.75	483.33	3915.51	3.03	
8419.00	90.28	179.72	4708.07	-3974.75	483.90	3978.51	0.83	
8483.00	90.28	179.50	4707.76	-4038.75	484.34	4042.51	0.34	
8545.00	90.07	179.19	4707.57	-4100.74	485.05	4104.51	0.60	
8608.00	89.65	179.57	4707.72	-4163.74	485.73	4167.50	0.90	
8671.00	89.93	179.43	4707.95	-4226.74	486.28	4230.50	0.50	
8734.00	89.16	179.33	4708.45	-4289.73	486.96	4293.50	1.23	
8798.00	89.44	178.58	4709.24	-4353.71	488.13	4357.49	1.25	
8861.00	89.79	178.82	4709.66	-4416.70	489.56	4420.48	0.67	
8924.00	88.67	178.51	4710.51	-4479.67	491.03	4483.47	1.84	
8987.00	88.60	178.70	4712.01	-4542.64	492.56	4546.44	0.32	
9050.00	88.32	178.17	4713.70	-4605.59	494.28	4609.41	0.95	
9080.00	87.98	178.44	4714.67	-4635.56	495.17	4639.39	1.45	
9143.00	87.98	178.44	4716.89	-4698.50	496.88	4702.34	0.00	

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/5/2014
Job End Date:	11/6/2014
State:	Kansas
County:	Harper
API Number:	15-077-22092-00-00
Operator Name:	SandRidge Energy
Well Name and Number:	Nicole 3406 2-33H
Longitude:	-97.96809931
Latitude:	37.05089110
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,717
Total Base Water Volume (gal):	2,379,426
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	95.80970	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	3.47807	None
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.09216	None
			Methyl Alcohol	67-56-1	80.00000	0.00078	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00015	None
			NONYL PHENOL, 4 MOL	104-40-5	10.00000	0.00003	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00173	None
			Citric Acid	77-92-9	30.00000	0.00104	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		0.05023	
			Anionic Polymer	N/A		0.02511	
			Aliphatic Hydrocarbon	64742-47-8		0.02511	
			Water	7732-18-5		0.00845	

			Polyol Ester	N/A		0.00419	
			Oxyalkylated Alcohol	68002-97-1		0.00419	
			Sodium Salt of Phosphate Ester	68131-72-6		0.00141	
			Acrylic Polymer	28205-96-1		0.00141	
			Water	7732-18-5		0.00121	
			Polyglycol Ester	N/A		0.00084	
			WATER	7732-18-5		0.00019	
			Alcohol Ethoxylate Surfactants	N/A		0.00015	
			TRADE SECRET	N/A		0.00013	
			Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00008	
			n-olefins	N/A		0.00008	
			Propargyl Alcohol	107-19-7		0.00006	
			METHANOL	67-56-1		0.00003	
			ISOPROPANOL	67-63-0		0.00003	
			Cinnamic Aldehyde	104-55-2			
			Surfactant	N/A			
			Buffer	N/A			
			Acetic Acid	64-19-7			
			Water	7732-18-5			

\* 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)