Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1224766

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34192
Name: SandRidge Exploration and Production LLC
Address 1: 123 ROBERT S. KERR AVE
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73102 + 6406
Contact Person: Tiffany Golay
Phone: (405) 429-6543
CONTRACTOR: License # 34464
Name: Lariat Services, Inc. dba Chaparral Supply, Hondo Heavy Haul
Wellsite Geologist: Will Scott
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 #:

6/6/2014 Spud Date or Recompletion Date
7/2/2014 Date Reached TD
8/24/2014 Completion Date or Recompletion Date

API No. 15 - 15-077-22056-01-00
Spot Description:
SW SE SW SE Sec. 31 Twp. 34 S. R. 8 ☐ East ☑ West
200 Feet from ☐ North / ☑ South Line of Section
1775 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Harper
Lease Name: Rose 3408 Well #: 2-31H
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 1250 Kelly Bushing: 1269
Total Vertical Depth: 9200 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 780 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: 10/03/2014
☑ **Confidential Release Date:** 10/02/2016
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 10/03/2014

1224766

Operator Name: SandRidge Exploration and Production LLC Lease Name: Rose 3408 Well #: 2-31H

Sec. 31 Twp. 34 S. R. 8 ☐ East ☑ West County: Harper

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

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

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

Name	Top	Datum
Base Heebner	3513	
Lansing	3845	
Cottage Grove	4140	
Oswego	4513	
Cherokee	4686	
Verdigris	4719	
Mississippian	5058	

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	120	Edge Services 10 Sack Grout	12	None
Surface	12.25	9.63	36	780	O-Tex Lite Premium Plus 65/35	290	(6% Gel) @% Calcium Chloride, 1/4 pps
Intermediate	8.75	7	26	5445	50/50 Poz Premium and Premii	315	4% Gel, .2% FL-17, .1% C-51, .2% C-20,

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☑ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☑ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☑ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
Attached	Attached	Attached	Attached

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 8/28/2014

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 2-31H
Doc ID	1224766

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
		750 gals 15% HCl, 4470 bbls fresh Slickwater, TLTR: 4470	9016
		750 gals 15% HCl, 2906 bbls fresh Slickwater, TLTR: 7376	8843
		750 gals 15% HCl, 2860 bbls fresh Slickwater, TLTR: 10236	8673
		750 gals 15% HCl, 2897 bbls fresh Slickwater, TLTR: 13133	8503
		750 gals 15% HCl, 2960 bbls fresh Slickwater, TLTR: 16093	8331
		750 gals 15% HCl, 3601 bbls fresh Slickwater, TLTR: 19694	8155
		750 gals 15% HCl, 2863 bbls fresh Slickwater, TLTR: 22557	7640
		750 gals 15% HCl, 2893 bbls fresh Slickwater, TLTR: 25450	7770

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 2-31H
Doc ID	1224766

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
		750 gals 15% HCl, 2872 bbls fresh Slickwater, TLTR: 28322	7600
		750 gals 15% HCl, 3497 bbls fresh Slickwater, TLTR: 31819	7429
		750 gals 15% HCl, 3109 bbls fresh Slickwater, TLTR: 34428	7217
		750 gals 15% HCl, 2153 bbls fresh Slickwater, TLTR: 37081	7100
		750 gals 15% HCl, 2839 bbls fresh Slickwater, TLTR: 39920	7090
		750 gals 15% HCl, 3469 bbls fresh Slickwater, TLTR: 43389	6918
		750 gals 15% HCl, 2843 bbls fresh Slickwater, TLTR: 46232	6747
		750 gals 15% HCl, 3453 bbls fresh Slickwater, TLTR: 51685	6535

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 2-31H
Doc ID	1224766

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
		750 gals 15% HCl, 2820 bbls fresh Slickwater, TLTR: 54505	6323
		750 gals 15% HCl, 3423 bbls fresh Slickwater, TLTR: 55928	6151
		750 gals 15% HCl, 2865 bbls fresh Slickwater, TLTR: 58793	5985
		750 gals 15% HCl, 3115 bbls fresh Slickwater, TLTR: 61908	5777
		750 gals 15% HCl, 3314 bbls fresh Slickwater, TLTR: 65222	5110

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Rose 3408 2-31H
Doc ID	1224766

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	120	Edge Services 10 Sack Grout	12	None
Surface	12.25	9.63	36	780	O-Tex Lite Premium Plus 65/35 and Premium Plus (Class C)	290	(6% Gel) @% Calcium Chloride, 1/4 pps Cello-Flake, .4% C-41P
Intermediate	8.75	7	26	5445	50/50 Poz Premium and Premiium	315	4% Gel, .2% FL-17, .1% C-51, .2% C-20, .1% C-37, .4% C-41P

EDGE SERVICES
580-254-3216
Woodward, OK

INVOICE

DATE	INVOICE #
6/9/2014	4843

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

REMIT TO
EDGE SERVICES, INC. PO BOX 609 WOODWARD, OK 73802

COUNTY	STARTING D...	WORK ORDER	RIG NUMBER	LEASE NAME	Terms
HARPER, KS	6/6/2014	3674	LARIAT 40	ROSE 3408 2-31H	Due on rec...

Description
DRILLED 120' OF 30" CONDUCTOR HOLE DRILLED 6' OF 76" HOLE FURNISHED AND SET 6' X 6' TINHORN CELLAR FURNISHED 120' OF 30" CONDUCTOR PIPE FURNISHED MUD, WATER, AND TRUCKING FURNISHED WELDER AND MATERIALS FURNISHED 12 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 $24,250.00

Sales Tax (6.15%)	$306.39
TOTAL	$24,556.39

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 3850	06/17/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	dridge Exploration & Produc	Jackie Kennedy

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Rose 3408	2-31H	Surface	MARCOS QUINTANA

EMP NAME							
Marcos Quintana		0					
Wallace Berry							
David Settlemier							
David Thomas							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 80 Pressure _____

Retainer Depth _____ Total Depth 800

	Called Out	On Location	Job Started	Job Completed
Date	6/16/2014	6/17/2014	6/17/2014	6/17/2014
Time	2300	0400	1550	1650

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Val	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size Grade	From	To	Max. Allow
Casing		36#	9⅝"	Surface	800	1,500
Liner						
Liner						
Tubing			0			
Drill Pipe						
Open Hole			12¼"	Surface	800	Shots/Ft.
Perforations						
Perforations						
Perforations						

Materials

Mud Type	WBM	Density 9	Lb/Gal	
Disp. Fluid	Fresh Water	Density 8.33	Lb/Gal	
Spacer type	resh Wate	BBL. 10	8.33	
Spacer type		BBL.		
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
6/17	11.0
Total	11.0

Operating Hours

Date	Hours
6/17	1.0
Total	1.0

Description of Job

Surface

Pressures

MAX 1,500 PSI AVG. 50 psi

Average Rates in BPM

MAX 6 BPM AVG 5

Cement Left in Pipe

Feet 44 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	195	TEX Lite Premium Plus 65	(6% Gel) 2% Calcium Chloride - ¼pps Cello-Flake - .4% C-41P	11.11	2.01	12.40
2	195	Premium Plus (Class C)	2% Calcium Chloride - ¼pps Cello-Flake	6.32	1.32	14.80
3	*100	Premium Plus (Class C)	*2% Calcium Chloride on side to use if necessary	*6.32	*1.32	*14.8

Summary

Preflush		Type:		Preflush:	BBl	10.00	Type: Fresh Water
Breakdown		MAXIMUM	1,500 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl	56	Calc.Disp Bbl 57
		Actual TOC	SURFACE	Calc. TOC:		SURFACE	Actual Disp. 57.00
Average		Bump Plug PSI:	600	Final Circ.	PSI:	100	Disp:Bbl
ISIP	5 Min.	10 Min	15 Min	Cement Slurry:	BBl	116.0	
				Total Volume	BBl	183.00	

CUSTOMER REPRESENTATIVE Bill Tumlin

SIGNATURE

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 3887	06/27/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Sandridge Exploration & Production	Jackie Kennedy

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Rose 3408	2-31H	Intermediate	Mike Hall

EMP NAME							
Mike Hall		0					
Cheryl Newton							
Vontray Watkins							
Ron Derry							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 155 Pressure _____

Retainer Depth _____ Total Depth 5445

	Called Out	On Location	Job Started	Job Completed
Date	6/27/2014	6/27/2014	6/27/2014	6/27/2014
Time		03:00	10:25	13:00

Tools and Accessories

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		5,000
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			8¾"		Surface	5,470'	Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	WBM	Density 9	Lb/Gal	
Disp. Fluid	Fresh Water	Density 8.33	Lb/Gal	
Spacer type	Fresh Wate	BBL. 20		8.33
Spacer type	Caustic	BBL. 10		8.40
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
6/27	10.0
Total	10.0

Operating Hours

Date	Hours
6/27	1.0
Total	1.0

Description of Job

Intermediate

Pressures

MAX 5,000 PSI AVG. 400

Average Rates in BPM

MAX 8 BPM AVG 5

Cement Left in Pipe

Feet 44 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	215	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.2% C-20 - 0.1% C-37 - 0.4% C-41P	6.93	1.43	13.60
2	100	Premium	0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.4% C-41P	5.19	1.19	15.60
3	0	0	0	0.00	0.00	0.00

Summary

Preflush	10	Type:	Caustic	Preflush:	BBl	30.00	Type: Gel Spacer
Breakdown		MAXIMUM	5,000 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl	N/A	Calc.Disp Bbl 207
		Actual TOC	2,674	Calc. TOC:		2,674	Actual Disp. 207.00
Average		Bump Plug PSI:	1,200	Final Circ.	PSI:	750	Disp:Bbl 207.00
ISIP	5 Min.	10 Min	15 Min	Cement Slurry	BBl	76.0	
				Total Volume	BBl	313.00	

CUSTOMER REPRESENTATIVE _____ SIGNATURE Jackie Kennedy

Directional Survey Calculations	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
SHL	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5114	200	3568	1776
BHL	9200	90.00	359.30	4513.96	4690.98	750.63	4750.65	-0.06	274	4968	1669	3628
Miss Entry	5058	75.50	18.00	4492.33	560.68	785.37	676.28	7.22	4405	837	1644	3658
Top Port	5608	91.22	358.55	4548.53	1101.63	808.75	1214.26	1.52	3864	1378	1675	3626
Bottom Port	9016	90.00	359.30	4513.96	4506.94	752.88	4569.20	0.12	458	4784	1669	3628

Survey Points		X	Y		X	Y		m
	NW Corner XY Coord	2076724	139861				North Line slope	0.0080812
	SW Corner XY Coord	2076798	134541	Surface XY	2080363	134776	East Line slope	-0.018264
	NE Corner XY Coord	2082045	139904				South Line slope	0.0097305
	SE Corner XY Coord	2082142	134593				West Line slope	-0.0139098

	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
	0	0.0	0	0	0	0	0	0	5114	200	3568	1776
	250	0.75	124.5	249.99286	-0.9267668	1.34845407	-1.00735935	0.3	5115	199	3570	1774
	520	0.69	124.5	519.97151	-2.84848705	4.14457437	-3.09619426	0.022222	5117	197	3572	1772
	750	0.55	124.5	749.95787	-4.25815271	6.19565064	-4.62844582	0.06087	5119	196	3574	1770
	858	0.1	124.5	857.95585	-4.6051364	6.70051504	-5.00560355	0.416667	5119	196	3575	1769
	949	0.2	102.9	948.95551	-4.68557372	6.92077701	-5.09933751	0.12437	5119	196	3575	1769
	1405	0.4	126.3	1404.9486	-5.80557503	8.97937685	-6.34292431	0.050562	5120	194	3577	1767
	1881	0.2	156.4	1880.9413	-7.55051986	10.6510589	-8.18666821	0.052131	5122	193	3579	1765
	2354	0.3	159.4	2353.9366	-9.46614071	11.4172501	-10.1454909	0.021315	5124	191	3580	1764
	2830	0.8	15.6	2829.9237	-7.43197422	12.7493589	-8.19644183	0.222068	5122	193	3581	1763
	3304	0.1	343.7	3303.9064	-3.84777055	13.5231388	-4.66616156	0.151277	5118	196	3582	1762
	3779	0.5	102.6	3778.9007	-3.90203007	15.4294514	-4.83669747	0.1169	5118	196	3584	1760
	3905	0.4	59.8	3904.8971	-3.80072083	16.3461104	-4.79153788	0.270897	5118	196	3585	1759
	3936	0.5	20.3	3935.8963	-3.61942873	16.4865605	-4.61915821	1.026945	5118	197	3585	1759
	3967	1.3	340	3966.8924	-3.16211128	16.4132131	-4.15821599	3.141666	5118	197	3585	1759
	3999	2.8	337.3	3998.871	-2.0998921	15.9874135	-3.07198363	4.695908	5117	198	3584	1760
	4030	4.7	340.8	4029.8033	-0.20179404	15.2774745	-1.13408516	6.17051	5115	200	3584	1760
	4061	6.3	342.3	4060.6596	2.618157524	14.3426129	1.73767856	5.181646	5112	203	3583	1761
	4093	7.8	342.3	4092.4167	6.359661619	13.1485466	5.5451	4.6875	5108	207	3582	1762
	4125	9.3	344	4124.0602	10.91408206	11.7755689	10.1748438	4.753069	5104	211	3580	1764
	4156	9.9	343.5	4154.626	15.87711324	10.3282498	15.2169747	1.954067	5099	216	3579	1765
	4188	13.4	340	4185.9623	22.00102653	8.27809958	21.4546243	11.15334	5092	222	3577	1767
	4220	17.8	335.8	4216.7769	29.95082834	5.00320204	29.5895258	14.18709	5084	230	3574	1770
	4251	22.4	334.1	4245.8812	39.59128739	0.47839418	39.4882364	14.95641	5075	240	3569	1774
	4283	25.7	334	4275.0993	51.31556952	-5.22807728	51.5390221	10.31328	5063	252	3564	1780
	4316	28.1	334.3	4304.5265	64.75164549	-11.7360084	65.3473368	7.284327	5050	265	3557	1786
	4347	30.7	334.3	4331.5318	78.46307383	-18.3348732	79.4360416	8.387097	5036	279	3551	1793
	4378	32.6	335.5	4357.9202	93.19420707	-25.2303802	94.560659	6.456576	5021	294	3544	1799
	4411	33.7	335.8	4385.5488	109.6344209	-32.6699377	111.424383	3.37019	5005	310	3537	1806
	4442	35.6	336.5	4411.0496	125.7548237	-39.793869	127.949623	6.261964	4988	326	3530	1813
	4474	38.3	337.1	4436.6204	143.434524	-47.3679654	146.058735	8.512359	4971	344	3523	1820
	4505	40.4	337.3	4460.591	161.5536836	-54.983727	164.60903	6.786526	4952	362	3516	1828
	4537	43.5	336.3	4484.3877	181.210155	-63.4146149	184.743531	9.90992	4933	382	3507	1836
	4568	47.3	334.9	4506.151	201.303179	-72.5389001	205.356102	12.67222	4913	402	3499	1845
	4600	49.8	334.5	4527.3322	222.985177	-82.7897181	227.623456	7.86845	4891	424	3489	1854
	4631	52.2	334.7	4546.8398	244.7465968	-93.1220104	249.975058	7.758147	4869	446	3479	1864
	4663	54.5	335.5	4565.9403	268.0328305	-103.928169	273.877558	7.462017	4846	469	3468	1875
	4694	56.6	335.8	4583.4756	291.3210482	-114.466755	297.765704	6.821023	4822	493	3458	1885
	4726	58.3	338.1	4600.6938	316.1395553	-125.021584	323.182276	8.057339	4797	518	3448	1895
	4757	60	339.9	4616.5907	340.9846234	-134.554744	348.562989	7.41066	4772	543	3438	1904
	4789	61.6	340.1	4632.2017	367.2327909	-144.107891	375.345404	5.029674	4746	569	3429	1913
	4821	62.4	341	4647.2249	393.8743716	-153.515139	402.511592	3.523708	4719	596	3420	1922
	4853	65.3	340.9	4661.3266	421.0228254	-162.88994	430.181726	9.066839	4692	623	3411	1931
	4885	68.7	341.4	4673.8282	448.8954962	-172.40401	458.583229	10.72186	4664	651	3402	1940
	4917	70.6	342.2	4684.956	477.3960754	-181.773168	487.602622	6.383365	4636	679	3393	1949
	4948	73.8	343.5	4694.4317	505.5961902	-190.472459	516.281217	11.06764	4607	708	3385	1957
	4980	75.9	345.8	4702.7953	535.3790336	-198.644875	546.507423	9.5494	4577	738	3377	1965
	5012	77.1	347.8	4710.2662	565.670809	-205.748344	577.176355	7.141039	4547	768	3370	1971
	5044	78	349.3	4717.1653	596.2953055	-211.950419	608.122358	5.372245	4516	799	3365	1977
	5075	80	350.2	4723.0802	626.2383933	-217.364187	638.340099	7.052959	4486	829	3360	1982
	5107	81.6	351.9	4728.1966	657.4400971	-222.277071	669.783529	7.245637	4455	860	3355	1986
	5152	83.5	355.4	4734.0328	701.7776409	-227.208175	714.339411	8.791924	4411	904	3351	1990
	5202	84.3	358	4739.3469	751.407389	-230.068965	764.051237	5.412408	4361	954	3349	1992
Top of Tangent	5249	84.6	358.7	4743.8925	798.1673174	-231.415854	810.806174	1.613961	4314	1001	3348	1992
@ 5177'	5297	85.6	358	4747.9925	845.9711474	-232.793105	858.60492	2.539969	4267	1049	3347	1993
	5344	86	357.7	4751.4347	892.8117799	-234.551637	905.465541	1.062801	4220	1095	3346	1994
	5392	86.2	357.4	4754.6995	940.6567703	-236.598778	953.346266	0.749952	4172	1143	3345	1995
Btm of Tangent	5419	86.6	356.8	4756.3948	967.5688027	-237.962114	980.291331	2.667127	4145	1170	3344	1996
@ 5443'	5494	89.6	358	4758.8813	1042.44051	-241.361336	1055.23091	4.307737	4070	1245	3341	1998
	5585	90.7	357.3	4758.643	1133.361706	-245.092569	1146.2103	1.432784	3979	1336	3339	2000
	5675	91.6	356.8	4756.8367	1223.22313	-249.723314	1236.18682	1.143902	3889	1426	3336	2003
	5766	91.5	357.2	4754.3752	1314.064971	-254.484125	1327.14986	0.452932	3798	1517	3332	2006
	5857	90.4	359.3	4752.8663	1405.003543	-257.262285	1418.08842	2.604802	3707	1608	3331	2007
	5948	90.9	359.2	4751.834	1495.989592	-258.453353	1508.97747	0.56033	3616	1699	3331	2007
	6039	92.5	358.4	4749.1344	1586.925901	-260.357934	1599.86044	1.965588	3525	1790	3330	2007

Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
6130	90.5	359.8	4746.7523	1677.876619	-261.786194	1690.72871	2.682412	3434	1881	3330	2007
6221	91.6	359.8	4745.0848	1768.859387	-262.103785	1781.56116	1.208791	3343	1972	3331	2005
6312	90.7	1.4	4743.2583	1859.832174	-261.150885	1872.30609	2.01699	3252	2063	3333	2003
6404	89.3	1.4	4743.2583	1951.802423	-258.903181	1963.96758	1.521739	3161	2155	3337	1999
6496	89.8	1	4743.9809	2043.77893	-256.976559	2055.65491	0.695983	3069	2247	3340	1995
6587	91.3	0.5	4743.1074	2134.764054	-255.785448	2146.39762	1.737502	2978	2338	3342	1992
6678	89.7	0.9	4742.3133	2225.750656	-254.673743	2237.14664	1.812347	2887	2429	3345	1990
6770	89.1	0.2	4743.2767	2317.74038	-253.790647	2328.91088	1.00209	2795	2521	3347	1987
6865	89.4	359.5	4744.5202	2412.731216	-254.039353	2423.73972	0.801602	2700	2616	3348	1986
6959	89.9	358.5	4745.0944	2506.713655	-255.679845	2517.64701	1.189377	2606	2710	3347	1986
7055	90.5	358	4744.7593	2602.667552	-258.611494	2613.60091	0.813564	2510	2805	3346	1987
7149	91.7	357.4	4742.9548	2696.572374	-262.383002	2707.56082	1.42722	2416	2899	3343	1989
7244	89.8	359.3	4741.7112	2791.516156	-265.117601	2802.49446	2.828241	2321	2994	3342	1990
7338	90.2	359.2	4741.7112	2885.5079	-266.34802	2896.386	0.438628	2227	3088	3342	1989
7433	91.8	359.2	4740.0533	2980.481087	-267.674182	2991.26301	1.684211	2132	3183	3342	1989
7527	92	358.6	4736.9367	3074.411616	-269.477712	3085.12844	0.672492	2038	3277	3342	1989
7622	90.2	359.2	4735.113	3169.372268	-271.300899	3180.02327	1.997183	1943	3372	3341	1989
7717	90.9	359.2	4734.2011	3264.358041	-272.627237	3274.91285	0.736842	1848	3467	3341	1989
7812	91.3	359.1	4732.3773	3359.329876	-274.036271	3369.79356	0.434006	1753	3562	3341	1988
7908	91.7	359.7	4729.8643	3455.291083	-275.041257	3465.63714	0.750977	1657	3658	3341	1988
8003	90	359.5	4728.455	3550.274782	-275.704415	3560.48416	1.801811	1562	3753	3342	1987
8097	90.8	359.4	4727.7988	3644.267385	-276.606703	3654.35653	0.857687	1468	3847	3342	1986
8192	91.7	359.2	4725.7264	3739.236665	-277.767001	3749.2195	0.970467	1373	3942	3343	1985
8286	93.1	359.7	4721.7902	3833.147247	-278.668715	3843.00997	1.581335	1279	4036	3343	1984
8381	90.5	358.6	4718.8063	3928.080305	-280.077829	3937.85199	2.971443	1184	4131	3343	1984
8476	90.5	358.1	4717.9773	4023.036998	-282.813142	4032.79855	0.526296	1089	4226	3341	1985
8571	90.8	358.3	4716.8996	4117.983854	-285.796972	4127.75047	0.379524	994	4321	3340	1986
8666	91.6	358.2	4714.9101	4212.917937	-288.697458	4222.68455	0.848656	899	4416	3338	1987
8760	89.7	0.5	4713.8436	4306.895226	-289.763288	4316.55162	3.173501	805	4510	3338	1987
8855	90.2	359.6	4713.9265	4401.893875	-289.680388	4411.36802	1.083748	710	4605	3340	1985
8949	89.9	358.2	4713.8445	4495.874071	-291.484903	4505.28309	1.52317	616	4699	3339	1985
9044	90.9	359.1	4713.1812	4590.843205	-293.72302	4600.21172	1.416147	521	4794	3338	1986
9138	90.6	359.5	4711.9508	4684.827839	-294.871305	4694.09115	0.531885	427	4888	3339	1985
9200	90.6	359.5	4711.3016	4746.822078	-295.412321	4756.00279	0	365	4950	3339	1984
								5114	200	3568	1776
								5114	200	3568	1776
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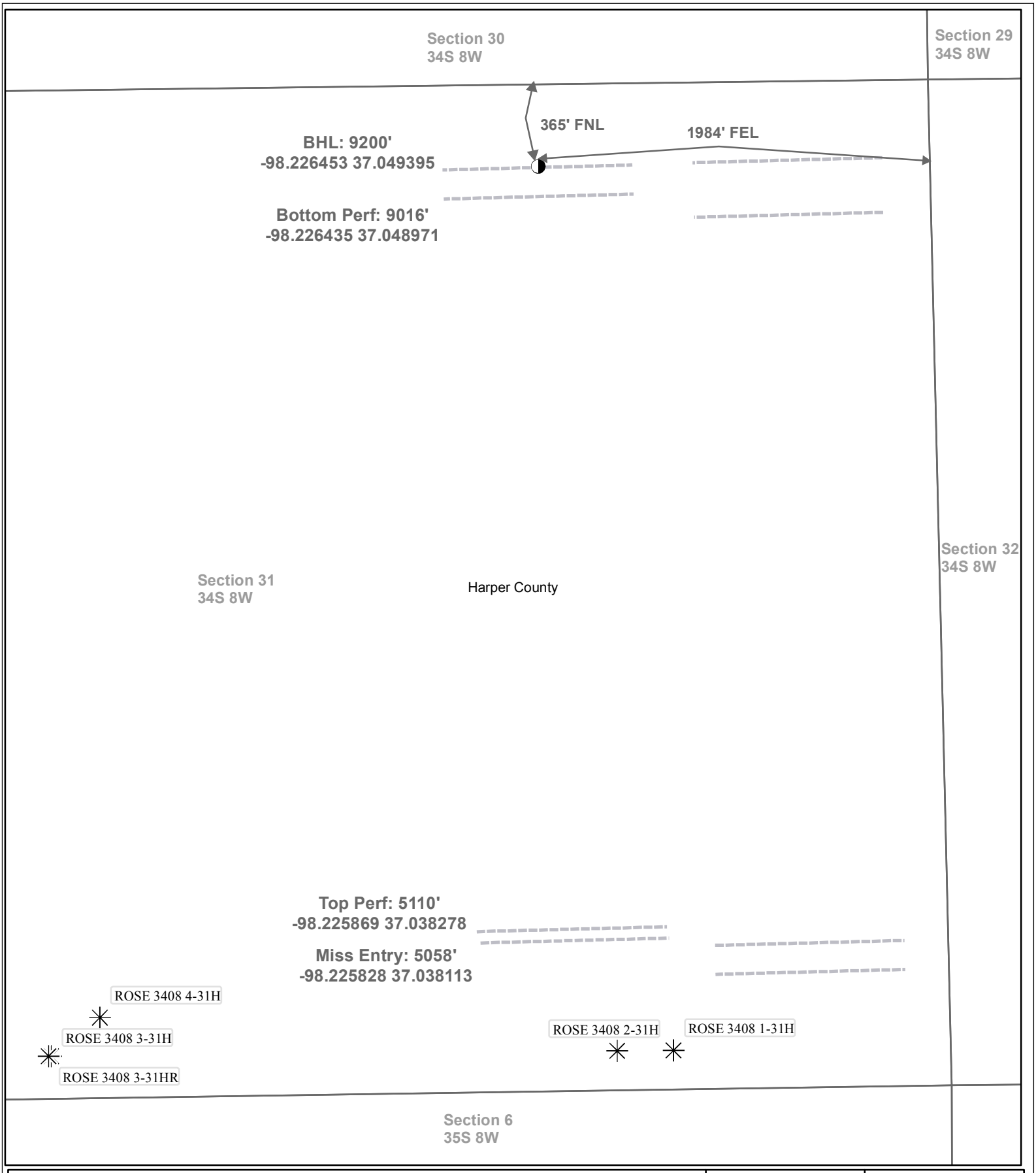

SANDRIDGE
THE POWER OF US

Actual BH Location

SandRidge Wells

Perf

Sections

Actual Bottom-Hole Location of Rose 3408 2-31H
T&R: 34S 8W
Section: 31, 1984' FEL & 365' FNL
-98.226453 37.049395

1 in = 667 ft

0 500 1,000 2,000 Feet

N

Draftsman: Dory Deines	Draft Date: 9/30/2014
Drawing Name/Number: Addendum_Rose 3408 2-31H.mxd	
Coordinate System: NAD 1927 State Plane Kansas South FIPS: 1502	