

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1248338  
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: \_\_\_\_\_

1248338

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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	Hunt 3408 2-15H
Doc ID	1248338

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	30	20	75	100	Edge Services 10 sack grout	10	none
Surface	12.25	9.63	36	849	Class C	520	2% Calcium Chloride, 1/4 pps Cello-Flake
Intermediate	8.75	7	26	5553	Class C	325	4% Gel, .2% FL-17, .1% C-51, .3% C-20, .1% C-37, .2% X-Air
Production	6.18	4.5	11.6	9300	N/A	0	na

# **Sandridge Energy, INC.(mid-con.)**

**Harper County (KS27S)**

**Sec 15-T34S-R08W**

**Hunt 3408 2-15H/Job #05108-431-22/Lariat 40**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**19 January, 2015**

# Scully Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Hunt 3408 2-15H/Job #05108-431-22/Lariat 40
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1402.0usft (Original Well Elev)
<b>Site:</b>	Sec 15-T34S-R08W	<b>MD Reference:</b>	WELL @ 1402.0usft (Original Well Elev)
<b>Well:</b>	Hunt 3408 2-15H/Job #05108-431-22/Lariat 40	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	Harper County (KS27S)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Kansas South 1502		

<b>Site</b>	Sec 15-T34S-R08W		
<b>Site Position:</b>		<b>Northing:</b>	155,396.70 usft
<b>From:</b>	Map	<b>Easting:</b>	2,095,585.60 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	37° 5' 34.724 N
		<b>Longitude:</b>	98° 10' 20.312 W
		<b>Grid Convergence:</b>	0.20 °

<b>Well</b>	Hunt 3408 2-15H/Job #05108-431-22/Lariat 40		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 155,396.70 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 2,095,585.60 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	37° 5' 34.724 N
		<b>Longitude:</b>	98° 10' 20.312 W
		<b>Ground Level:</b>	1,384.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/16/2014	4.36	65.11	51,558

<b>Design</b>	Wellbore #1			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	186.67

<b>Survey Program</b>	<b>Date</b>	1/19/2015		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
250.0	9,279.0	Archer MWD Survey (Wellbore #1)	MWD	MWD - Standard

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
250.0	0.41	12.70	250.0	0.9	0.2	-0.9	0.16	0.16	0.00	
<b>First Single Shot Survey</b>										
500.0	0.43	12.70	500.0	2.7	0.6	-2.7	0.01	0.01	0.00	
750.0	0.36	12.70	750.0	4.3	1.0	-4.4	0.03	-0.03	0.00	
<b>Last Single Shot Survey</b>										
862.0	0.70	12.70	862.0	5.4	1.2	-5.5	0.30	0.30	0.00	
<b>First Archer MWD Survey</b>										
953.0	0.50	33.90	953.0	6.2	1.5	-6.4	0.32	-0.22	23.30	
1,410.0	0.70	42.60	1,410.0	9.9	4.6	-10.4	0.05	0.04	1.90	

# Scully Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Hunt 3408 2-15H/Job #05108-431-22/Lariat 40
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1402.0usft (Original Well Elev)
<b>Site:</b>	Sec 15-T34S-R08W	<b>MD Reference:</b>	WELL @ 1402.0usft (Original Well Elev)
<b>Well:</b>	Hunt 3408 2-15H/Job #05108-431-22/Lariat 40	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
1,883.0	9.50	305.70	1,880.8	34.9	-25.3	-31.7	2.03	1.86	-20.49
2,356.0	16.70	298.60	2,341.2	90.3	-116.8	-76.1	1.56	1.52	-1.50
2,829.0	16.70	298.60	2,794.3	155.3	-236.1	-126.9	0.00	0.00	0.00
3,019.0	18.20	309.60	2,975.6	187.3	-282.9	-153.2	1.90	0.79	5.79
3,398.0	17.70	311.20	3,336.1	263.0	-371.9	-218.1	0.19	-0.13	0.42
3,586.0	13.90	304.30	3,517.0	294.6	-412.1	-244.7	2.25	-2.02	-3.67
3,775.0	13.40	309.20	3,700.7	321.2	-447.8	-267.0	0.67	-0.26	2.59
3,807.0	12.40	306.70	3,731.9	325.6	-453.4	-270.8	3.58	-3.13	-7.81
3,838.0	10.70	300.30	3,762.2	329.1	-458.6	-273.6	6.86	-5.48	-20.65
3,870.0	10.00	288.70	3,793.7	331.4	-463.8	-275.4	6.86	-2.19	-36.25
3,901.0	10.50	275.30	3,824.2	332.6	-469.1	-275.8	7.84	1.61	-43.23
3,933.0	11.60	264.90	3,855.6	332.6	-475.2	-275.1	7.10	3.44	-32.50
3,964.0	12.70	258.30	3,885.9	331.6	-481.7	-273.4	5.71	3.55	-21.29
3,996.0	14.00	256.30	3,917.1	330.0	-488.9	-271.0	4.31	4.06	-6.25
4,027.0	14.60	251.60	3,947.1	327.8	-496.2	-268.0	4.21	1.94	-15.16
4,059.0	15.80	244.10	3,978.0	324.7	-504.0	-263.9	7.19	3.75	-23.44
4,090.0	17.90	235.30	4,007.7	320.1	-511.7	-258.5	10.64	6.77	-28.39
4,122.0	20.40	229.00	4,037.9	313.6	-520.0	-251.1	10.13	7.81	-19.69
4,153.0	22.70	224.60	4,066.7	305.8	-528.2	-242.4	9.06	7.42	-14.19
4,185.0	24.70	220.10	4,096.0	296.3	-536.9	-232.0	8.42	6.25	-14.06
4,216.0	26.00	215.30	4,124.0	285.8	-545.0	-220.6	7.84	4.19	-15.48
4,247.0	27.50	211.50	4,151.7	274.2	-552.7	-208.1	7.34	4.84	-12.26
4,278.0	29.10	206.90	4,179.0	261.3	-559.8	-194.6	8.72	5.16	-14.84
4,310.0	31.60	204.10	4,206.6	246.7	-566.7	-179.3	8.97	7.81	-8.75
4,341.0	34.20	200.70	4,232.7	231.2	-573.1	-163.1	10.28	8.39	-10.97
4,373.0	36.40	197.00	4,258.8	213.7	-579.1	-145.0	9.58	6.88	-11.56
4,405.0	37.50	194.10	4,284.4	195.2	-584.3	-126.0	6.44	3.44	-9.06
4,436.0	38.90	191.50	4,308.7	176.5	-588.5	-106.9	6.88	4.52	-8.39
4,468.0	40.90	188.90	4,333.3	156.3	-592.1	-86.5	8.14	6.25	-8.13
4,499.0	43.00	186.10	4,356.3	135.7	-594.8	-65.7	9.07	6.77	-9.03
4,530.0	44.80	184.80	4,378.7	114.3	-596.8	-44.3	6.49	5.81	-4.19
4,562.0	46.90	181.60	4,401.0	91.4	-598.1	-21.3	9.72	6.56	-10.00
4,594.0	48.00	177.90	4,422.6	67.8	-598.0	2.1	9.18	3.44	-11.56
4,625.0	49.10	175.10	4,443.1	44.7	-596.6	24.9	7.64	3.55	-9.03
4,657.0	50.70	173.50	4,463.7	20.3	-594.1	48.8	6.29	5.00	-5.00
4,689.0	53.30	172.50	4,483.4	-4.7	-591.1	73.3	8.49	8.13	-3.13
4,720.0	55.70	171.90	4,501.4	-29.7	-587.6	97.8	7.90	7.74	-1.94
4,767.0	58.90	171.90	4,526.8	-68.9	-582.1	136.0	6.81	6.81	0.00
4,814.0	59.50	171.60	4,550.9	-108.8	-576.3	175.0	1.39	1.28	-0.64
4,862.0	59.90	171.00	4,575.1	-149.8	-570.0	215.0	1.36	0.83	-1.25
4,909.0	59.90	170.20	4,598.7	-189.9	-563.4	254.0	1.47	0.00	-1.70
4,940.0	59.80	170.00	4,614.2	-216.3	-558.8	279.7	0.64	-0.32	-0.65
4,971.0	61.00	170.30	4,629.6	-242.9	-554.2	305.6	3.96	3.87	0.97

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
5,003.0	64.80	171.30	4,644.1	-271.0	-549.6	333.0	12.20	11.88	3.13
5,035.0	68.70	173.70	4,656.8	-300.1	-545.8	361.5	14.00	12.19	7.50
5,067.0	70.80	175.50	4,667.8	-330.0	-543.0	390.8	8.42	6.56	5.63
5,098.0	71.80	176.50	4,677.8	-359.3	-540.9	419.7	4.44	3.23	3.23
5,130.0	72.80	177.20	4,687.5	-389.7	-539.2	449.7	3.76	3.13	2.19
5,161.0	74.30	177.40	4,696.3	-419.4	-537.8	479.1	4.88	4.84	0.65
5,192.0	76.00	177.50	4,704.2	-449.4	-536.5	508.6	5.49	5.48	0.32
5,224.0	77.40	177.80	4,711.6	-480.5	-535.2	539.4	4.47	4.38	0.94
5,255.0	79.50	178.30	4,717.8	-510.8	-534.2	569.4	6.96	6.77	1.61
5,287.0	82.90	179.10	4,722.7	-542.5	-533.5	600.7	10.91	10.63	2.50
5,334.0	84.60	179.00	4,727.8	-589.2	-532.7	647.0	3.62	3.62	-0.21
5,382.0	85.50	178.70	4,732.0	-637.0	-531.7	694.4	1.98	1.88	-0.63
5,445.0	86.60	178.40	4,736.3	-699.8	-530.1	756.6	1.81	1.75	-0.48
5,476.0	87.40	177.90	4,737.9	-730.7	-529.1	787.2	3.04	2.58	-1.61
5,523.0	88.00	178.50	4,739.8	-777.7	-527.7	833.7	1.80	1.28	1.28
5,570.0	89.40	179.00	4,740.9	-824.7	-526.6	880.2	3.16	2.98	1.06
5,663.0	89.30	178.90	4,741.9	-917.6	-524.9	972.4	0.15	-0.11	-0.11
5,756.0	89.20	180.10	4,743.1	-1,010.6	-524.1	1,064.7	1.29	-0.11	1.29
5,847.0	89.20	182.20	4,744.4	-1,101.6	-526.0	1,155.2	2.31	0.00	2.31
5,939.0	88.50	179.60	4,746.3	-1,193.6	-527.4	1,246.7	2.93	-0.76	-2.83
6,029.0	88.40	177.70	4,748.7	-1,283.5	-525.3	1,335.8	2.11	-0.11	-2.11
6,120.0	89.90	178.50	4,750.0	-1,374.4	-522.3	1,425.8	1.87	1.65	0.88
6,211.0	89.10	178.40	4,750.8	-1,465.4	-519.8	1,515.8	0.89	-0.88	-0.11
6,303.0	88.70	177.70	4,752.6	-1,557.3	-516.7	1,606.8	0.88	-0.43	-0.76
6,395.0	90.10	178.60	4,753.6	-1,649.3	-513.7	1,697.8	1.81	1.52	0.98
6,487.0	89.10	179.60	4,754.2	-1,741.3	-512.3	1,789.0	1.54	-1.09	1.09
6,577.0	88.70	180.70	4,755.9	-1,831.2	-512.5	1,878.4	1.30	-0.44	1.22
6,669.0	90.30	180.80	4,756.7	-1,923.2	-513.7	1,969.9	1.74	1.74	0.11
6,764.0	90.70	179.80	4,755.9	-2,018.2	-514.2	2,064.3	1.13	0.42	-1.05
6,859.0	91.60	181.60	4,754.0	-2,113.2	-515.4	2,158.7	2.12	0.95	1.89
6,954.0	89.80	181.20	4,752.8	-2,208.1	-517.7	2,253.3	1.94	-1.89	-0.42
7,046.0	89.70	181.00	4,753.2	-2,300.1	-519.4	2,344.9	0.24	-0.11	-0.22
7,141.0	89.10	180.50	4,754.2	-2,395.1	-520.7	2,439.4	0.82	-0.63	-0.53
7,235.0	88.30	179.60	4,756.4	-2,489.1	-520.8	2,532.7	1.28	-0.85	-0.96
7,330.0	89.10	180.70	4,758.5	-2,584.0	-521.0	2,627.1	1.43	0.84	1.16
7,425.0	89.10	181.50	4,760.0	-2,679.0	-522.8	2,721.6	0.84	0.00	0.84
7,520.0	89.50	179.50	4,761.2	-2,774.0	-523.7	2,816.0	2.15	0.42	-2.11
7,614.0	91.20	180.00	4,760.6	-2,868.0	-523.3	2,909.3	1.89	1.81	0.53
7,709.0	89.40	179.20	4,760.1	-2,963.0	-522.6	3,003.6	2.07	-1.89	-0.84
7,802.0	90.30	180.30	4,760.4	-3,056.0	-522.2	3,095.9	1.53	0.97	1.18
7,896.0	90.00	180.60	4,760.1	-3,150.0	-522.9	3,189.4	0.45	-0.32	0.32
7,991.0	88.00	180.00	4,761.8	-3,245.0	-523.4	3,283.8	2.20	-2.11	-0.63

# Scully Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Hunt 3408 2-15H/Job #05108-431-22/Lariat 40
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1402.0usft (Original Well Elev)
<b>Site:</b>	Sec 15-T34S-R08W	<b>MD Reference:</b>	WELL @ 1402.0usft (Original Well Elev)
<b>Well:</b>	Hunt 3408 2-15H/Job #05108-431-22/Lariat 40	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
8,086.0	88.20	179.10	4,764.9	-3,339.9	-522.7	3,378.0	0.97	0.21	-0.95
8,180.0	88.70	176.20	4,767.5	-3,433.8	-518.8	3,470.8	3.13	0.53	-3.09
8,275.0	90.20	178.30	4,768.4	-3,528.7	-514.3	3,564.5	2.72	1.58	2.21
8,369.0	90.40	179.90	4,767.9	-3,622.6	-512.8	3,657.7	1.72	0.21	1.70
8,464.0	88.40	180.00	4,768.9	-3,717.6	-512.7	3,752.0	2.11	-2.11	0.11
8,559.0	88.20	181.10	4,771.7	-3,812.6	-513.6	3,846.4	1.18	-0.21	1.16
8,652.0	89.20	179.90	4,773.8	-3,905.5	-514.4	3,938.9	1.68	1.08	-1.29
8,746.0	89.70	182.30	4,774.7	-3,999.5	-516.2	4,032.4	2.61	0.53	2.55
8,841.0	90.10	181.40	4,774.9	-4,094.5	-519.3	4,127.1	1.04	0.42	-0.95
8,935.0	90.20	180.40	4,774.6	-4,188.5	-520.8	4,220.6	1.07	0.11	-1.06
9,029.0	91.20	178.90	4,773.5	-4,282.4	-520.2	4,313.9	1.92	1.06	-1.60
9,123.0	89.80	180.20	4,772.7	-4,376.4	-519.5	4,407.1	2.03	-1.49	1.38
9,218.0	91.00	180.30	4,772.0	-4,471.4	-519.9	4,501.6	1.27	1.26	0.11
<b>Last Archer MWD Survey</b>									
9,279.0	91.00	180.30	4,770.9	-4,532.4	-520.2	4,562.2	0.00	0.00	0.00
<b>Projection to TD</b>									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.0	250.0	0.9	0.2	First Single Shot Survey
750.0	750.0	4.3	1.0	Last Single Shot Survey
862.0	862.0	5.4	1.2	First Archer MWD Survey
9,218.0	4,772.0	-4,471.4	-519.9	Last Archer MWD Survey
9,279.0	4,770.9	-4,532.4	-520.2	Projection to TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_





**INVOICE**

DATE	INVOICE #
12/16/2014	5343

<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	Start Date	End Date	Work Order	Rig Number	LEASE NAME	Terms
HARPER, KS	12/15/2014		3891	LARIAT 40	HUNT 3408 2-15H	Due on rec...

**Description**

DRILLED 100' OF 30" CONDUCTOR HOLE  
 DRILLED 6' 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 80' OF 16" CONDUCTOR PIPE

TOTAL BID \$21,000.00

AFE Number: DC 14406  
 Well Name: Hunt 3408 2-15H  
 Code: 850.010  
 Amount: \$21,275.64  
 Co. Man: Billy Smith for John Fortune  
 Co. Man Sig.: \_\_\_\_\_  
 Notes: \_\_\_\_\_

Sales Tax (6.15%) \$275.64

**TOTAL** \$21,275.64

<b>JOB SUMMARY</b>			PROJECT NUMBER <b>SOK 4700</b>	TICKET DATE <b>01/04/15</b>
COUNTY <b>Harper</b>	State <b>Kansas</b>	COMPANY <b>Dridge Exploration &amp; Produc</b>	CUSTOMER REP <b>Cory Aleman</b>	
LEASE NAME <b>Hunt 3408</b>	Well No. <b>2-15H</b>	JOB TYPE <b>Surface</b>	EMPLOYEE NAME <b>Joseph Klemm</b>	

EMP NAME					
Joseph Klemm	0				
Cody Bonitz					
Blake Hayworth					
David Settlemier					

Form. Name \_\_\_\_\_ Type: \_\_\_\_\_  
 Packer Type \_\_\_\_\_ Set At 0  
 Bottom Hole Temp. 80 Pressure \_\_\_\_\_  
 Retainer Depth \_\_\_\_\_ Total Depth 849'

Date	Called Out <b>1/3/2015</b>	On Location <b>1/4/2015</b>	Job Started <b>1/4/2015</b>	Job Completed <b>1/4/2015</b>
Time	<b>2100</b>	<b>0000</b>	<b>0830</b>	<b>1400</b>

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	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

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing		36#	9 1/2"		Surface	849'	2,000
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			12 1/4"		Surface	849'	Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials			
Mud Type	WBM	Density	9 Lb/Gal
Disp. Fluid	Fresh Water	Density	8.33 Lb/Gal
Spacer type	Fresh Water	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

Hours On Location		Operating Hours		Description of Job
Date	Hours	Date	Hours	
1/4	14.0	1/4	5.5	Surface
Total	14.0	Total	5.5	

Perfpac Balls \_\_\_\_\_ Qty. \_\_\_\_\_  
 Other \_\_\_\_\_  
 Other \_\_\_\_\_  
 Other \_\_\_\_\_  
 Other \_\_\_\_\_

Pressures		
MAX	2000 PSI	AVG. 300
Average Rates in BPM		
MAX	5 BPM	AVG 4.5
Cement Left in Pipe		
Feet	39	Reason SHOE JOINT

Cement Data				W/Rq.	Yield	Lbs/Gal
Stage	Sacks	Cement	Additives			
1	520	Premium Plus (Class C)	2% Calcium Chloride - 1/2pps Cello-Flake	6.32	1.32	14.80
2	0	0		0	0.00	0.00
3	0	0		0	0.00	0.00

Summary			
Preflush	_____ Type: _____	Preflush: BBI	10.00 Type: Fresh Water
Breakdown	MAXIMUM 2000 PSI	Load & Bkdn: Gal - BBI	N/A Pad:Bbl -Gal N/A
	Lost Returns- NO/FULL	Excess /Return BBI	60 Calc.Disp Bbl 63
	Actual TOC SURFACE	Calc. TOC:	SURFACE Actual Disp. 63.00
Average	Bump Plug PSI: 1,000	Final Circ. PSI:	400 Disp:Bbl 63.00
ISIP 5 Min. _____	10 Min. _____	Cement Slurry BBI	122.2
	15 Min. _____	Total Volume BBI	195.20

CUSTOMER REPRESENTATIVE \_\_\_\_\_ SIGNATURE \_\_\_\_\_

<b>JOB SUMMARY</b>			PROJECT NUMBER <b>SOK 4729</b>	TICKET DATE <b>01/12/15</b>
COUNTY <b>Harper</b>	State <b>Kansas</b>	COMPANY <b>Sandridge Exploration &amp; Production</b>	CUSTOMER REP <b>Jackie Kennedy</b>	
LEASE NAME <b>Hunt 3408</b>	Well No. <b>2-15H</b>	JOB TYPE <b>Intermediate</b>	EMPLOYEE NAME <b>Mike Hall</b>	

EMP NAME	<b>Mike Hall</b>	<b>0</b>					
	<b>Cheryl Newton</b>						
	<b>David Settlemier</b>						
	<b>Paul Thomas</b>						

Form. Name \_\_\_\_\_ Type: \_\_\_\_\_

Packer Type \_\_\_\_\_ Set At **0**

Bottom Hole Temp. **155** Pressure \_\_\_\_\_

Retainer Depth \_\_\_\_\_ Total Depth **5,578'**

Date	Called Out <b>1/12/2015</b>	On Location <b>1/12/2015</b>	Job Started <b>1/12/2015</b>	Job Completed <b>1/12/2015</b>
Time		<b>0800</b>	<b>1215</b>	<b>1400</b>

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	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	5,553'	5,000
Liner								
Liner								
Tubing				0				
Drill Pipe								
Open Hole				8 1/4"		Surface	5,578'	Shots/Ft.
Perforations								
Perforations								
Perforations								

Materials			
Mud Type	WBM	Density	<b>9</b> Lb/Gal
Disp. Fluid	Fresh Water	Density	<b>8.33</b> Lb/Gal
Spacer type	Gel Spacer	BBL.	<b>30</b> , <b>8.70</b>
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

Hours On Location		Operating Hours		Description of Job
Date	Hours	Date	Hours	
1/12	6.0	1/12	1.0	Intermediate
Total	6.0	Total	1.0	

Perfpac Balls \_\_\_\_\_ Qty. \_\_\_\_\_

Other \_\_\_\_\_

Other \_\_\_\_\_

Other \_\_\_\_\_

Other \_\_\_\_\_

Pressures		
MAX	5,000 PSI	AVG. 400
Average Rates in BPM		
MAX	8 BPM	AVG. 4.5
Cement Left in Pipe		
Feet	44'	Reason SHOE JOINT

Cement Data						
Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	225	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.3% C-20 - 0.1% C-37 - 0.2% X-Air	6.93	1.43	13.60
2	100	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

Summary					
Preflush Breakdown	<b>30</b>	Type: <b>MAXIMUM</b>	Gel Spacer <b>5,000 PSI</b>	Preflush: <b>BBI</b>	<b>30.00</b> Type: <b>Gel Spacer</b>
		Lost Returns- <b>NO/FULL</b>		Load & Bkdn: <b>Gal - BBI</b>	<b>N/A</b> Pad:Bbl -Gal <b>N/A</b>
		Actual TOC <b>2,710"</b>		Excess /Return <b>BBI</b>	<b>N/A</b> Calc.Disp Bbl <b>211</b>
Average		Bump Plug PSI: <b>1,600</b>		Calc. TOC: <b>2,710"</b>	Actual Disp. <b>211.00</b>
ISIP	5 Min.	10 Min	15 Min	Final Circ. <b>PSI: 900</b>	Disp:Bbl <b>211.00</b>
				Cement Slurry <b>BBI</b>	
				Total Volume <b>BBI</b>	<b>319.00</b>

CUSTOMER REPRESENTATIVE *Jackie Kennedy* SIGNATURE

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/30/2015
Job End Date:	2/1/2015
State:	Kansas
County:	Harper
API Number:	15-077-22123-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Hunt 3408 2-15H
Longitude:	-98.17230900
Latitude:	37.09297900
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,774
Total Base Water Volume (gal):	2,397,108
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	95.76941	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	3.59238	None
C102	Bosque Disposal Systems, LLC	Oxidizer					
			Chlorine Dioxide	10049-04-4	15.00000	0.27545	
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.04386	None
			Methyl Alcohol	67-56-1	80.00000	0.00037	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00007	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	0.00080	None
			Citric Acid	77-92-9	30.00000	0.00048	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.00084	None

		Alcohol Ethoxylate Surfactants	NA	10.00000	0.00009	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		0.03382	
		Aliphatic Hydrocarbon	64742-47-8		0.01691	
		Anionic Polymer	N/A		0.01691	
		Water	7732-18-5		0.00971	
		Oxyalkylated Alcohol	68002-97-1		0.00282	
		Polyol Ester	N/A		0.00282	
		Acrylic Polymer	28205-96-1		0.00162	
		Sodium Salt of Phosphate Ester	68131-72-6		0.00162	
		Polyglycol Ester	N/A		0.00056	
		Water	7732-18-5		0.00056	
		WATER	7732-18-5		0.00016	
		TRADE SECRET	N/A		0.00011	
		Alcohol Ethoxylate Surfactants	N/A		0.00007	
		Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00006	
		n-olefins	N/A		0.00004	
		Propargyl Alcohol	107-19-7		0.00003	
		METHANOL	67-56-1		0.00003	
		ISOPROPANOL	67-63-0		0.00003	
		Surfactant	N/A			
		Water	7732-18-5			
		Acetic Acid	64-19-7			
		Buffer	N/A			
		Cinnamic Aldehyde	104-55-2			

\* 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)

	Surfactant (gpt)	ClO <sub>2</sub> (ppm)	Scale inhibitor (gpt)
Archer/Bosque	0	2-3	0.1
Cimarron/Bosque	0	2-3	0.25

NOTE: Pump FR as required to obtain minimum rate of 75 bpm. DO NOT EXCEED 0.75 gal/1000 concentration of FR without prior discussion with engineer.

STAGE 1								
P-Sleeve @ 9,281 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	1000	24					1.2
Slickwater	65	12693	302					4.6
Slickwater	65	9520	227	40/70	Genoa	0.25	2380	3.5
Slickwater	65	3150	75					1.2
Slickwater	65	9520	227	40/70	Genoa	0.50	4760	3.5
Slickwater	65	3150	75					1.2
Slickwater	65	9520	227	40/70	Genoa	0.75	7140	3.5
Slickwater	65	3150	75					1.2
Slickwater	65	9520	227	40/70	Genoa	1.00	9520	3.5
Slickwater	65	14399	343					5.3
<b>TOTAL</b>		<b>75,623</b>	<b>1,801</b>				<b>23,800</b>	<b>28.5</b>

Frac the MISSISSIPPI (Stage 2) as follows:  
 Drop 2.563" ball. Reduce rate to 5-10 bpm at +/- 215 bbls (50 bbls before ball seats).

STAGE 2								
Port @ 9,133 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	750	18					0.9
Slickwater	65	20693	493					7.6
Slickwater	65	15520	370	40/70	Genoa	0.25	3880	5.7
Slickwater	65	5410	129					2.0
Slickwater	65	15520	370	40/70	Genoa	0.50	7760	5.7
Slickwater	65	5410	129					2.0
Slickwater	65	15520	370	40/70	Genoa	0.75	11640	5.7
Slickwater	65	5410	129					2.0
Slickwater	65	15520	370	40/70	Genoa	1.00	15520	5.7
Slickwater	65	14303	341					5.2
<b>TOTAL</b>		<b>114,056</b>	<b>2,716</b>				<b>38,800</b>	<b>42.4</b>

Frac the MISSISSIPPI (Stage 3) as follows:  
 Drop 2.625" ball. Reduce rate to 5-10 bpm at +/- 211 bbls (50 bbls before ball seats).

STAGE 3								
Port @ 8,892 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	500	12					0.6
Slickwater	70	20800	495					7.1
Slickwater	70	15600	371	40/70	Genoa	0.25	3900	5.3
Slickwater	70	5610	134					1.9
Slickwater	70	15600	371	40/70	Genoa	0.50	7800	5.3
Slickwater	70	5610	134					1.9
Slickwater	70	15600	371	40/70	Genoa	0.75	11700	5.3
Slickwater	70	5610	134					1.9
Slickwater	70	15600	371	40/70	Genoa	1.00	15600	5.3
Slickwater	70	14146	337					4.8
<b>TOTAL</b>		<b>114,676</b>	<b>2,730</b>				<b>39,000</b>	<b>39.4</b>

Frac the MISSISSIPPI (Stage 4) as follows:  
 Drop 2.688" ball. Reduce rate to 5-10 bpm at +/- 209 bbls (50 bbls before ball seats).

STAGE 4								
Port @ 8,743 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	70	19200	457					6.5
Slickwater	70	14400	343	40/70	Genoa	0.25	3600	4.9
Slickwater	70	4905	117					1.7
Slickwater	70	14400	343	40/70	Genoa	0.50	7200	4.9
Slickwater	70	4905	117					1.7
Slickwater	70	14400	343	40/70	Genoa	0.75	10800	4.9
Slickwater	70	4905	117					1.7
Slickwater	70	14400	343	40/70	Genoa	1.00	14400	4.9
Slickwater	70	14049	335					4.8
<b>TOTAL</b>		<b>105,814</b>	<b>2,519</b>				<b>36,000</b>	<b>36.2</b>

Frac the MISSISSIPPI (Stage 5) as follows:  
 Drop 2.750" ball. Reduce rate to 5-10 bpm at +/- 206 bbls (50 bbls before ball seats).

STAGE 5								
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	75	25067	597					8.0
Slickwater	75	18800	448	40/70	Genoa	0.25	4700	6.0
Slickwater	75	7925	189					2.5
Slickwater	75	18800	448	40/70	Genoa	0.50	9400	6.0
Slickwater	75	7925	189					2.5
Slickwater	75	18800	448	40/70	Genoa	0.75	14100	6.0
Slickwater	75	7925	189					2.5
Slickwater	75	18800	448	40/70	Genoa	1.00	18800	6.0
Slickwater	75	13903	331					4.4
<b>TOTAL</b>		<b>138,195</b>	<b>3,290</b>				<b>47,000</b>	<b>44.1</b>

Frac the MISSISSIPPI (Stage 6) as follows:  
 Drop 2.813" ball. Reduce rate to 5-10 bpm at +/- 203 bbls (50 bbls before ball seats).

STAGE 6								
Port @ 8,332 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	75	15360	366					4.9
Slickwater	75	11520	274	40/70	Genoa	0.25	2880	3.7
Slickwater	75	3150	75					1.0
Slickwater	75	11520	274	40/70	Genoa	0.50	5760	3.7
Slickwater	75	3150	75					1.0
Slickwater	75	11520	274	40/70	Genoa	0.75	8640	3.7
Slickwater	75	3150	75					1.0
Slickwater	75	11520	274	40/70	Genoa	1.00	11520	3.7
Slickwater	75	13782	328					4.4
<b>TOTAL</b>		<b>84,922</b>	<b>2,022</b>				<b>28,800</b>	<b>27.2</b>

Frac the MISSISSIPPI (Stage 7) as follows:  
 Drop 2.875" ball. Reduce rate to 5-10 bpm at +/- 199 bbls (50 bbls before ball seats).

STAGE 7								
Port @ 8,090 '								
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	25920	617					7.7
Slickwater	80	19440	463	40/70	Genoa	0.25	4860	5.8
Slickwater	80	8460	201					2.5
Slickwater	80	19440	463	40/70	Genoa	0.50	9720	5.8
Slickwater	80	8460	201					2.5
Slickwater	80	19440	463	40/70	Genoa	0.75	14580	5.8
Slickwater	80	8460	201					2.5
Slickwater	80	19440	463	40/70	Genoa	1.00	19440	5.8
Slickwater	80	13624	324					4.1
<b>TOTAL</b>		<b>142,934</b>	<b>3,403</b>				<b>48,600</b>	<b>42.8</b>

Frac the MISSISSIPPI (Stage 8) as follows:  
 Drop 2.938" ball. Reduce rate to 5-10 bpm at +/- 197 bbls (50 bbls before ball seats).

STAGE 8								
Port @ 7,942 '								
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	15787	376					4.7
Slickwater	80	11840	282	40/70	Genoa	0.25	2960	3.5
Slickwater	80	3375	80					1.0
Slickwater	80	11840	282	40/70	Genoa	0.50	5920	3.5
Slickwater	80	3375	80					1.0
Slickwater	80	11840	282	40/70	Genoa	0.75	8880	3.5
Slickwater	80	3375	80					1.0
Slickwater	80	11840	282	40/70	Genoa	1.00	11840	3.5
Slickwater	80	13528	322					4.0
<b>TOTAL</b>		<b>87,049</b>	<b>2,073</b>				<b>29,600</b>	<b>26.1</b>

Frac the MISSISSIPPI (Stage 9) as follows:  
 Drop 3.000" ball. Reduce rate to 5-10 bpm at +/- 194 bbls (50 bbls before ball seats).

STAGE 9								
Port @ 7,746 '								
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	20800	495					5.8
Slickwater	85	15600	371	40/70	Genoa	0.25	3900	4.4
Slickwater	85	5935	141					1.7
Slickwater	85	15600	371	40/70	Genoa	0.50	7800	4.4
Slickwater	85	5935	141					1.7
Slickwater	85	15600	371	40/70	Genoa	0.75	11700	4.4
Slickwater	85	5935	141					1.7
Slickwater	85	15600	371	40/70	Genoa	1.00	15600	4.4
Slickwater	85	13400	319					3.8
<b>TOTAL</b>		<b>114,655</b>	<b>2,730</b>				<b>39,000</b>	<b>32.3</b>



Frac the MISSISSIPPI (Stage 10) as follows:  
 Drop 3.063" ball. Reduce rate to 5-10 bpm at +/- 191 bbls (50 bbls before ball seats).

STAGE 10								
Port @ 7,551'								
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	15893	378					4.5
Slickwater	85	11920	284	40/70	Genoa	0.25	2980	3.3
Slickwater	85	3505	83					1.0
Slickwater	85	11920	284	40/70	Genoa	0.50	5960	3.3
Slickwater	85	3505	83					1.0
Slickwater	85	11920	284	40/70	Genoa	0.75	8940	3.3
Slickwater	85	3505	83					1.0
Slickwater	85	11920	284	40/70	Genoa	1.00	11920	3.3
Slickwater	85	13273	316					3.7
<b>TOTAL</b>		<b>87,612</b>	<b>2,086</b>				<b>29,800</b>	<b>24.8</b>

Frac the MISSISSIPPI (Stage 11) as follows:  
 Drop 3.125" ball. Reduce rate to 5-10 bpm at +/- 187 bbls (50 bbls before ball seats).

STAGE 11								
Port @ 7,355'								
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	24960	594					6.6
Slickwater	90	18720	446	40/70	Genoa	0.25	4680	5.0
Slickwater	90	8125	193					2.1
Slickwater	90	18720	446	40/70	Genoa	0.50	9360	5.0
Slickwater	90	8125	193					2.1
Slickwater	90	18720	446	40/70	Genoa	0.75	14040	5.0
Slickwater	90	8125	193					2.1
Slickwater	90	18720	446	40/70	Genoa	1.00	18720	5.0
Slickwater	90	13146	313					3.5
<b>TOTAL</b>		<b>137,611</b>	<b>3,276</b>				<b>46,800</b>	<b>36.6</b>

Frac the MISSISSIPPI (Stage 12) as follows:  
 Drop 3.188" ball. Reduce rate to 5-10 bpm at +/- 185 bbls (50 bbls before ball seats).

STAGE 12								
Port @ 7,171'								
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	20160	480					5.3
Slickwater	90	15120	360	40/70	Genoa	0.25	3780	4.0
Slickwater	90	5745	137					1.5
Slickwater	90	15120	360	40/70	Genoa	0.50	7560	4.0
Slickwater	90	5745	137					1.5
Slickwater	90	15120	360	40/70	Genoa	0.75	11340	4.0
Slickwater	90	5745	137					1.5
Slickwater	90	15120	360	40/70	Genoa	1.00	15120	4.0
Slickwater	90	13026	310					3.4
<b>TOTAL</b>		<b>111,151</b>	<b>2,646</b>				<b>37,800</b>	<b>29.6</b>

Frac the MISSISSIPPI (Stage 13) as follows:  
 Drop 3.250" ball. Reduce rate to 5-10 bpm at +/- 182 bbls (50 bbls before ball seats).

STAGE 13								
Port @ 6,979'								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	20693	493					5.1
Slickwater	96	15520	370	40/70	Genoa	0.25	3880	3.8
Slickwater	96	6060	144					1.5
Slickwater	96	15520	370	40/70	Genoa	0.50	7760	3.8
Slickwater	96	6060	144					1.5
Slickwater	96	15520	370	40/70	Genoa	0.75	11640	3.8
Slickwater	96	6060	144					1.5
Slickwater	96	15520	370	40/70	Genoa	1.00	15520	3.8
Slickwater	96	12901	307					3.2
<b>TOTAL</b>		<b>114,104</b>	<b>2,717</b>				<b>38,800</b>	<b>28.5</b>

Frac the MISSISSIPPI (Stage 14) as follows:  
 Drop 3.313" ball. Reduce rate to 5-10 bpm at +/- 179 bbls (50 bbls before ball seats).

STAGE 14								
Port @ 6,832 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	20907	498					5.2
Slickwater	96	15680	373	40/70	Genoa	0.25	3920	3.9
Slickwater	96	6195	148					1.5
Slickwater	96	15680	373	40/70	Genoa	0.50	7840	3.9
Slickwater	96	6195	148					1.5
Slickwater	96	15680	373	40/70	Genoa	0.75	11760	3.9
Slickwater	96	6195	148					1.5
Slickwater	96	15680	373	40/70	Genoa	1.00	15680	3.9
Slickwater	96	12805	305					3.2
<b>TOTAL</b>		<b>115,267</b>	<b>2,744</b>				<b>39,200</b>	<b>28.8</b>

Frac the MISSISSIPPI (Stage 15) as follows:  
 Drop 3.375" ball. Reduce rate to 5-10 bpm at +/- 176 bbls (50 bbls before ball seats).

STAGE 15								
Port @ 6,589 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	20907	498					5.2
Slickwater	96	15680	373	40/70	Genoa	0.25	3920	3.9
Slickwater	96	6250	149					1.6
Slickwater	96	15680	373	40/70	Genoa	0.50	7840	3.9
Slickwater	96	6250	149					1.6
Slickwater	96	15680	373	40/70	Genoa	0.75	11760	3.9
Slickwater	96	6250	149					1.6
Slickwater	96	15680	373	40/70	Genoa	1.00	15680	3.9
Slickwater	96	12647	301					3.1
<b>TOTAL</b>		<b>115,274</b>	<b>2,745</b>				<b>39,200</b>	<b>28.8</b>

Frac the MISSISSIPPI (Stage 16) as follows:  
 Drop 3.438" ball. Reduce rate to 5-10 bpm at +/- 173 bbls (50 bbls before ball seats).

STAGE 16								
Port @ 6,394 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	15787	376					3.9
Slickwater	96	11840	282	40/70	Genoa	0.25	2960	2.9
Slickwater	96	3710	88					0.9
Slickwater	96	11840	282	40/70	Genoa	0.50	5920	2.9
Slickwater	96	3710	88					0.9
Slickwater	96	11840	282	40/70	Genoa	0.75	8880	2.9
Slickwater	96	3710	88					0.9
Slickwater	96	11840	282	40/70	Genoa	1.00	11840	2.9
Slickwater	96	12520	298					3.1
<b>TOTAL</b>		<b>87,047</b>	<b>2,073</b>				<b>29,600</b>	<b>21.8</b>

Frac the MISSISSIPPI (Stage 17) as follows:  
 Drop 3.500" ball. Reduce rate to 5-10 bpm at +/- 170 bbls (50 bbls before ball seats).

STAGE 17								
Port @ 6,245 '								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	15787	376					3.9
Slickwater	96	11840	282	40/70	Genoa	0.25	2960	2.9
Slickwater	96	3730	89					0.9
Slickwater	96	11840	282	40/70	Genoa	0.50	5920	2.9
Slickwater	96	3730	89					0.9
Slickwater	96	11840	282	40/70	Genoa	0.75	8880	2.9
Slickwater	96	3730	89					0.9
Slickwater	96	11840	282	40/70	Genoa	1.00	11840	2.9
Slickwater	96	12423	296					3.1
<b>TOTAL</b>		<b>87,010</b>	<b>2,072</b>				<b>29,600</b>	<b>21.8</b>

Frac the MISSISSIPPI (Stage 18) as follows:  
Drop 3.563" ball. Reduce rate to 5-10 bpm at +/- 167 bbls (50 bbls before ball seats).

STAGE 18								
Port @ 6,049'								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	20907	498					5.2
Slickwater	96	15680	373	40/70	Genoa	0.25	3920	3.9
Slickwater	96	6360	151					1.6
Slickwater	96	15680	373	40/70	Genoa	0.50	7840	3.9
Slickwater	96	6360	151					1.6
Slickwater	96	15680	373	40/70	Genoa	0.75	11760	3.9
Slickwater	96	6360	151					1.6
Slickwater	96	15680	373	40/70	Genoa	1.00	15680	3.9
Slickwater	96	12295	293					3.0
<b>TOTAL</b>		<b>115,252</b>	<b>2,744</b>				<b>39,200</b>	<b>28.8</b>

Frac the MISSISSIPPI (Stage 19) as follows:  
Drop 3.625" ball. Reduce rate to 5-10 bpm at +/- 165 bbls (50 bbls before ball seats).

STAGE 19								
Port @ 5,901'								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	20480	488					5.1
Slickwater	96	15360	366	40/70	Genoa	0.25	3840	3.8
Slickwater	96	6175	147					1.5
Slickwater	96	15360	366	40/70	Genoa	0.50	7680	3.8
Slickwater	96	6175	147					1.5
Slickwater	96	15360	366	40/70	Genoa	0.75	11520	3.8
Slickwater	96	6175	147					1.5
Slickwater	96	15360	366	40/70	Genoa	1.00	15360	3.8
Slickwater	96	12199	290					3.0
<b>TOTAL</b>		<b>112,894</b>	<b>2,688</b>				<b>38,400</b>	<b>28.2</b>

Frac the MISSISSIPPI (Stage 20) as follows:  
Drop 3.688" ball. Reduce rate to 5-10 bpm at +/- 163 bbls (50 bbls before ball seats).

STAGE 20								
Port @ 5,756'								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	10240	244					2.5
Slickwater	96	7680	183	40/70	Genoa	0.25	1920	1.9
Slickwater	96	3150	75					0.8
Slickwater	96	7680	183	40/70	Genoa	0.50	3840	1.9
Slickwater	96	3150	75					0.8
Slickwater	96	7680	183	40/70	Genoa	0.75	5760	1.9
Slickwater	96	3150	75					0.8
Slickwater	96	7680	183	40/70	Genoa	1.00	7680	1.9
Slickwater	96	12105	288					3.0
<b>TOTAL</b>		<b>62,765</b>	<b>1,494</b>				<b>19,200</b>	<b>15.8</b>

Frac the MISSISSIPPI (Stage 21) as follows:  
Drop 3.750" ball. Reduce rate to 5-10 bpm at +/- 161 bbls (50 bbls before ball seats).

STAGE 21								
Port @ 5,661'								
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop type	Prop, lbs	Time, min
15% HCl acid	20	250	6					0.3
Slickwater	96	16747	399					4.2
Slickwater	96	12560	299	40/70	Genoa	0.25	3140	3.1
Slickwater	96	4340	103					1.1
Slickwater	96	12560	299	40/70	Genoa	0.50	6280	3.1
Slickwater	96	4340	103					1.1
Slickwater	96	12560	299	40/70	Genoa	0.75	9420	3.1
Slickwater	96	4340	103					1.1
Slickwater	96	12560	299	40/70	Genoa	1.00	12560	3.1
Slickwater	96	12043	287					3.0
<b>TOTAL</b>		<b>92,299</b>	<b>2,198</b>				<b>31,400</b>	<b>23.1</b>

**TOTAL FRAC JOB VOLUMES: 52,767 bbls 749,600 lbs, Prop**

DUSENBURY 3408 1-10H YETI SWD 3408 1-15  
 HUNT 3408 2-15H \* \* HUNT 3408 3-15H  
 \* \*

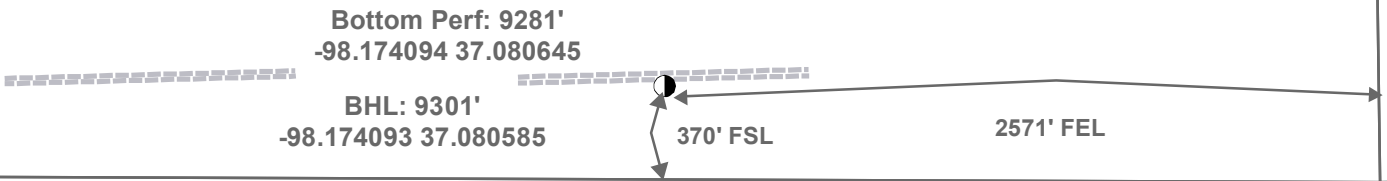


Miss Entry: 5189'  
 -98.174474 37.091747

Top Perf: 5661'  
 -98.174397 37.090474

Section 15  
 34S 8W

Harper County



Section 22  
 34S 8W



**Actual Bottom-Hole Location of Hunt 3408 2-15H**  
 T&R: 34S 8W  
 Section: 15, 2571' FEL & 370' FSL  
 -98.174093 37.080585

1 in = 666 ft

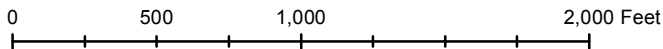


● Actual BH Location

\* SandRidge Wells

--- Perf

□ Sections



Draftsman: Dory Deines  
 Draft Date: 4/10/2015

Drawing Name/Number:  
 Addendum\_Hunt 3408 2-15H.mxd

Coordinate System:  
 NAD 1927 State Plane  
 Kansas South FIPS: 1502