Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1154931

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: Wanda Ledbetter
Phone: (405) 429-5500
CONTRACTOR: License # 34826
Name: Pistol Drilling, LLC
Wellsite Geologist: Tammy Alcorn
Purchaser: NA

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 #:

4/19/2013	5/9/2013	6/27/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-033-21706-00-00
Spot Description:
S2 - N2 - NW - NE Sec. 21 Twp. 34 S. R. 19 ☐ East ☑ West
350 Feet from ☑ North / ☐ South Line of Section
1980 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: Comanche
Lease Name: Easton 3419 Well #: 1-21
Field Name:
Producing Formation: Mississippi Osage
Elevation: Ground: 1876 Kelly Bushing: 1904
Total Vertical Depth: 6140 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 787 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: 15000 ppm Fluid volume: 1640 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: LoJo Disposal
Lease Name: SW/4 Sec 10 License #: 56371
Quarter SW Sec. 10 Twp. 26 S. R. 15 ☐ East ☑ West
County: Woods Permit #: 99999

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 08/19/2013
☑ **Confidential Release Date:** 08/19/2015
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ I ☐ II ☐ III **Approved by:** NAOMI JAMES **Date:** 08/20/2013

1154931

Operator Name: SandRidge Exploration and Production LLC Lease Name: Easton 3419 Well #: 1-21

Sec. 21 Twp. 34 S. R. 19 ☐ East ☑ West County: Comanche

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:

Attached

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

Name	Top	Datum
Base Heebner	4355	-2646
Lansing	4541	-2646
Cherokee	5191	-3296
Mississippi Lime	5342	-3477

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	110	grout	6	grout
Surface	12.25	8.625	24	834	Class H	435	3% calcium chloride pellet,.25lbm poly e
Production	7.875	5.5	17	6132	Class H, Econocem	1000	0.2% HR-800, 3% Cal-Seal 60, 6% Bentc

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	0-850	Econocem	250	.25% SA-1025, 5o lb sk, 2%,CFR-3, Defoamer, 50 lb sk, 9.7 Gal Fresh water
	-			

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
2	5650 - 5683	Frac see attachment	
4	5987 - 5996	Frac see attachment	

TUBING RECORD: Size: 2.875 Set At: 5300 Packer At: 5873

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
	0	0	0		

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:
5650-5996

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Easton 3419 1-21
Doc ID	1154931

All Electric Logs Run

Array Compensated True Resistivity
Dual Spaced Neutron Spectral Density
Micro Log
Measured Dept Log
Compensated Soecral Natural Gamma

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 305021	**Ship To #:**	**Quote #:**	**Sales Order #:** 900406736
Customer: SANDRIDGE ENERGY INC EBUSINESS		**Customer Rep:**	
Well Name: Easton 3419	**Well #:** 1-21		**API/UWI #:** 15-033-21706
Field:	**City (SAP):** PROTECTION	**County/Parish:** Comanche	**State:** Kansas
Legal Description: Section 25 Township 19S Range 33W			
Contractor: Pistol Rig	**Rig/Platform Name/Num:** 7		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	**Job Type:** Cement Surface Casing		
Sales Person: FRENCH, JEREMY	**Srvc Supervisor:** VILLARREAL, ARTURO	**MBU ID Emp #:** 106127	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DALRYMPLE, BRIAN Kieth	9	456242	VEGA, JORGE	5	529975	VILLARREAL, ARTURO	9	106127
WILLIAMS, DARREL Lee	5	511430						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10857045	60 mile	10991615	60 mile	11006594	60 mile	11150262	60 mile
11706673	60 mile	11749437	60 mile	11808729	60 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
5-2-13	9	2						
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name			
Formation Depth (MD)	**Top**	**Bottom**	
Form Type		**BHST**	
Job depth MD	850. m	**Job Depth TVD**	
Water Depth		**Wk Ht Above Floor**	
Perforation Depth (MD)	**From**	**To**	

Job Times

	Date	Time	Time Zone
Called Out			
On Location			
Job Started			
Job Completed	18 - Apr - 2013	02:00	GMT
Departed Loc			

Well Data

Description	New / Used	Max pressure MPa	Size mm	ID mm	Weight kg/m	Thread	Grade	Top MD m	Bottom MD m	Top TVD m	Bottom TVD m
12.25" Open Hole				12.25				.	850.		
8.625" Surface Casing	Unknown		8.625	8.097	24.	STC	J-55	.	850.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP,8 5/8,HWE,7.20 MIN/8.09 MA	1	EA		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

Miscellaneous Materials

Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty		Conc	%
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size		Qty	

HALLIBURTON

Cementing Job Summary

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density kg/m3	Yield m3/sk	Mix Fluid m3/ tonne	Rate m3/min	Total Mix Fluid m3/ tonne
1	Fresh Water		10.00	bbl	8.33	.0	.0	.0	
2	Lead Cement	EXTENDACEM (TM) SYSTEM (452981)	300.0	sacks	12.4	2.11	11.57		11.57
3 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
0.25 lbm		POLY-E-FLAKE (101216940)							
11.571 Gal		FRESH WATER							
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)	135.0	sacks	15.6	1.2	5.32		5.32
2 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
0.125 lbm		POLY-E-FLAKE (101216940)							
5.319 Gal		FRESH WATER							
4	Displacement		50.00	bbl	8.33	.0	.0	.0	

Calculated Values		Pressures		Volumes					
Displacement	50	Shut In: Instant		Lost Returns	NO	Cement Slurry	148	Pad	
Top Of Cement	SURFACE 7 BBLS	5 Min		Cement Returns	7 BBLS	Actual Displacement	50	Treatment	
Frac Gradient		15 Min		Spacers	10	Load and Breakdown		Total Job	

Rates

Circulating		Mixing	4	Displacement	5	Avg. Job	5

Cement Left In Pipe	Amount	42 ft	Reason	Shoe Joint

Frac Ring # 1 @		ID		Frac ring # 2 @		ID		Frac Ring # 3 @		ID		Frac Ring # 4 @		ID	

The Information Stated Herein Is Correct	Customer Representative Signature

HALLIBURTON — Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 305021	**Ship To #:** 2995061	**Quote #:**	**Sales Order #:** 900643362
Customer: SANDRIDGE ENERGY INC EBUSINESS		**Customer Rep:** Behrens, Charlie	
Well Name: Easton 3419	**Well #:** 1-21		**API/UWI #:** 15-033-21706
Field:	**City (SAP):** PROTECTION	**County/Parish:** Comanche	**State:** Kansas
Legal Description: Section 25 Township 19S Range 33W			
Contractor: WORKOVER	**Rig/Platform Name/Num:**		
Job Purpose: Recement Service			
Well Type: Development Well	**Job Type:** Recement Service		
Sales Person: GUSTKE, GREGORY	**Srvc Supervisor:** RODRIGUEZ, EDGAR	**MBU ID Emp #:** 442125	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
LAYNE, OLANDIS P	6.5	517538	RAMIREZ, JORGE M.	6.5	498481	RODRIGUEZ, EDGAR Alejandro	6.5	442125
YANEZ, BENJAMIN	6.5	538038						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
8/4/2013	6.5	3.5						
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name					
Formation Depth (MD)	**Top**		**Bottom**		
Form Type		**BHST**			
Job depth MD	5500. ft	**Job Depth TVD**	5475. ft		
Water Depth		**Wk Ht Above Floor**	4. ft		
Perforation Depth (MD)	**From**		**To**		

Job Times

	Date	Time	Time Zone
Called Out	04 - Aug - 2013	06:00	CST
On Location	04 - Aug - 2013	11:00	CST
Job Started	04 - Aug - 2013	15:26	CST
Job Completed	04 - Aug - 2013	17:11	CST
Departed Loc	04 - Aug - 2013	18:40	CST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
5.5" Cement Retainer	Used			.				.	5300.		
7.875" Open Hole				7.875				850.	6380.		
5.5" Production Casing	Unknown		5.5	4.892	17.	LTC	L-80	.	5500.		
8.625" Surface Casing	Unknown		8.625	8.097	24.	STC	J-55	.	850.		
2 7/8" Tubing	Unknown		2.875	2.441	6.5			.	5300.		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

Miscellaneous Materials

Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty		Conc	%
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size		Qty	

Fluid Data

Stage/Plug #: 1

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Establish Injection		10.00	bbl	8.3	.0	.0	4.0	
2	SUPER FLUSH 101	SUPER FLUSH 101 - SBM (12199)	40.00	bbl	10.	.0	.0	4.0	
3	Water		10.00	bbl	8.33	.0	.0	4.0	
4	Tail Cement	ECONOCEM (TM) SYSTEM (452992)	250.0	sacks	13.6	1.47	7.0	4.0	7.0
	0.25 %	SA-1015, 50 LB SACK (102077046)							
	0.2 %	CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
	6.998 Gal	FRESH WATER							
5	Displacement		31.00	bbl	8.33	.0	.0	4.0	

Calculated Values		Pressures		Volumes					
Displacement	31	Shut In: Instant		Lost Returns		Cement Slurry	65	Pad	
Top Of Cement		5 Min		Cement Returns		Actual Displacement	31	Treatment	
Frac Gradient		15 Min		Spacers	50	Load and Breakdown		Total Job	146

Rates							
Circulating	3	Mixing	3	Displacement	3	Avg. Job	3

Cement Left In Pipe	Amount	ft	Reason	Shoe Joint

Frac Ring # 1 @		ID		Frac ring # 2 @		ID		Frac Ring # 3 @		ID		Frac Ring # 4 @		ID	

The Information Stated Herein Is Correct	Customer Representative Signature

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 305021	**Ship To #:** 2995061	**Quote #:**	**Sales Order #:** 900428336
Customer: SANDRIDGE ENERGY INC EBUSINESS		**Customer Rep:** ., Cole	
Well Name: Easton 3419	**Well #:** 1-21		**API/UWI #:** 15-033-21706
Field:	**City (SAP):** PROTECTION	**County/Parish:** Comanche	**State:** Kansas
Legal Description: Section 25 Township 19S Range 33W			
Contractor: Pistol Rig	**Rig/Platform Name/Num:** 7		
Job Purpose: Cement Production Casing			
Well Type: Development Well	**Job Type:** Cement Production Casing		
Sales Person: FRENCH, JEREMY	***Srvc Supervisor:*** MONTOYA-MOLINAS, ARTHUR	***MBU ID Emp #:*** 483764	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
MONTOYA-MOLINAS, ARTHUR J	13.5	483764	NEAL, MICHAEL Edward	13.5	483780	RALSTON, NICHOLAS	13.5	496027

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
5-14-2013	13	4.5	5-15-2013	.5	0			
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name					
Formation Depth (MD)	**Top**		**Bottom**		
Form Type		**BHST**			
Job depth MD	6132. ft	**Job Depth TVD**	6132. ft		
Water Depth		**Wk Ht Above Floor**	4. ft		
Perforation Depth (MD)	**From**		**To**		

Job Times

	Date	Time	Time Zone
Called Out	14 - May - 2013	03:00	CST
On Location	14 - May - 2013	10:45	CST
Job Started	14 - May - 2013	18:22	CST
Job Completed	14 - May - 2013	22:55	CST
Departed Loc	15 - May - 2013	00:30	CST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
8.75" Open Hole				8.75				850.	6380.		
5.5" Production Casing	Unknown		5.5	4.892	17.	LTC	L-80	.	6380.		
8.625" Surface Casing	Unknown		8.625	8.097	24.	STC	J-55	.	850.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP PLSTC,5 1/2 13-23PPF,4.49	1	EA		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

Miscellaneous Materials

Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty		Conc	%
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size		Qty	

Fluid Data

HALLIBURTON

Cementing Job Summary

Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Rig Supplied Gel Spacer		30.00	bbl	8.5	.0	.0	.0	
2	Lead Cement	ECONOCEM (TM) SYSTEM (452992)	850.0	sacks	12.	2.23	12.4		12.4
0.2 %		HR-800, 50 LB SACK (101619742)							
3 %		CAL-SEAL 60, 50 LB BAG (101217146)							
6 %		BENTONITE, BULK (100003682)							
0.1 %		WG-17, 50 LB SK (100003623)							
12.395 Gal		FRESH WATER							
3	Tail Cement	ECONOCEM (TM) SYSTEM (452992)	375.0	sacks	13.6	1.5	6.76		6.76
5 lbm		KOL-SEAL, BULK (100064233)							
0.25 %		SA-1015, 50 LB SACK (102077046)							
0.2 %		CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
6.756 Gal		FRESH WATER							
4	Displacement		146.00	bbl	8.33	.0	.0	.0	

Calculated Values		Pressures		Volumes					
Displacement	141 BBLS	Shut In: Instant		Lost Returns	360	Cement Slurry	438 BBLS	Pad	
Top Of Cement	APPROX 2900	5 Min		Cement Returns	0	Actual Displacement	141 BBLS	Treatment	
Frac Gradient		15 Min		Spacers	30 BBLS	Load and Breakdown		Total Job	

Rates							
Circulating	3	Mixing	2	Displacement	4	Avg. Job	2

Cement Left In Pipe	Amount	84 ft	Reason	Shoe Joint

Frac Ring # 1 @		ID		Frac ring # 2 @		ID		Frac Ring # 3 @		ID		Frac Ring # 4 @		ID	

The Information Stated Herein Is Correct	Customer Representative Signature

850
375
12.5

CONSOLIDATED
OIL WELL SERVICES, LLC

Stimulation Treatment
6/19/2013

for

SandRidge Energy
Mr. Mike Anderson
Easton 3419 #1-21

Comanche County, KS
API #
AFE #
Perfs: 5987' - 5996'
Osage/Mississippi Formation
Zone 1

Treated by:
Chad Carter

Prepared by:
Greg Hicks

Mr. Mike Anderson
Easton 3419 #1-21
Osage/Mississippi Formation
Perfs: 5987' - 5996'

0
Comanche County, KS
Zone 1

Date: 6/19/2013
Treated by: Chad Carter
Consolidated Oil Well Services, LLC

CONSOLIDATED OIL WELL SERVICES, LLC

Stage #	Design Clean	Fluid Type	Proppant Type	Start Time Stage Start	Elasped Time Stage Start	Actual Maximum CSG Press (psi)	Actual Maximum Slurry Rate (bpm)	Stage Clean (bbl)	Stage Slurry (bbl)	Cumulative Clean (bbl)	Cumulative Slurry (bbl)	Proppant Prop (ppg)	Proppant Stage (lb)	Proppant Cumulative (lb)	Comments
1	238.1	30# Linear Gel	Pad	7:07:46	0:00:00	4907	18.2	242.0	242.0	242.0	242.0	0.00	0	0	Breakdown at 2333 psi at 5.4 bpm
2	238.1	30# Linear Gel	30/50 White	7:24:58	0:17:12	4341	19.9	237.0	242.5	479.0	484.5	0.51	5102	5102	
3	119.0	30# Linear Gel	30/50 White	7:38:51	0:31:05	2842	20.1	120.0	125.5	599.0	610.1	1.01	5095	10197	
4	119.0	30# Linear Gel	30/50 White	7:45:04	0:37:18	2706	20.1	120.0	128.1	719.0	738.1	1.47	7427	17624	
5	0.0	30# X-Link	30/50 White	7:51:28	0:43:42	3360	20.1	12.0	13.0	731.0	751.2	1.88	946	18570	
6	0.0	30# Linear Gel	0	7:52:11	0:44:25	3982	20.8	147.0	147.0	878.0	898.2	0.00	0	18570	Tub paddles stopped spinning, cut sand and crosslink until got paddles spinning again
7	83.3	30# X-Link	30/50 White	7:59:58	0:52:12	2584	20.2	112.0	121.5	990.0	1019.6	1.85	8719	27289	Increased sand from 1 ppg up to 2 ppg
8	59.5	30# X-Link	30/50 White	8:05:07	0:57:21	2998	20.4	18.0	19.9	1008.0	1039.5	2.32	1754	29043	Went to 2.5 ppg instead of 3.0 ppg
9	35.7	30# Linear Gel	0	8:06:10	0:58:24	3128	20.4	72.0	72.0	1080.0	1111.5	0.00	0	29043	Lost paddles on blender again
10	35.7	30# X-Link	30/50 White	8:10:03	1:02:17	2333	20.8	70.0	76.5	1150.0	1188.0	2.03	5957	35000	Started sand again at 1.0 ppg and worked way back up to 2.5 ppg
11	0.0	30# X-Link	30/50 White	8:13:44	1:05:58	2306	20.2	38.0	43.2	1188.0	1231.2	3.01	4800	39800	
12	0.0	30# X-Link	30/50 White	8:15:50	1:08:04	2158	20.3	29.0	34.2	1217.0	1265.4	3.95	4806	44606	Showing more flush here because staged when cut sand.
13	0.0	30# Linear Gel	Flush	8:17:45	1:09:59	2393	20.3	54.0	54.0	1271.0	1319.4	0.00	0	44606	Started flush volume after 15 bbls when blender reached 0.5 ppg, then went 36.5 bbls for flush
			Shutdown	8:20	1:09:59					1271.0					

Averages	Slurry Rate:	20.13846154	BPM	Pressure:	3079.846154	PSI	
Total	Time:	1:13:00	HH:MM:SS	Clean Vol.:	1271.0	BBL	Slurry Vol.: 1319.4 BBL
Max	Slurry Rate:	20.80	BPM	Pressure:	4907.00	PSI	
ISIP	161	5-min	60				
FG	0.459618871	PSI/FT					

Job Notes:

1 Pressure Tested to 5520 psi
2 Pressured up backside to 1487 psi, start of frac it was at 1482 psi, Ended at 869 psi
3 Opening wellhead pressure = 0 psi
4 ISIP = 161 psi, 5 Min = 60 psi, 10 Min = 23 psi, 15 Min = 16 psi
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Total Pumped:	30# Linear G	30# X-Link	Slickwater	15% HCl	0	0
bbls	992	279	0	0	0	0

	30/50 White	0	0
lbs	44606	0	0

CONSOLIDATED
OIL WELL SERVICES, LLC

Quality Control Report

6/19/2013

Mr. Mike Anderson

Easton 3419 #1-21
0
Comanche County, KS
API #
Perfs: 5987' - 5996'
Osage/Mississippi Formation
Zone 1
Prepared by:
Greg Hicks

Tank QC Tests	Tank 1	Tank 2	Tank 4	Tank 5	Tank 6	Tank 7	Tank 8	Tank 9	Average
Water Temp (deg F)									
Viscosity (cp)									
pH									
Buffered pH									
Cross-Link Time (sec)									

		Weight (ppg)	ABS Volume	sp
Base Fluid	Fresh Water	8.33		1
Proppant	30/50 White	13.36809037	0.0456	2.65

Chemicals	Component	Max Percentage	CAS #	Amt Used		Design	Actual	Variance	Fraction
						Concentration/Mgal			of Frac
Hydrochloric Acid	Hydrogen Chloride	38%	1-1-7467						0.000%
Acid		0%		**0**	gallons	0	0	0.00%	0.000%
		0%							0.000%
SP-650	Methanol	15%	67-56-1						0.006%
Biocide		0%		**22**	gallons	0.25	0.41	64.85%	0.000%
		0%							0.000%
GA-41W		0%							0.000%
Gel		0%		**387**	gallons	7.5	7.25	-3.34%	0.000%
		0%							0.000%
SR-445	Isopropanol	30%	67-63-0						0.009%
Surfactant/Stimulation Additive	Citrus Turpenes	30%	94266-47-4	**18**	gallons	0.25	0.34	34.88%	0.009%
	2-Butoxyethanol	30%	111-76-2						0.009%
CL-142		0%							0.000%
Cross-Linker		0%		**18**	gallons	2	1.54	-23.20%	0.000%
		0%							0.000%
LEB-4		0%							0.000%
Liquid Enzyme Breaker		0%		**4**	gallons	0.08	0.07	-6.34%	0.000%
		0%							0.000%
Ammonium Persulfate	Ammonium Persulfate	100%	7727-54-0						0.011%
Dry Breaker		0%		**55**	pounds	1	1.03	3.03%	0.000%
		0%							0.000%
Buffer CL	Potassium Hydroxide	50%	1310-58-3						0.000%
Buffering Agent		0%		**0**	gallons	0	0.00	0.00%	0.000%
		0%							0.000%
Potassium Chloride	Potassium Cloride	100%							0.000%
KCL		0%		**16000**	gallons	350	299.73	-14.36%	0.000%
		0%							0.000%
				0		0	0.00	0.00%	
				0		0	0.00	0.00%	
30/50 White	Quartz, (Crystalline Silica)	100%	14808-60-7	**44606**	lb	38000	44606	17.4%	9.109%
0	Quartz, (Crystalline Silica)	100%	14808-60-7	**0**	lb	0	0	0.0%	0.0%
0	Quartz, (Crystalline Silica)	100%	14808-60-7	**0**	lb	0	0	0.0%	0.0%
							Average:	5.2%	

Total fluid pumped (includes acid)	1271	**bbl**	**Avg. Rate**	**20**	BPM
Acid Pumped	0	**bbl**	**Max. Rate**	**21**	BPM
Fresh water pumped	1271	**bbl**	**Avg. Press.**	**3080**	PSI
Total sand pumped	44606	**lbs**	**Max. Press.**	**4907**	PSI

45003
Total Weight of Frac (lbs) 489,675

EASTON 3419 1-21

(5987' - 5996')

Harper County, Kansas

Stage #1

Stage	#	Fluid Type	Clean Volume (gal)	Clean Volume (bbl)	Cum. Clean Volume (bbl)	Clean Rate (bbl/min)	Proppant Type	Proppant Conc. (ppa)	Stage Prop (lbs)	Total Prop (lbs)	Slurry Volume (bbl)	Cum. Slurry Volume (bbl)	Slurry Rate (bbl/min)	Stage Time (min)	Cumulative Time (min)
0	1	20# Linear Gel	10,000	238	60	20.0		0.00	0	0	238	238	20	11.9	11.9
0.5 ppg	2	20# Linear Gel	10,000	238	60	19.0	30/50 Ottawa	0.50	5,000	5,000	243	482	20	12.2	24.1
1 ppg	3	20# Linear Gel	5,000	119	60	18.1	30/50 Ottawa	1.00	5,000	10,000	124	606	20	6.2	30.3
1.5 ppg	4	20# Linear Gel	5,000	119	179	17.1	30/50 Ottawa	1.50	7,500	17,500	127	733	20	6.4	36.7
2 ppg	5	20# Linear Gel	3,500	83	238	16.2	30/50 Ottawa	2.00	7,000	24,500	91	824	20	4.5	41.2
3 ppg	6	20# X-Link Gel	2,500	60	298	14.3	30/50 Ottawa	3.00	7,500	32,000	68	892	20	3.4	44.6
4 ppg	7	20# X-Link Gel	1,500	36	484	12.4	30/50 Ottawa	4.00	6,000	38,000	42	934	20	2.1	46.7
Flush	8	20# Linear Gel	5,750	137		40.0		0.00	0	38,000	137	1,071	20	6.8	53.5
			43,250	**1,030**					**38,000**		**1,071**			**53.5**	

Pad % 36%

Maximum Allowable Pressure:	5,800	psi
Anticipated STP:	4,400	psi
Minimum Horsepower Required:	2,500	hhp

Formation	Top Perf	Base Perf	Phasing	Feet	SPF	Shots
Osage/Miss	5987	5,996'	120	9	4	36

Fluid Requirements:

1. Base fluid is to be freshwater with granular KCl to achieve 4% KCl by volume and must contain biocide.
2. Frac fluid to have minimum temperature of ± 70° F 12 hours prior to treatment.
3. Fann 35 testing to be provided to OKC offices 24 hr prior to job setup
4. Backside pressure transducer to monitor pressure during job
5. BHT = 130° F
6. Est. F.G. - 0.7 psi/ft
7. Fann 35 tests to be performed on location to verify item #3 results
8. Note specific flush volume (1 bbl short of top perf)

Chemical Additives for Gelled Fluid System

Recommended Breaker

1 gpt non-ionic surfactant

Clay stabilizer (service company recommendation)

Cross-linker: on-site recommendation

Operational Considerations:

1. Frac tanks required: 3
2. Fluid testing to be done at 130 ° F
3. Base Fluid: 4% KCl Water

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

August 19, 2013

Wanda Ledbetter
SandRidge Exploration and Production LLC
123 ROBERT S. KERR AVE
OKLAHOMA CITY, OK 73102-6406

Re: ACO1
API 15-033-21706-00-00
Easton 3419 1-21
NE/4 Sec.21-34S-19W
Comanche County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Wanda Ledbetter