



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1211586
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
-----------------------------------	-----------------	---

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: _____

1211586



Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

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

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

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

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

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

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

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hank 3420 1-2H
Doc ID	1211586

Tops

Name	Top	Datum
Base Anhydrite	2280	
Base Heebner Shale Marker	4179	
Lansing Limestone Group	4367	
Marmaton Limestone Group	4981	
Big Lime	5033	
Oswego Limestones	5057	
Pawnee Limestones	5151	
Cherokee Shale Marker	5223	
Mississippi Unconformity & Lime	5557	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hank 3420 1-2H
Doc ID	1211586

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	7351-7419	1500 gals 15% HCL acid, 5940 bbls Fresh Slickwater, Running TLTR: 5683	
5	7177-7284	1500 gals 15% HCL acid, 5952 bbls Fresh Slickwater, Running TLTR: 11227	
5	7005-7115	1500 gals 15% HCL acid, 5724 bbls Fresh Slickwater, Running TLTR: 16505	
5	6827-6928	1500 gals 15% HCL acid, 5719 bbls Fresh Slickwater, Running TLTR: 22492	
5	6669-6772	1500 gals 15% HCL acid, 5889 bbls Fresh Slickwater, Running TLTR: 28497	
5	6457-6624	1500 gals 15% HCL acid, 5833 bbls Fresh Slickwater, Running TLTR: 34705	
5	6277-6375	1500 gals 15% HCL acid, 5682 bbls Fresh Slickwater, Running TLTR: 40478	
5	6086-6222	1500 gals 15% HCL acid, 5702 bbls Fresh Slickwater, Running TLTR: 46402	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hank 3420 1-2H
Doc ID	1211586

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	5600-5912	1500 gals 15% HCL acid, 5847 bbls Fresh Slickwater, Running TLTR: 52330	



INVOICE

DATE	INVOICE #
3/18/2014	4632

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
COMANCHE, ...	3/13/2014	3520	HWD 14	HANK 3420 1-2H	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 20" CONDUCTOR PIPE FURNISHED MUD, WATER, AND TRUCKING FURNISHED WELDER AND MATERIALS FURNISHED 12 YARDS OF 10 SACK GROUT FOR CONDUCTOR HOLE FURNISHED GROUT PUMP TOTAL BID \$15,131.73

Sales Tax (6.15%)	\$131.73
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TOTAL	\$15,131.73
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Post Job Report

SandRidge Energy

3/23/2014

Hank #3420 1-2H

Comanche County, KS





SandRidge Energy
Hank #3420 1-2H
Comanche County, KS.

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SandRidge Energy
Hank #3420 1-2H
Comanche County, KS.

1.0 Executive Summary

Allied Oil & Gas Services would like to thank you for the award of the provision of cementing products and services on the well Hank #3420 1-2H surface Casing.

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

Allied started the job testing lines to 2000 psi. After a successful test we began the job by pumping 10 bbls of preflush spacer. We then mixed and pumped the following cements:

76.60 Bbls (230 sacks) of 12.7 ppg Lead slurry:
65:35 Class A:Poz Blend - 1.87 Yield
6.0% Gel
2%cc
¼# Floseal

32 Bbls (150 sacks) of 15.6 ppg Tail slurry:
2% cc
¼# Floseal

The top plug was then released and displaced with 53.5 of fresh water. The plug bumped and pressured up to 950 psi. Pressure was released and floats held. Cement did not circulate. Wait 5 hours + run a temperature survey, Tested @ 210'. 200' of 1" pipe was run, and the following cement was circulated to surface.

80 Bbls (375 sacks) of 15.6 ppg slurry
2% cc
¼# Floseal

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

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

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



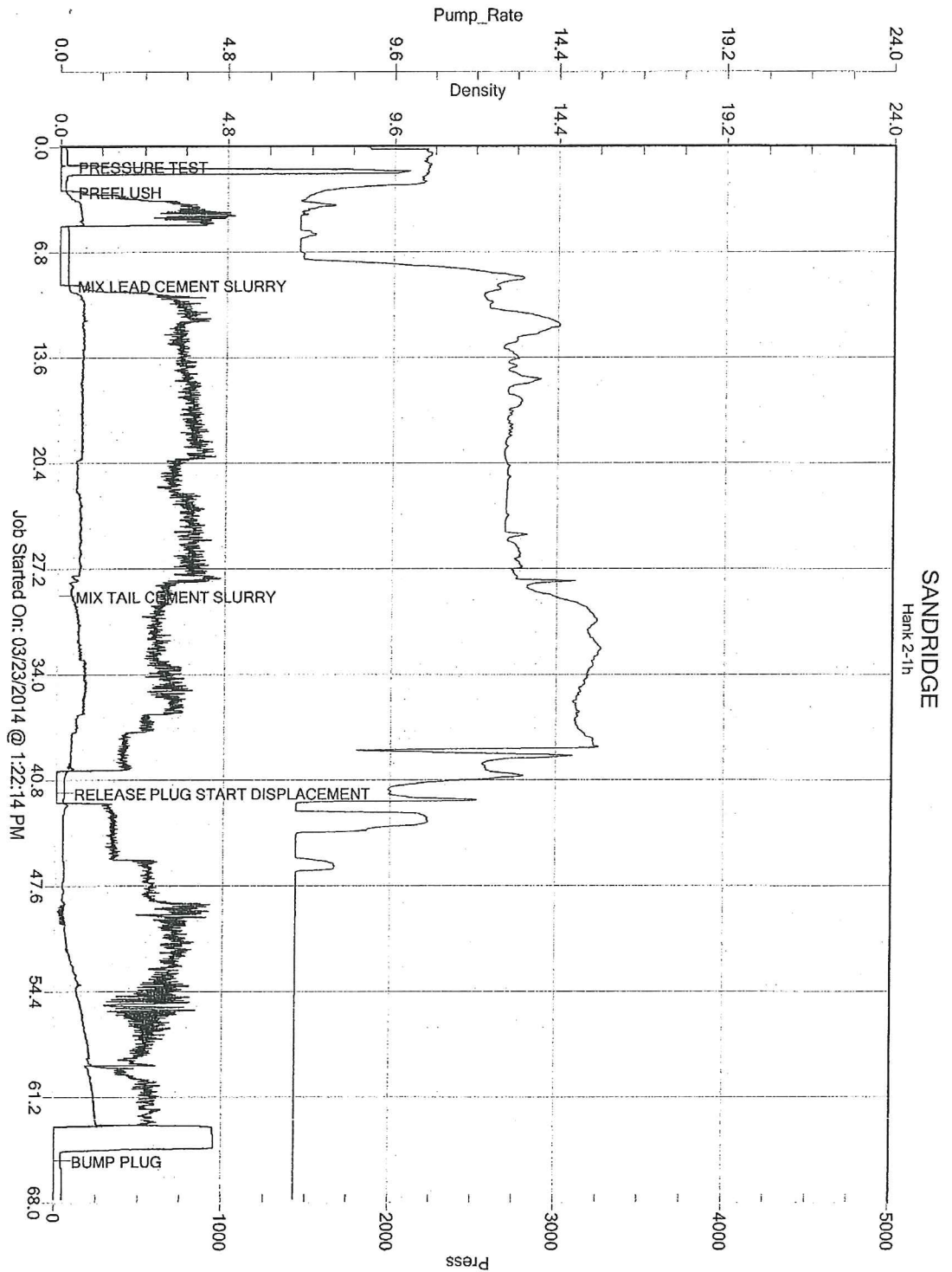
SandRidge Energy
 Hank #3420 1-2H
 Comanche County, KS.

2.0 Job Summary

2.1 Job Log

Time	Pressures PSI		Fluid Pumped Data			Remarks
	Drill Pipe /Casing	Annulus	Total Fluid	Pumped per Period	Rate Bbls/Min	
						Held Safety Meeting
						Rig Up
						Pre-Job Safety Meeting
						Finish Rig Up
2:00pm	2000		.25		.25	Pressure Test Lines
	150		10		3.5	Pump Spacer
	150		76.5		3.5	Mix & Pump Lead Cement (230 sacks)
	150		32		3.5	Mix & Pump Tail Cement (150 sacks)
						Cement in stop pumps + release plug
						Lost returns
	70		20		3.5	Start displacement
	110		40		3.5	Continue Displacement
	200		50		3	Continue Displacement
	240				3	Continue Displacement
3:00pm	950				0	Displacement in Bump plug
						Release pressure + Float Held
						Cement did not circulate
						Wait for temperature survey @ 210'
						Run 200' 1" tubing
	250		64		1.5	Mix 300 sacks Class A 2%cc + 1/4# Floseal
						Raise cement 5' from surface
						Cement fell
4:00am	150		16		1.5	Mix 75 sacks Class A + 2%cc + 1/4# Floseal
						Raised cement to surface.

2.2 Job Summary Chart





SandRidge Energy
 Hank #3420 1-2H
 Comanche County, KS.

3.0 Customer Satisfaction Survey

Customer: Sand Ridge
 Date: 3/23/14
 Well Name: Hank 3420 1-2H
 Well Location: Vic Protection KS
 Supervisor: Jason T
 Equipment Operators: CJ / Hector



Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	<input checked="" type="checkbox"/> Yes	No
Was the job performed in a professional manner?	<input checked="" type="checkbox"/> Yes	No
Were the calculations prepared and explained properly?	<input checked="" type="checkbox"/> Yes	No
Were the correct services dispatched to the job site?	<input checked="" type="checkbox"/> Yes	No
Were the services performed as requested?	<input checked="" type="checkbox"/> Yes	No
Did the job site environment remain unchanged?	<input checked="" type="checkbox"/> Yes	No
Did the equipment perform in the manner expected?	<input checked="" type="checkbox"/> Yes	No
Did the materials meet your expectations?	<input checked="" type="checkbox"/> Yes	No
Was the crew prepared for the job?	<input checked="" type="checkbox"/> Yes	No
Was the crew prompt in the rig-up and actual job?	<input checked="" type="checkbox"/> Yes	No
Were reasonable recommendations given, as requested?	<input checked="" type="checkbox"/> Yes	No
Did the crew perform safely?	<input checked="" type="checkbox"/> Yes	No
Was the job performed to your satisfaction?	<input checked="" type="checkbox"/> Yes	No
Customer Signature:	Date: <u>3.24.14</u>	
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"></div> <div style="width: 35%;"></div> </div>		
Additional Comments:		



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Post Job Report

SandRidge Energy

Hank #3420 1-2H

4/2/2014

Plug Back

Comanche County, KS





SandRidge Energy
Hank #3420 1-2H
Comanche County, KS.

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SandRidge Energy
Hank #3420 1-2H
Comanche County, KS.

1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Hank #3420 1-2H Plug Back

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

Allied started the job testing lines to 2600 psi. After a successful test we began the job by pumping 30 bbls of preflush spacer. We then mixed and pumped the following cements:

43 Bbls (245 sacks) of 17 ppg Lead slurry:
Class H .99 Yield
.75% CD-31
.2% Defoamer
.1% C-20

We then started displacement with 5.5. Bbls of water followed with 44 Bbls of mud. The drill pipe was then pulled out of the hole leaving a 507" cement plug from 5250'-4743'+-

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

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

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



SandRidge Energy
 Hank #3420 1-2H
 Comanche County, KS.

3.0 Customer Satisfaction Survey

Customer: SANDRIDGE
 Date: 4-3-2014
 Well Name: HANK 3420 1-2H
 Well Location: COMANCHE, CO.
 Supervisor: K. LESLEY
 Equipment Operators: J. BOWERS, R. JOHNSON



Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	Yes	No
Was the job performed in a professional manner?	Yes	No
Were the calculations prepared and explained properly?	Yes	No
Were the correct services dispatched to the job site?	Yes	No
Were the services performed as requested?	Yes	No
Did the job site environment remain unchanged?	Yes	No
Did the equipment perform in the manner expected?	Yes	No
Did the materials meet your expectations?	Yes	No
Was the crew prepared for the job?	Yes	No
Was the crew prompt in the rig-up and actual job?	Yes	No
Were reasonable recommendations given, as requested?	Yes	No
Did the crew perform safely?	Yes	No
Was the job performed to your satisfaction?	Yes	No
Customer Signature: <u><i>Eddie Miller</i></u> Date: <u>4-3-2014</u>		
Additional Comments:		



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Post Job Report

SandRidge Energy

Hank #3420 1-2H

4-10-14

Intermediate Casing

Comanche County, KS





SandRidge Energy
Hank #3420 1-2H
Comanche County, KS.

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SandRidge Energy
Hank #3420 1-2H
Comanche County, KS.

1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Hank #3420 1-2H Casing.

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

Allied started the job testing lines to 3000 psi. After a successful test we began the job by pumping 30 bbls of preflush spacer. We then mixed and pumped the following cements:

60 Bbls (240 sacks) of 13.6 ppg Lead slurry:
50:50 Class A:Poz Blend - 1.4 Yield
2.0% Gel
0.4% FL-160
0.1% SA-51

21Bbls (100 sacks) of 15.6 ppg Tail slurry:
Class A - 1.18 Yield
0.8% FL-160
0.2% CD-31

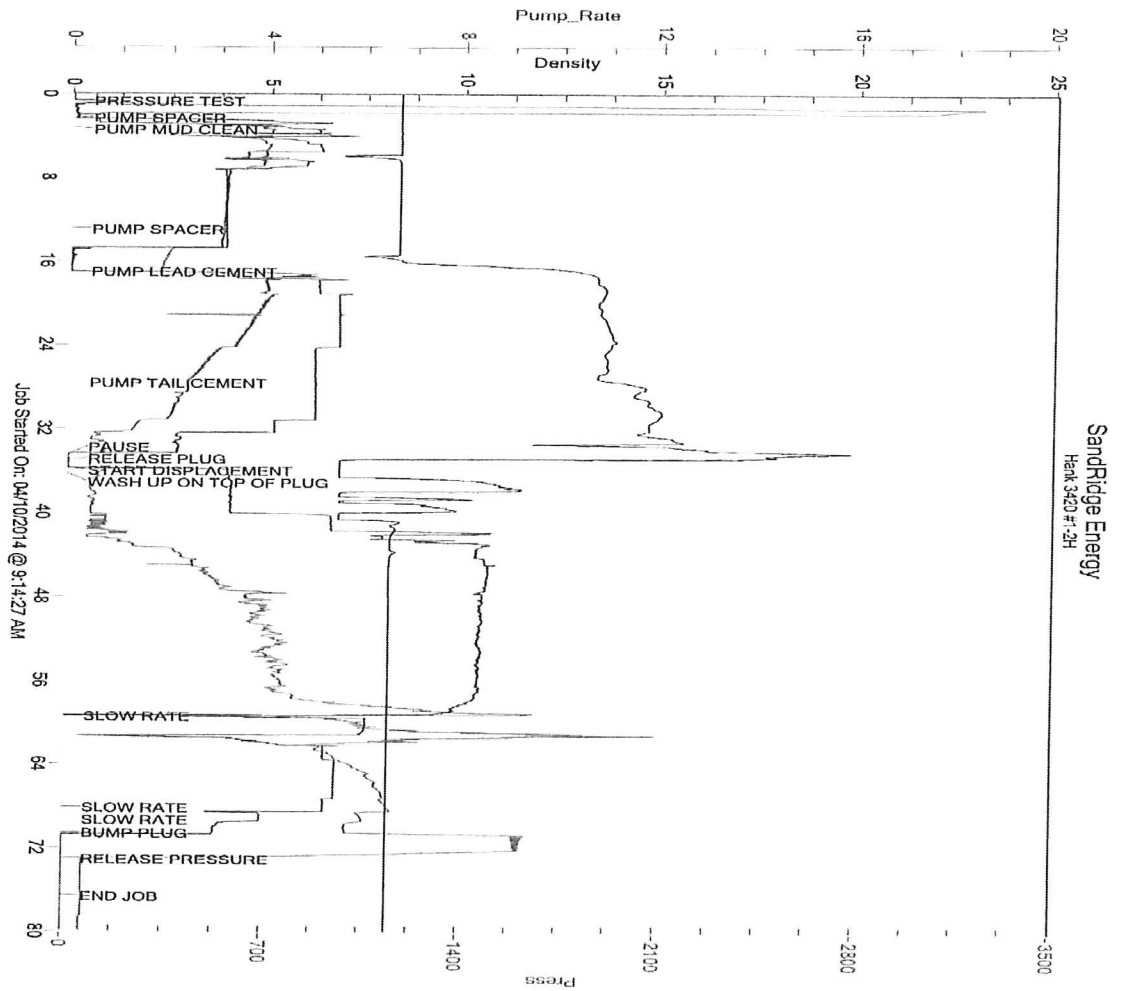
The top plug was then released and displaced with 213 of fresh water. The plug bumped and pressured up to 1600 psi. Pressure was released and floats held.

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

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

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

2.2 Job Summary Chart





SandRidge Energy
 Hank #3420 1-2H
 Comanche County, KS.

3.0 Customer Satisfaction Survey

Customer: SANDRIDGE
 Date: 4-10-14
 Well Name: Hank 3420- 1-2 H
 Well Location: Vic of Protection Ks
 Supervisor: T. SEBASTIAN
 Equipment Operators: Scott P James B



Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the job performed in a professional manner?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the calculations prepared and explained properly?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the correct services dispatched to the job site?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the services performed as requested?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the job site environment remain unchanged?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the equipment perform in the manner expected?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the materials meet your expectations?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the crew prepared for the job?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the crew prompt in the rig-up and actual job?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were reasonable recommendations given, as requested?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the crew perform safely?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the job performed to your satisfaction?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Customer Signature:		
<u>Ricardo Robles</u>		Date: <u>9-10-2014</u>
Additional Comments:		



Weatherford[®]

Drilling Services

Final Survey Report



HANK 3420 1-2H ST01

COMANCHE COUNTY, KS

WELL FILE: 4032266

APRIL 15, 2014

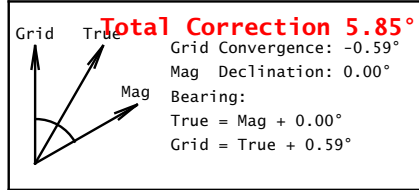
Weatherford
6525 N. Meridian Ste. #201
Oklahoma City, OK 73116
+1.405.773.1100 Main
+1.405.773.1200 Fax
www.weatherford.com

KB: 1286'
GL: 1268'



Plan Data for Hank 3420 1-2H ST01
 Field: SandRidge Energy - Comanche County, KS S NAD 27 US FT
 Map Unit: USFT Vertical Reference Datum (VRD): Mean Sea Level
 Projected Coordinate System: NAD27 / Kansas South
 Well: Hank 3420 1-2H ST01
 Type: Side-Track
 File Number: 4032266
 Plan Folder: P1 Plan: P2:V2
 Vertical Section: Position offset of origin from Site centre:
 +N/-S: 0.00USft Azimuth: 0.48°
 +E/-W: 0.00USft
 Magnetic Parameters:
 Model: Field Strength: Declination: Dip: Date:
 Default 50000(nT) 0.00° 0.00° 2014-03-10

Hank 3420 1-2H ST01
 HWD #14
 Comanche County, KA
 X= 1721689.02'
 Y= 161499.89'
 Plan 4 vs Actual



Plan Data for Hank 3420 1-2H ST01

Plan Point Information:
 DogLeg Severity Unit: °/100.00ft Position offsets from Site centre

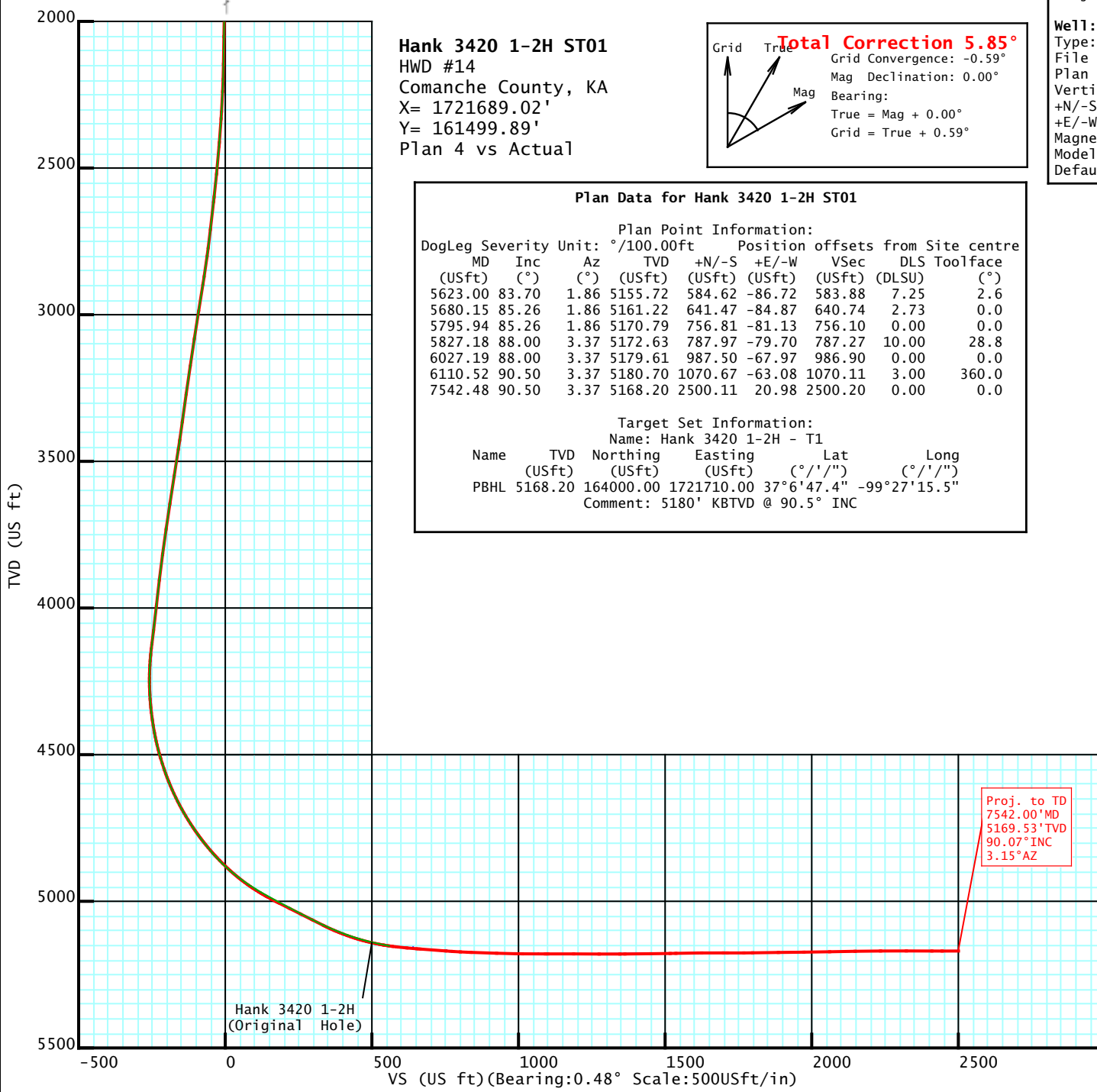
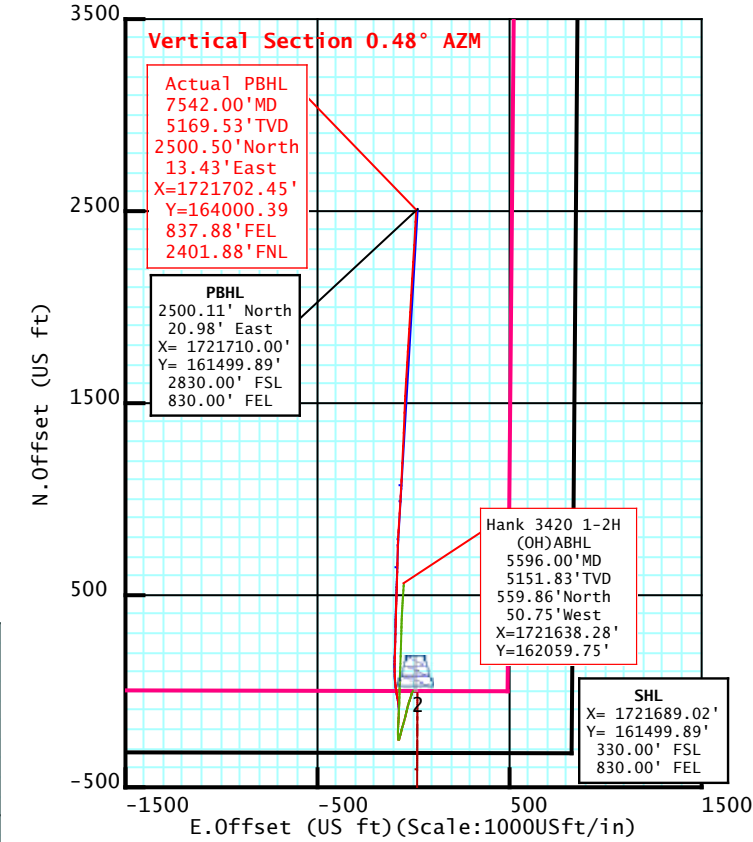
MD (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (USft)	DLS Toolface (DLSU)	Toolface (°)
5623.00	83.70	1.86	5155.72	584.62	-86.72	583.88	7.25	2.6
5680.15	85.26	1.86	5161.22	641.47	-84.87	640.74	2.73	0.0
5795.94	85.26	1.86	5170.79	756.81	-81.13	756.10	0.00	0.0
5827.18	88.00	3.37	5172.63	787.97	-79.70	787.27	10.00	28.8
6027.19	88.00	3.37	5179.61	987.50	-67.97	986.90	0.00	0.0
6110.52	90.50	3.37	5180.70	1070.67	-63.08	1070.11	3.00	360.0
7542.48	90.50	3.37	5168.20	2500.11	20.98	2500.20	0.00	0.0

Target Set Information:
 Name: Hank 3420 1-2H - T1

Name	TVD (USft)	Northing (USft)	Easting (USft)	Lat (°/'/'")	Long (°/'/'")
PBHL	5168.20	164000.00	1721710.00	37°6'47.4"	-99°27'15.5"

Comment: 5180' KBTVD @ 90.5° INC

Hank 3420 1-2H ST01
 F(OH) Ellen 3420 1-11H
 Hank 3420 1-2H
 Hank 3420 1-2H ST01 - Actual



Planned By: Lando Hiler Date: 04/04/2014

Weatherford Drilling Services
 6525 N. Meridian Ste. #201
 Oklahoma City, OK 73116
 +1.405.773.1100 Main
 +1.405.773.1887 Fax

5D Survey Report**SandRidge Energy**

Field Name: *SandRidge Energy - Comanche County, KS S NAD 27 US FT*
Site Name: *Hank 3420 1-2H*
Well Name: *Hank 3420 1-2H*
Survey: *Definitive Survey*

15 April 2014



Hank 3420 1-2H

Field Name	Map Units : US ft		Company Name : SandRidge Energy	
SandRidge Energy - Comanche County, KS S NAD 27 US FT	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD27 / Kansas South			
	Comment :			
Site Name	Units : US ft	North Reference : Grid	Convergence Angle : -0.59	
Hank 3420 1-2H	Position	Northing : 161499.89 US ft	Latitude : 37° 6' 22.65"	
		Easting : 1721689.02 US ft	Longitude : -99° 27' 15.49"	
	Site TVD Reference : Mean Sea Level			
	Elevation above Mean Sea Level: 1785.00 US ft			
	Comment :			
Slot Name	Position (Offsets relative to Site Centre)			
Hank 3420 1-2H	+N / -S : 0.00 US ft	Northing : 161499.89 US ft	Latitude : 37°6'22.65"	
	+E / -W : 0.00 US ft	Easting : 1721689.02 US ft	Longitude : -99°27'15.49"	
	Elevation above Mean Sea Level : 1785.00 US ft			
	Comment :			
Well Name	Type : Main well	UWI :		
Hank 3420 1-2H	Rig Height <i>Well TVD Reference</i> : 18.00 US ft	Comment :		
	Relative to Mean Sea Level: 1803.00 US ft	Closure Azimuth : 354.821°		
	Closure Distance : 562.154 US ft			
	Vertical Section (Position of Origin Relative to Site)			
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 0.48°	

5D Survey Report

Target Set**Name :** Hank 3420 1-2H - T1**Number of Targets :** 1**Comment :** 5180' KBTVD @ 90.5° INC

TargetName:	Position (Relative to Site centre)		
PBHL	+N / -S : 2500.11US ft	Northing : 164000.00 US ft	Latitude : 37°6'47.36"
Shape:	+E / -W : 20.98 US ft	Easting : 1721710.00US ft	Longitude : -99°27'15.55"
Cuboid	TVD (Well TVD Reference) : 5168.20 US ft		
	SS : -3365.20 US ft		
Orientation	Azimuth : 0.00°	Inclination : 0.00°	
Dimensions	Length : 0.00 US ft	Breadth : 0.00 US ft	Height : 0.00 US ft

Survey Name :Definitive Survey**Date :** 11/Mar/2014**Survey Tool :****Comment :****Company :****Magnetic Model****Model Name:** IGRF**Date:** 11/Mar/2014**Field Strength:** 51579.6 nT**Declination:** 5.26°**Dip:** 65.01°**Survey Tool Ranges**

Name	Start MD (US ft)	End MD (US ft)	Source Survey
MWD	0.00	5596.00	WFT MWD Surveys

Well path created using minimum curvature

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
741.00	0.22	95.68	741.00	-0.14	1.42	-0.13	0.03	First WFT MWD Survey (OH)	
836.00	0.07	145.21	836.00	-0.21	1.63	-0.19	0.19		
930.00	0.07	52.57	930.00	-0.22	1.71	-0.20	0.11		
1025.00	0.00	0.00	1025.00	-0.18	1.75	-0.17	0.07		
1118.00	0.30	294.86	1118.00	-0.08	1.53	-0.07	0.32		
1212.00	0.30	317.70	1212.00	0.20	1.14	0.21	0.13		
1305.00	0.43	303.62	1304.99	0.58	0.69	0.58	0.17		
1398.00	0.45	297.91	1397.99	0.94	0.08	0.94	0.05		
1492.00	0.56	278.79	1491.99	1.18	-0.70	1.18	0.21		
1586.00	0.75	254.00	1585.98	1.09	-1.75	1.07	0.36		
1678.00	0.64	230.01	1677.98	0.59	-2.72	0.57	0.34		
1772.00	1.00	225.00	1771.97	-0.33	-3.70	-0.36	0.39		

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
1865.00	1.11	222.52	1864.95	-1.57	-4.89	-1.61	0.13		
1959.00	1.16	216.64	1958.93	-3.00	-6.07	-3.05	0.13		
2052.00	1.16	213.00	2051.91	-4.55	-7.14	-4.61	0.08		
2146.00	1.20	219.68	2145.89	-6.10	-8.29	-6.17	0.15		
2239.00	2.63	185.69	2238.84	-8.97	-9.12	-9.05	1.90		
2332.00	3.89	192.59	2331.69	-14.18	-10.02	-14.26	1.42		
2426.00	4.95	198.18	2425.41	-21.14	-11.98	-21.24	1.22		
2521.00	5.81	197.55	2519.99	-29.62	-14.71	-29.74	0.91		
2616.00	7.00	197.52	2614.39	-39.73	-17.90	-39.87	1.25		
2711.00	6.67	199.13	2708.72	-50.46	-21.46	-50.64	0.40		
2805.00	8.15	197.79	2801.93	-61.96	-25.28	-62.17	1.59		
2900.00	9.43	194.96	2895.81	-75.89	-29.35	-76.13	1.42		
2994.00	9.21	193.52	2988.57	-90.65	-33.09	-90.92	0.34		
3089.00	8.94	192.73	3082.38	-105.24	-36.50	-105.54	0.31		
3184.00	8.51	193.18	3176.28	-119.28	-39.73	-119.61	0.46		
3279.00	8.51	195.00	3270.24	-132.92	-43.15	-133.27	0.28		
3374.00	7.79	193.65	3364.28	-145.96	-46.49	-146.35	0.78		
3469.00	9.21	196.08	3458.23	-159.52	-50.11	-159.94	1.54		
3563.00	9.21	197.18	3551.02	-173.94	-54.42	-174.39	0.19		
3658.00	9.05	196.79	3644.82	-188.36	-58.82	-188.84	0.18		
3745.00	8.50	193.37	3730.80	-201.16	-62.29	-201.68	0.87		
3832.00	7.81	192.11	3816.92	-213.20	-65.01	-213.73	0.82		
3920.00	7.10	196.86	3904.18	-224.25	-67.84	-224.81	1.07		
4007.00	6.41	195.90	3990.57	-234.06	-70.73	-234.65	0.80		
4095.00	7.13	193.70	4077.96	-244.09	-73.37	-244.70	0.87		
4139.00	7.56	192.14	4121.60	-249.58	-74.63	-250.19	1.08		
4182.00	5.26	192.41	4164.32	-254.27	-75.65	-254.89	5.35		
4226.00	2.54	204.11	4208.22	-257.13	-76.48	-257.76	6.41		
4270.00	1.75	282.26	4252.20	-257.88	-77.53	-258.52	6.30		
4313.00	3.52	330.23	4295.15	-256.59	-78.83	-257.24	6.24		
4357.00	5.82	348.67	4339.01	-253.23	-79.94	-253.89	6.18		
4401.00	8.28	356.95	4382.67	-247.88	-80.55	-248.54	6.04		
4444.00	10.49	358.29	4425.09	-240.87	-80.83	-241.54	5.16		
4488.00	13.58	358.87	4468.12	-231.70	-81.05	-232.37	7.03		
4532.00	16.65	359.78	4510.59	-220.23	-81.18	-220.90	7.00		
4576.00	18.80	0.75	4552.50	-206.84	-81.11	-207.51	4.93		
4619.00	21.91	2.53	4592.81	-191.89	-80.66	-192.56	7.37		
4663.00	25.02	3.21	4633.17	-174.39	-79.78	-175.06	7.09		
4707.00	27.95	3.27	4672.55	-154.81	-78.67	-155.46	6.66		
4750.00	30.89	2.74	4710.00	-133.71	-77.57	-134.36	6.86		
4794.00	33.82	2.49	4747.16	-110.19	-76.50	-110.83	6.67		

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
4838.00	36.65	2.71	4783.10	-84.84	-75.34	-85.47	6.44		
4882.00	39.22	1.77	4817.80	-57.81	-74.29	-58.43	5.99		
4925.00	42.74	1.13	4850.26	-29.63	-73.58	-30.24	8.24		
4969.00	47.01	1.16	4881.43	1.41	-72.96	0.79	9.70		
5013.00	51.61	1.52	4910.11	34.75	-72.18	34.14	10.47		
5056.00	55.41	1.82	4935.68	69.30	-71.17	68.70	8.85		
5100.00	58.96	1.90	4959.52	106.25	-69.97	105.66	8.07		
5144.00	61.11	2.28	4981.49	144.34	-68.58	143.76	4.94		
5187.00	61.82	1.86	5002.03	182.09	-67.21	181.53	1.86		
5231.00	62.18	1.67	5022.69	220.93	-66.02	220.36	0.90		
5275.00	62.26	1.57	5043.20	259.84	-64.92	259.29	0.27		
5319.00	62.81	1.53	5063.49	298.87	-63.86	298.32	1.25		
5362.00	65.22	1.47	5082.33	337.50	-62.85	336.96	5.61		
5406.00	67.75	2.34	5099.88	377.82	-61.51	377.29	6.03		
5450.00	70.54	3.12	5115.55	418.89	-59.54	418.37	6.55		
5493.00	73.57	3.58	5128.79	459.72	-57.15	459.23	7.12		
5520.25	75.76	3.63	5136.00	485.95	-55.50	485.47	8.02	Mississippi Lime :	
5537.00	77.10	3.66	5139.93	502.20	-54.47	501.72	8.02	Last WFT Survey (OH)	
5596.00	79.62	3.72	5151.83	559.86	-50.75	559.41	4.27	Proj. to Bit	

5D Survey Report**SandRidge Energy**

Field Name: *SandRidge Energy - Comanche County, KS S NAD 27 US FT*
Site Name: *Hank 3420 1-2H*
Well Name: *Hank 3420 1-2H*
Survey: *Definitive Survey (Geographic)*

15 April 2014



Hank 3420 1-2H

Field Name	Map Units : US ft		Company Name : SandRidge Energy	
SandRidge Energy - Comanche County, KS S NAD 27 US FT	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD27 / Kansas South			
	Comment :			
Site Name	Units : US ft	North Reference : Grid	Convergence Angle : -0.59	
Hank 3420 1-2H	Position	Northing : 161499.89 US ft	Latitude : 37° 6' 22.65"	
		Easting : 1721689.02 US ft	Longitude : -99° 27' 15.49"	
	Site TVD Reference : Mean Sea Level			
	Elevation above Mean Sea Level: 1785.00 US ft			
	Comment :			
Slot Name	Position (Offsets relative to Site Centre)			
Hank 3420 1-2H	+N / -S : 0.00 US ft	Northing : 161499.89 US ft	Latitude : 37°6'22.65"	
	+E / -W : 0.00 US ft	Easting : 1721689.02 US ft	Longitude : -99°27'15.49"	
	Elevation above Mean Sea Level : 1785.00 US ft			
	Comment :			
Well Name	Type : Main well	UWI :		
Hank 3420 1-2H	Rig Height <i>Well TVD Reference</i> : 18.00 US ft	Comment :		
	Relative to Mean Sea Level: 1803.00 US ft	Closure Azimuth : 354.821°		
	Closure Distance : 562.154 US ft			
	Vertical Section (Position of Origin Relative to Site)			
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 0.48°	

5D Survey Report

Target Set

Name : Hank 3420 1-2H - T1 **Number of Targets :** 1

Comment : 5180' KBTVD @ 90.5° INC

TargetName: PBHL	Position (Relative to Site centre)		
	+N / -S : 2500.11US ft	Northing : 164000.00 US ft	Latitude : 37°6'47.36"
Shape: Cuboid	+E / -W : 20.98 US ft	Easting : 1721710.00US ft	Longitude : -99°27'15.55"
	TVD (Well TVD Reference) : 5168.20 US ft		
	SS : -3365.20 US ft		
Orientation	Azimuth : 0.00°	Inclination : 0.00°	
Dimensions	Length : 0.00 US ft	Breadth : 0.00 US ft	Height : 0.00 US ft

Survey Name :Definitive Survey

Date : 11/Mar/2014 **Survey Tool :** **Comment :** **Company :**

Magnetic Model
Model Name: IGRF **Date:** 11/Mar/2014 **Field Strength:** 51579.6 nT **Declination:** 5.26° **Dip:** 65.01°

Survey Tool Ranges

Name	Start MD (US ft)	End MD (US ft)	Source Survey
MWD	0.00	5596.00	WFT MWD Surveys

Well path created using minimum curvature

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment
0.00	0.00	0.00	0.00	0.00	0.00	161499.89	1721689.02	37°6'22.65"	-99°27'15.49"	
741.00	0.22	95.68	741.00	-0.14	1.42	161499.75	1721690.44	37°6'22.64"	-99°27'15.48"	First WFT MWD Survey (OH)
836.00	0.07	145.21	836.00	-0.21	1.63	161499.68	1721690.65	37°6'22.64"	-99°27'15.47"	
930.00	0.07	52.57	930.00	-0.22	1.71	161499.67	1721690.73	37°6'22.64"	-99°27'15.47"	
1025.00	0.00	0.00	1025.00	-0.18	1.75	161499.71	1721690.78	37°6'22.64"	-99°27'15.47"	
1118.00	0.30	294.86	1118.00	-0.08	1.53	161499.81	1721690.56	37°6'22.64"	-99°27'15.47"	
1212.00	0.30	317.70	1212.00	0.20	1.14	161500.10	1721690.17	37°6'22.65"	-99°27'15.48"	
1305.00	0.43	303.62	1304.99	0.58	0.69	161500.47	1721689.71	37°6'22.65"	-99°27'15.48"	
1398.00	0.45	297.91	1397.99	0.94	0.08	161500.83	1721689.10	37°6'22.65"	-99°27'15.49"	
1492.00	0.56	278.79	1491.99	1.18	-0.70	161501.08	1721688.32	37°6'22.66"	-99°27'15.50"	
1586.00	0.75	254.00	1585.98	1.09	-1.75	161500.98	1721687.27	37°6'22.66"	-99°27'15.51"	
1678.00	0.64	230.01	1677.98	0.59	-2.72	161500.48	1721686.30	37°6'22.65"	-99°27'15.53"	
1772.00	1.00	225.00	1771.97	-0.33	-3.70	161499.56	1721685.32	37°6'22.64"	-99°27'15.54"	

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment
1865.00	1.11	222.52	1864.95	-1.57	-4.89	161498.33	1721684.14	37°6'22.63"	-99°27'15.55"	
1959.00	1.16	216.64	1958.93	-3.00	-6.07	161496.89	1721682.95	37°6'22.61"	-99°27'15.57"	
2052.00	1.16	213.00	2051.91	-4.55	-7.14	161495.35	1721681.88	37°6'22.60"	-99°27'15.58"	
2146.00	1.20	219.68	2145.89	-6.10	-8.29	161493.79	1721680.73	37°6'22.58"	-99°27'15.59"	
2239.00	2.63	185.69	2238.84	-8.97	-9.12	161490.92	1721679.90	37°6'22.56"	-99°27'15.60"	
2332.00	3.89	192.59	2331.69	-14.18	-10.02	161485.72	1721679.00	37°6'22.50"	-99°27'15.61"	
2426.00	4.95	198.18	2425.41	-21.14	-11.98	161478.75	1721677.04	37°6'22.43"	-99°27'15.64"	
2521.00	5.81	197.55	2519.99	-29.62	-14.71	161470.27	1721674.31	37°6'22.35"	-99°27'15.67"	
2616.00	7.00	197.52	2614.39	-39.73	-17.90	161460.17	1721671.12	37°6'22.25"	-99°27'15.71"	
2711.00	6.67	199.13	2708.72	-50.46	-21.46	161449.43	1721667.57	37°6'22.14"	-99°27'15.75"	
2805.00	8.15	197.79	2801.93	-61.96	-25.28	161437.93	1721663.74	37°6'22.03"	-99°27'15.80"	
2900.00	9.43	194.96	2895.81	-75.89	-29.35	161424.00	1721659.68	37°6'21.89"	-99°27'15.85"	
2994.00	9.21	193.52	2988.57	-90.65	-33.09	161409.25	1721655.93	37°6'21.75"	-99°27'15.89"	
3089.00	8.94	192.73	3082.38	-105.24	-36.50	161394.65	1721652.52	37°6'21.60"	-99°27'15.93"	
3184.00	8.51	193.18	3176.28	-119.28	-39.73	161380.61	1721649.30	37°6'21.46"	-99°27'15.97"	
3279.00	8.51	195.00	3270.24	-132.92	-43.15	161366.98	1721645.87	37°6'21.33"	-99°27'16.01"	
3374.00	7.79	193.65	3364.28	-145.96	-46.49	161353.93	1721642.53	37°6'21.20"	-99°27'16.05"	
3469.00	9.21	196.08	3458.23	-159.52	-50.11	161340.37	1721638.91	37°6'21.06"	-99°27'16.09"	
3563.00	9.21	197.18	3551.02	-173.94	-54.42	161325.95	1721634.60	37°6'20.92"	-99°27'16.14"	
3658.00	9.05	196.79	3644.82	-188.36	-58.82	161311.54	1721630.20	37°6'20.78"	-99°27'16.19"	
3745.00	8.50	193.37	3730.80	-201.16	-62.29	161298.73	1721626.74	37°6'20.65"	-99°27'16.24"	
3832.00	7.81	192.11	3816.92	-213.20	-65.01	161286.69	1721624.01	37°6'20.53"	-99°27'16.27"	
3920.00	7.10	196.86	3904.18	-224.25	-67.84	161275.64	1721621.18	37°6'20.42"	-99°27'16.30"	
4007.00	6.41	195.90	3990.57	-234.06	-70.73	161265.83	1721618.29	37°6'20.32"	-99°27'16.34"	
4095.00	7.13	193.70	4077.96	-244.09	-73.37	161255.80	1721615.65	37°6'20.22"	-99°27'16.37"	
4139.00	7.56	192.14	4121.60	-249.58	-74.63	161250.31	1721614.39	37°6'20.17"	-99°27'16.38"	
4182.00	5.26	192.41	4164.32	-254.27	-75.65	161245.62	1721613.37	37°6'20.12"	-99°27'16.39"	
4226.00	2.54	204.11	4208.22	-257.13	-76.48	161242.76	1721612.54	37°6'20.10"	-99°27'16.40"	
4270.00	1.75	282.26	4252.20	-257.88	-77.53	161242.02	1721611.49	37°6'20.09"	-99°27'16.42"	
4313.00	3.52	330.23	4295.15	-256.59	-78.83	161243.30	1721610.19	37°6'20.10"	-99°27'16.43"	
4357.00	5.82	348.67	4339.01	-253.23	-79.94	161246.66	1721609.08	37°6'20.13"	-99°27'16.45"	
4401.00	8.28	356.95	4382.67	-247.88	-80.55	161252.01	1721608.47	37°6'20.19"	-99°27'16.46"	
4444.00	10.49	358.29	4425.09	-240.87	-80.83	161259.02	1721608.19	37°6'20.26"	-99°27'16.46"	
4488.00	13.58	358.87	4468.12	-231.70	-81.05	161268.19	1721607.97	37°6'20.35"	-99°27'16.46"	
4532.00	16.65	359.78	4510.59	-220.23	-81.18	161279.66	1721607.85	37°6'20.46"	-99°27'16.47"	
4576.00	18.80	0.75	4552.50	-206.84	-81.11	161293.06	1721607.91	37°6'20.59"	-99°27'16.47"	
4619.00	21.91	2.53	4592.81	-191.89	-80.66	161308.00	1721608.36	37°6'20.74"	-99°27'16.46"	
4663.00	25.02	3.21	4633.17	-174.39	-79.78	161325.50	1721609.24	37°6'20.91"	-99°27'16.46"	
4707.00	27.95	3.27	4672.55	-154.81	-78.67	161345.09	1721610.35	37°6'21.11"	-99°27'16.44"	
4750.00	30.89	2.74	4710.00	-133.71	-77.57	161366.18	1721611.45	37°6'21.32"	-99°27'16.43"	
4794.00	33.82	2.49	4747.16	-110.19	-76.50	161389.70	1721612.53	37°6'21.55"	-99°27'16.42"	

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment	
4838.00	36.65	2.71	4783.10	-84.84	-75.34	161415.05	1721613.68	37°6'21.80"	-99°27'16.41"		
4882.00	39.22	1.77	4817.80	-57.81	-74.29	161442.08	1721614.73	37°6'22.07"	-99°27'16.40"		
4925.00	42.74	1.13	4850.26	-29.63	-73.58	161470.27	1721615.44	37°6'22.34"	-99°27'16.40"		
4969.00	47.01	1.16	4881.43	1.41	-72.96	161501.30	1721616.06	37°6'22.65"	-99°27'16.39"		
5013.00	51.61	1.52	4910.11	34.75	-72.18	161534.64	1721616.84	37°6'22.98"	-99°27'16.39"		
5056.00	55.41	1.82	4935.68	69.30	-71.17	161569.19	1721617.85	37°6'23.32"	-99°27'16.38"		
5100.00	58.96	1.90	4959.52	106.25	-69.97	161606.14	1721619.05	37°6'23.69"	-99°27'16.37"		
5144.00	61.11	2.28	4981.49	144.34	-68.58	161644.23	1721620.44	37°6'24.07"	-99°27'16.36"		
5187.00	61.82	1.86	5002.03	182.09	-67.21	161681.99	1721621.81	37°6'24.44"	-99°27'16.35"		
5231.00	62.18	1.67	5022.69	220.93	-66.02	161720.82	1721623.00	37°6'24.82"	-99°27'16.34"		
5275.00	62.26	1.57	5043.20	259.84	-64.92	161759.73	1721624.11	37°6'25.21"	-99°27'16.33"		
5319.00	62.81	1.53	5063.49	298.87	-63.86	161798.76	1721625.16	37°6'25.59"	-99°27'16.32"		
5362.00	65.22	1.47	5082.33	337.50	-62.85	161837.39	1721626.17	37°6'25.98"	-99°27'16.31"		
5406.00	67.75	2.34	5099.88	377.82	-61.51	161877.71	1721627.52	37°6'26.37"	-99°27'16.30"		
5450.00	70.54	3.12	5115.55	418.89	-59.54	161918.78	1721629.48	37°6'26.78"	-99°27'16.28"		
5493.00	73.57	3.58	5128.79	459.72	-57.15	161959.61	1721631.87	37°6'27.18"	-99°27'16.26"		
5520.25	75.76	3.63	5136.00	485.95	-55.50	161985.84	1721633.52	37°6'27.44"	-99°27'16.24"	Mississippi Lime :	
5537.00	77.10	3.66	5139.93	502.20	-54.47	162002.09	1721634.56	37°6'27.60"	-99°27'16.23"	Last WFT Survey (OH)	
5596.00	79.62	3.72	5151.83	559.86	-50.75	162059.75	1721638.28	37°6'28.18"	-99°27'16.19"	Proj. to Bit	

5D Survey Report**SandRidge Energy**

Field Name: *SandRidge Energy - Comanche County, KS S NAD 27 US FT*
Site Name: *Hank 3420 1-2H*
Well Name: *Hank 3420 1-2H ST01*
File Number: *4032266*
Survey: *Definitive Survey*

15 April 2014



Hank 3420 1-2H ST01

Field Name	Map Units : US ft		Company Name : SandRidge Energy	
SandRidge Energy - Comanche County, KS S NAD 27 US FT	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD27 / Kansas South			
	Comment :			
Site Name	Units : US ft	North Reference : Grid	Convergence Angle : -0.59	
Hank 3420 1-2H	Position	Northing : 161499.89 US ft	Latitude : 37° 6' 22.65"	
		Easting : 1721689.02 US ft	Longitude : -99° 27' 15.49"	
	Site TVD Reference : Mean Sea Level			
	Elevation above Mean Sea Level: 1785.00 US ft			
	Comment :			
Slot Name	Position (Offsets relative to Site Centre)			
Hank 3420 1-2H	+N / -S : 0.00 US ft	Northing : 161499.89 US ft	Latitude : 37°6'22.65"	
	+E / -W : 0.00 US ft	Easting : 1721689.02 US ft	Longitude : -99°27'15.49"	
	Elevation above Mean Sea Level : 1785.00 US ft			
	Comment :			
Well Name	Type : Sidetrack	UWI :		
Hank 3420 1-2H ST01	Parent : Hank 3420 1-2H	Tie Point Method : MD	Tie Point : 4794.00 US ft	
	Rig Height Well TVD Reference : 18.00 US ft	Comment :		
	Relative to Mean Sea Level: 1803.00 US ft	Closure Azimuth : 0.307657°		
	Closure Distance : 2500.54 US ft			
	Vertical Section (Position of Origin Relative to Site)			
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 0.48°	

5D Survey Report

Target Set

Name : Hank 3420 1-2H - T1

Number of Targets : 1

Comment : 5180' KBTVD @ 90.5° INC

TargetName:	Position (Relative to Site centre)		
PBHL	+N / -S : 2500.11US ft	Northing : 164000.00 US ft	Latitude : 37°6'47.36"
	+E / -W : 20.98 US ft	Easting : 1721710.00US ft	Longitude : -99°27'15.55"
Shape:	TVD (Well TVD Reference) : 5168.20 US ft		
Cuboid	SS : -3365.20 US ft		
	Orientation	Azimuth : 0.00°	Inclination : 0.00°
	Dimensions	Length : 0.00 US ft	Breadth : 0.00 US ft
			Height : 0.00 US ft

Survey Name :Definitive Survey

Date : 01/Apr/2014

Survey Tool :

Comment :

Company :

Magnetic Model

Model Name: Default

Date: 10/Mar/2014

Field Strength: 50000.0 nT

Declination: 0.00°

Dip: 0.00°

Survey Tool Ranges

Name	Start MD (US ft)	End MD (US ft)	Source Survey
MWD	4794.00	7542.00	WFT MWD Surveys

Well path created using minimum curvature

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
741.00	0.22	95.68	741.00	-0.14	1.42	-0.13	0.03	First WFT MWD Survey (OH)	
836.00	0.07	145.21	836.00	-0.21	1.63	-0.19	0.19		
930.00	0.07	52.57	930.00	-0.22	1.71	-0.20	0.11		
1025.00	0.00	0.00	1025.00	-0.18	1.75	-0.17	0.07		
1118.00	0.30	294.86	1118.00	-0.08	1.53	-0.07	0.32		
1212.00	0.30	317.70	1212.00	0.20	1.14	0.21	0.13		
1305.00	0.43	303.62	1304.99	0.58	0.69	0.58	0.17		
1398.00	0.45	297.91	1397.99	0.94	0.08	0.94	0.05		
1492.00	0.56	278.79	1491.99	1.18	-0.70	1.18	0.21		
1586.00	0.75	254.00	1585.98	1.09	-1.75	1.07	0.36		
1678.00	0.64	230.01	1677.98	0.59	-2.72	0.57	0.34		
1772.00	1.00	225.00	1771.97	-0.33	-3.70	-0.36	0.39		

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
1865.00	1.11	222.52	1864.95	-1.57	-4.89	-1.61	0.13		
1959.00	1.16	216.64	1958.93	-3.00	-6.07	-3.05	0.13		
2052.00	1.16	213.00	2051.91	-4.55	-7.14	-4.61	0.08		
2146.00	1.20	219.68	2145.89	-6.10	-8.29	-6.17	0.15		
2239.00	2.63	185.69	2238.84	-8.97	-9.12	-9.05	1.90		
2332.00	3.89	192.59	2331.69	-14.18	-10.02	-14.26	1.42		
2426.00	4.95	198.18	2425.41	-21.14	-11.98	-21.24	1.22		
2521.00	5.81	197.55	2519.99	-29.62	-14.71	-29.74	0.91		
2616.00	7.00	197.52	2614.39	-39.73	-17.90	-39.87	1.25		
2711.00	6.67	199.13	2708.72	-50.46	-21.46	-50.64	0.40		
2805.00	8.15	197.79	2801.93	-61.96	-25.28	-62.17	1.59		
2900.00	9.43	194.96	2895.81	-75.89	-29.35	-76.13	1.42		
2994.00	9.21	193.52	2988.57	-90.65	-33.09	-90.92	0.34		
3089.00	8.94	192.73	3082.38	-105.24	-36.50	-105.54	0.31		
3184.00	8.51	193.18	3176.28	-119.28	-39.73	-119.61	0.46		
3279.00	8.51	195.00	3270.24	-132.92	-43.15	-133.27	0.28		
3374.00	7.79	193.65	3364.28	-145.96	-46.49	-146.35	0.78		
3469.00	9.21	196.08	3458.23	-159.52	-50.11	-159.94	1.54		
3563.00	9.21	197.18	3551.02	-173.94	-54.42	-174.39	0.19		
3658.00	9.05	196.79	3644.82	-188.36	-58.82	-188.84	0.18		
3745.00	8.50	193.37	3730.80	-201.16	-62.29	-201.68	0.87		
3832.00	7.81	192.11	3816.92	-213.20	-65.01	-213.73	0.82		
3920.00	7.10	196.86	3904.18	-224.25	-67.84	-224.81	1.07		
4007.00	6.41	195.90	3990.57	-234.06	-70.73	-234.65	0.80		
4095.00	7.13	193.70	4077.96	-244.09	-73.37	-244.70	0.87		
4139.00	7.56	192.14	4121.60	-249.58	-74.63	-250.19	1.08		
4182.00	5.26	192.41	4164.32	-254.27	-75.65	-254.89	5.35		
4226.00	2.54	204.11	4208.22	-257.13	-76.48	-257.76	6.41		
4270.00	1.75	282.26	4252.20	-257.88	-77.53	-258.52	6.30		
4313.00	3.52	330.23	4295.15	-256.59	-78.83	-257.24	6.24		
4357.00	5.82	348.67	4339.01	-253.23	-79.94	-253.89	6.18		
4401.00	8.28	356.95	4382.67	-247.88	-80.55	-248.54	6.04		
4444.00	10.49	358.29	4425.09	-240.87	-80.83	-241.54	5.16		
4488.00	13.58	358.87	4468.12	-231.70	-81.05	-232.37	7.03		
4532.00	16.65	359.78	4510.59	-220.23	-81.18	-220.90	7.00		
4576.00	18.80	0.75	4552.50	-206.84	-81.11	-207.51	4.93		
4619.00	21.91	2.53	4592.81	-191.89	-80.66	-192.56	7.37		
4663.00	25.02	3.21	4633.17	-174.39	-79.78	-175.06	7.09		
4707.00	27.95	3.27	4672.55	-154.81	-78.67	-155.46	6.66		
4750.00	30.89	2.74	4710.00	-133.71	-77.57	-134.36	6.86		
4794.00	33.82	2.49	4747.16	-110.19	-76.50	-110.83	6.67		

2

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment	
4882.00	40.23	351.20	4817.47	-57.53	-79.79	-58.19	10.59	First WFT MWD Survey (ST01)	
4926.00	43.78	349.35	4850.16	-28.52	-84.77	-29.23	8.54		
4970.00	46.54	351.22	4881.18	2.23	-90.03	1.48	6.96		
5013.00	50.00	353.81	4909.80	34.04	-94.19	33.25	9.22		
5057.00	53.70	356.82	4936.98	68.52	-96.99	67.70	9.98		
5101.00	57.55	358.99	4961.82	104.80	-98.30	103.97	9.65		
5144.00	60.92	0.52	4983.81	141.74	-98.45	140.91	8.41		
5188.00	63.17	1.99	5004.44	180.59	-97.59	179.77	5.90		
5232.00	63.24	1.86	5024.27	219.84	-96.27	219.03	0.31		
5275.00	63.32	1.56	5043.61	258.24	-95.13	257.43	0.65		
5319.00	63.40	1.40	5063.34	297.55	-94.11	296.75	0.37		
5363.00	63.55	1.22	5082.99	336.91	-93.21	336.12	0.50		
5406.00	67.06	1.34	5100.95	375.96	-92.34	375.17	8.17		
5450.00	70.18	1.56	5116.99	416.92	-91.30	416.14	7.11		
5494.00	73.83	1.85	5130.58	458.74	-90.05	457.97	8.32		
5514.49	75.49	1.89	5136.00	478.49	-89.41	477.72	8.09	Mississippi Lime :	
5538.00	77.39	1.94	5141.51	501.33	-88.65	500.57	8.09		
5581.00	80.66	1.72	5149.70	543.51	-87.30	542.76	7.62		
5623.00	83.70	1.86	5155.41	585.10	-86.00	584.36	7.25		
5704.00	85.88	1.05	5162.77	665.73	-83.95	665.00	2.87		
5790.00	85.52	1.56	5169.21	751.47	-82.00	750.75	0.72		
5877.00	88.04	3.85	5174.10	838.22	-77.90	837.54	3.91		
5965.00	88.04	3.34	5177.11	925.99	-72.38	925.36	0.58		
6053.00	89.37	3.40	5179.10	1013.82	-67.21	1013.22	1.51		
6140.00	90.28	2.77	5179.37	1100.69	-62.53	1100.13	1.27		
6228.00	89.79	2.48	5179.31	1188.60	-58.50	1188.07	0.65		
6315.00	89.58	3.01	5179.79	1275.50	-54.33	1275.00	0.66		
6403.00	90.63	2.35	5179.63	1363.40	-50.22	1362.93	1.41		
6490.00	90.49	1.85	5178.78	1450.33	-47.03	1449.89	0.60		
6577.00	91.26	2.89	5177.45	1537.25	-43.43	1536.83	1.49		
6665.00	90.49	3.82	5176.11	1625.09	-38.28	1624.71	1.37		
6752.00	89.58	3.08	5176.05	1711.93	-33.05	1711.59	1.35		
6839.00	90.91	3.84	5175.68	1798.76	-27.80	1798.47	1.76		
6927.00	90.70	3.21	5174.44	1886.59	-22.39	1886.34	0.75		
7014.00	90.63	3.45	5173.43	1973.44	-17.33	1973.22	0.29		
7102.00	91.19	3.21	5172.04	2061.28	-12.22	2061.10	0.69		
7189.00	90.91	3.27	5170.44	2148.12	-7.31	2147.99	0.33		
7276.00	90.35	4.04	5169.49	2234.94	-1.76	2234.85	1.09		
7364.00	89.93	3.21	5169.27	2322.76	3.80	2322.71	1.06		
7451.00	89.72	2.96	5169.54	2409.64	8.48	2409.62	0.38		

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)								
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Comment
7486.00	90.07	3.15	5169.60	2444.59	10.35	2444.59	1.14	Last MWD Survey
7542.00	90.07	3.15	5169.53	2500.50	13.43	2500.53	0.00	Proj. to TD

5D Survey Report**SandRidge Energy**

Field Name: *SandRidge Energy - Comanche County, KS S NAD 27 US FT*
Site Name: *Hank 3420 1-2H*
Well Name: *Hank 3420 1-2H ST01*
File Number: *4032266 Definitive Survey (Geographic)*
Survey:

15 April 2014



Hank 3420 1-2H ST01

Field Name	Map Units : US ft		Company Name : SandRidge Energy	
SandRidge Energy - Comanche County, KS S NAD 27 US FT	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD27 / Kansas South			
	Comment :			
Site Name Hank 3420 1-2H	Units : US ft	North Reference : Grid	Convergence Angle : -0.59	
	Position	Northing : 161499.89 US ft	Latitude : 37° 6' 22.65"	
		Easting : 1721689.02 US ft	Longitude : -99° 27' 15.49"	
	Site TVD Reference : Mean Sea Level			
	Elevation above Mean Sea Level: 1785.00 US ft			
Comment :				
Slot Name Hank 3420 1-2H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.00 US ft	Northing : 161499.89 US ft	Latitude : 37°6'22.65"	
	+E / -W : 0.00 US ft	Easting : 1721689.02 US ft	Longitude : -99°27'15.49"	
	Elevation above Mean Sea Level : 1785.00 US ft			
	Comment :			
Well Name Hank 3420 1-2H ST01	Type : Sidetrack	UWI :		
	Parent : Hank 3420 1-2H	Tie Point Method : MD	Tie Point : 4794.00 US ft	
	Rig Height Well TVD Reference : 18.00 US ft	Comment :		
	Relative to Mean Sea Level: 1803.00 US ft	Closure Azimuth : 0.307657°		
	Closure Distance : 2500.54 US ft			
	Vertical Section (Position of Origin Relative to Site)	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 0.48°

5D Survey Report

Target Set

Name : Hank 3420 1-2H - T1 **Number of Targets :** 1

Comment : 5180' KBTVD @ 90.5° INC

TargetName: PBHL	Position (Relative to Site centre)		
	+N / -S : 2500.11US ft +E / -W : 20.98 US ft	Northing : 164000.00 US ft Easting : 1721710.00US ft	Latitude : 37°6'47.36" Longitude : -99°27'15.55"
Shape: Cuboid	TVD (Well TVD Reference) : 5168.20 US ft SS : -3365.20 US ft		
Orientation	Azimuth : 0.00°	Inclination : 0.00°	
Dimensions	Length : 0.00 US ft	Breadth : 0.00 US ft	Height : 0.00 US ft

Survey Name :Definitive Survey

Date : 01/Apr/2014 **Survey Tool :** **Comment :** **Company :**

Magnetic Model

Model Name: Default **Date:** 10/Mar/2014 **Field Strength:** 50000.0 nT **Declination:** 0.00° **Dip:** 0.00°

Survey Tool Ranges

Name	Start MD (US ft)	End MD (US ft)	Source Survey
MWD	4794.00	7542.00	WFT MWD Surveys

Well path created using minimum curvature

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment
0.00	0.00	0.00	0.00	0.00	0.00	161499.89	1721689.02	37°6'22.65"	-99°27'15.49"	
741.00	0.22	95.68	741.00	-0.14	1.42	161499.75	1721690.44	37°6'22.64"	-99°27'15.48"	First WFT MWD Survey (OH)
836.00	0.07	145.21	836.00	-0.21	1.63	161499.68	1721690.65	37°6'22.64"	-99°27'15.47"	
930.00	0.07	52.57	930.00	-0.22	1.71	161499.67	1721690.73	37°6'22.64"	-99°27'15.47"	
1025.00	0.00	0.00	1025.00	-0.18	1.75	161499.71	1721690.78	37°6'22.64"	-99°27'15.47"	
1118.00	0.30	294.86	1118.00	-0.08	1.53	161499.81	1721690.56	37°6'22.64"	-99°27'15.47"	
1212.00	0.30	317.70	1212.00	0.20	1.14	161500.10	1721690.17	37°6'22.65"	-99°27'15.48"	
1305.00	0.43	303.62	1304.99	0.58	0.69	161500.47	1721689.71	37°6'22.65"	-99°27'15.48"	
1398.00	0.45	297.91	1397.99	0.94	0.08	161500.83	1721689.10	37°6'22.65"	-99°27'15.49"	
1492.00	0.56	278.79	1491.99	1.18	-0.70	161501.08	1721688.32	37°6'22.66"	-99°27'15.50"	
1586.00	0.75	254.00	1585.98	1.09	-1.75	161500.98	1721687.27	37°6'22.66"	-99°27'15.51"	
1678.00	0.64	230.01	1677.98	0.59	-2.72	161500.48	1721686.30	37°6'22.65"	-99°27'15.53"	
1772.00	1.00	225.00	1771.97	-0.33	-3.70	161499.56	1721685.32	37°6'22.64"	-99°27'15.54"	

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment
1865.00	1.11	222.52	1864.95	-1.57	-4.89	161498.33	1721684.14	37°6'22.63"	-99°27'15.55"	
1959.00	1.16	216.64	1958.93	-3.00	-6.07	161496.89	1721682.95	37°6'22.61"	-99°27'15.57"	
2052.00	1.16	213.00	2051.91	-4.55	-7.14	161495.35	1721681.88	37°6'22.60"	-99°27'15.58"	
2146.00	1.20	219.68	2145.89	-6.10	-8.29	161493.79	1721680.73	37°6'22.58"	-99°27'15.59"	
2239.00	2.63	185.69	2238.84	-8.97	-9.12	161490.92	1721679.90	37°6'22.56"	-99°27'15.60"	
2332.00	3.89	192.59	2331.69	-14.18	-10.02	161485.72	1721679.00	37°6'22.50"	-99°27'15.61"	
2426.00	4.95	198.18	2425.41	-21.14	-11.98	161478.75	1721677.04	37°6'22.43"	-99°27'15.64"	
2521.00	5.81	197.55	2519.99	-29.62	-14.71	161470.27	1721674.31	37°6'22.35"	-99°27'15.67"	
2616.00	7.00	197.52	2614.39	-39.73	-17.90	161460.17	1721671.12	37°6'22.25"	-99°27'15.71"	
2711.00	6.67	199.13	2708.72	-50.46	-21.46	161449.43	1721667.57	37°6'22.14"	-99°27'15.75"	
2805.00	8.15	197.79	2801.93	-61.96	-25.28	161437.93	1721663.74	37°6'22.03"	-99°27'15.80"	
2900.00	9.43	194.96	2895.81	-75.89	-29.35	161424.00	1721659.68	37°6'21.89"	-99°27'15.85"	
2994.00	9.21	193.52	2988.57	-90.65	-33.09	161409.25	1721655.93	37°6'21.75"	-99°27'15.89"	
3089.00	8.94	192.73	3082.38	-105.24	-36.50	161394.65	1721652.52	37°6'21.60"	-99°27'15.93"	
3184.00	8.51	193.18	3176.28	-119.28	-39.73	161380.61	1721649.30	37°6'21.46"	-99°27'15.97"	
3279.00	8.51	195.00	3270.24	-132.92	-43.15	161366.98	1721645.87	37°6'21.33"	-99°27'16.01"	
3374.00	7.79	193.65	3364.28	-145.96	-46.49	161353.93	1721642.53	37°6'21.20"	-99°27'16.05"	
3469.00	9.21	196.08	3458.23	-159.52	-50.11	161340.37	1721638.91	37°6'21.06"	-99°27'16.09"	
3563.00	9.21	197.18	3551.02	-173.94	-54.42	161325.95	1721634.60	37°6'20.92"	-99°27'16.14"	
3658.00	9.05	196.79	3644.82	-188.36	-58.82	161311.54	1721630.20	37°6'20.78"	-99°27'16.19"	
3745.00	8.50	193.37	3730.80	-201.16	-62.29	161298.73	1721626.74	37°6'20.65"	-99°27'16.24"	
3832.00	7.81	192.11	3816.92	-213.20	-65.01	161286.69	1721624.01	37°6'20.53"	-99°27'16.27"	
3920.00	7.10	196.86	3904.18	-224.25	-67.84	161275.64	1721621.18	37°6'20.42"	-99°27'16.30"	
4007.00	6.41	195.90	3990.57	-234.06	-70.73	161265.83	1721618.29	37°6'20.32"	-99°27'16.34"	
4095.00	7.13	193.70	4077.96	-244.09	-73.37	161255.80	1721615.65	37°6'20.22"	-99°27'16.37"	
4139.00	7.56	192.14	4121.60	-249.58	-74.63	161250.31	1721614.39	37°6'20.17"	-99°27'16.38"	
4182.00	5.26	192.41	4164.32	-254.27	-75.65	161245.62	1721613.37	37°6'20.12"	-99°27'16.39"	
4226.00	2.54	204.11	4208.22	-257.13	-76.48	161242.76	1721612.54	37°6'20.10"	-99°27'16.40"	
4270.00	1.75	282.26	4252.20	-257.88	-77.53	161242.02	1721611.49	37°6'20.09"	-99°27'16.42"	
4313.00	3.52	330.23	4295.15	-256.59	-78.83	161243.30	1721610.19	37°6'20.10"	-99°27'16.43"	
4357.00	5.82	348.67	4339.01	-253.23	-79.94	161246.66	1721609.08	37°6'20.13"	-99°27'16.45"	
4401.00	8.28	356.95	4382.67	-247.88	-80.55	161252.01	1721608.47	37°6'20.19"	-99°27'16.46"	
4444.00	10.49	358.29	4425.09	-240.87	-80.83	161259.02	1721608.19	37°6'20.26"	-99°27'16.46"	
4488.00	13.58	358.87	4468.12	-231.70	-81.05	161268.19	1721607.97	37°6'20.35"	-99°27'16.46"	
4532.00	16.65	359.78	4510.59	-220.23	-81.18	161279.66	1721607.85	37°6'20.46"	-99°27'16.47"	
4576.00	18.80	0.75	4552.50	-206.84	-81.11	161293.06	1721607.91	37°6'20.59"	-99°27'16.47"	
4619.00	21.91	2.53	4592.81	-191.89	-80.66	161308.00	1721608.36	37°6'20.74"	-99°27'16.46"	
4663.00	25.02	3.21	4633.17	-174.39	-79.78	161325.50	1721609.24	37°6'20.91"	-99°27'16.46"	
4707.00	27.95	3.27	4672.55	-154.81	-78.67	161345.09	1721610.35	37°6'21.11"	-99°27'16.44"	
4750.00	30.89	2.74	4710.00	-133.71	-77.57	161366.18	1721611.45	37°6'21.32"	-99°27'16.43"	
4794.00	33.82	2.49	4747.16	-110.19	-76.50	161389.70	1721612.53	37°6'21.55"	-99°27'16.42"	2

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment	
4882.00	40.23	351.20	4817.47	-57.53	-79.79	161442.36	1721609.24	37°6'22.07"	-99°27'16.47"	First WFT MWD Survey (ST01)	
4926.00	43.78	349.35	4850.16	-28.52	-84.77	161471.37	1721604.25	37°6'22.35"	-99°27'16.54"		
4970.00	46.54	351.22	4881.18	2.23	-90.03	161502.12	1721599.00	37°6'22.66"	-99°27'16.60"		
5013.00	50.00	353.81	4909.80	34.04	-94.19	161533.93	1721594.84	37°6'22.97"	-99°27'16.66"		
5057.00	53.70	356.82	4936.98	68.52	-96.99	161568.41	1721592.03	37°6'23.31"	-99°27'16.70"		
5101.00	57.55	358.99	4961.82	104.80	-98.30	161604.69	1721590.72	37°6'23.67"	-99°27'16.72"		
5144.00	60.92	0.52	4983.81	141.74	-98.45	161641.63	1721590.57	37°6'24.04"	-99°27'16.73"		
5188.00	63.17	1.99	5004.44	180.59	-97.59	161680.48	1721591.43	37°6'24.42"	-99°27'16.72"		
5232.00	63.24	1.86	5024.27	219.84	-96.27	161719.74	1721592.75	37°6'24.81"	-99°27'16.71"		
5275.00	63.32	1.56	5043.61	258.24	-95.13	161758.13	1721593.89	37°6'25.19"	-99°27'16.70"		
5319.00	63.40	1.40	5063.34	297.55	-94.11	161797.44	1721594.91	37°6'25.58"	-99°27'16.69"		
5363.00	63.55	1.22	5082.99	336.91	-93.21	161836.80	1721595.81	37°6'25.97"	-99°27'16.69"		
5406.00	67.06	1.34	5100.95	375.96	-92.34	161875.85	1721596.68	37°6'26.35"	-99°27'16.68"		
5450.00	70.18	1.56	5116.99	416.92	-91.30	161916.81	1721597.72	37°6'26.76"	-99°27'16.67"		
5494.00	73.83	1.85	5130.58	458.74	-90.05	161958.63	1721598.97	37°6'27.17"	-99°27'16.66"		
5514.49	75.49	1.89	5136.00	478.49	-89.41	161978.38	1721599.61	37°6'27.37"	-99°27'16.66"	Mississippi Lime :	
5538.00	77.39	1.94	5141.51	501.33	-88.65	162001.22	1721600.38	37°6'27.59"	-99°27'16.65"		
5581.00	80.66	1.72	5149.70	543.51	-87.30	162043.40	1721601.72	37°6'28.01"	-99°27'16.64"		
5623.00	83.70	1.86	5155.41	585.10	-86.00	162084.99	1721603.02	37°6'28.42"	-99°27'16.63"		
5704.00	85.88	1.05	5162.77	665.73	-83.95	162165.62	1721605.07	37°6'29.22"	-99°27'16.61"		
5790.00	85.52	1.56	5169.21	751.47	-82.00	162251.36	1721607.02	37°6'30.07"	-99°27'16.60"		
5877.00	88.04	3.85	5174.10	838.22	-77.90	162338.11	1721611.12	37°6'30.92"	-99°27'16.56"		
5965.00	88.04	3.34	5177.11	925.99	-72.38	162425.89	1721616.64	37°6'31.79"	-99°27'16.50"		
6053.00	89.37	3.40	5179.10	1013.82	-67.21	162513.71	1721621.81	37°6'32.66"	-99°27'16.45"		
6140.00	90.28	2.77	5179.37	1100.69	-62.53	162600.58	1721626.49	37°6'33.52"	-99°27'16.40"		
6228.00	89.79	2.48	5179.31	1188.60	-58.50	162688.49	1721630.52	37°6'34.39"	-99°27'16.36"		
6315.00	89.58	3.01	5179.79	1275.50	-54.33	162775.39	1721634.69	37°6'35.25"	-99°27'16.32"		
6403.00	90.63	2.35	5179.63	1363.40	-50.22	162863.29	1721638.80	37°6'36.12"	-99°27'16.28"		
6490.00	90.49	1.85	5178.78	1450.33	-47.03	162950.23	1721641.99	37°6'36.98"	-99°27'16.26"		
6577.00	91.26	2.89	5177.45	1537.25	-43.43	163037.14	1721645.59	37°6'37.84"	-99°27'16.22"		
6665.00	90.49	3.82	5176.11	1625.09	-38.28	163124.98	1721650.74	37°6'38.71"	-99°27'16.17"		
6752.00	89.58	3.08	5176.05	1711.93	-33.05	163211.82	1721655.97	37°6'39.57"	-99°27'16.12"		
6839.00	90.91	3.84	5175.68	1798.76	-27.80	163298.66	1721661.22	37°6'40.43"	-99°27'16.06"		
6927.00	90.70	3.21	5174.44	1886.59	-22.39	163386.48	1721666.63	37°6'41.29"	-99°27'16.01"		
7014.00	90.63	3.45	5173.43	1973.44	-17.33	163473.33	1721671.69	37°6'42.15"	-99°27'15.96"		
7102.00	91.19	3.21	5172.04	2061.28	-12.22	163561.17	1721676.80	37°6'43.02"	-99°27'15.90"		
7189.00	90.91	3.27	5170.44	2148.12	-7.31	163648.01	1721681.71	37°6'43.88"	-99°27'15.85"		
7276.00	90.35	4.04	5169.49	2234.94	-1.76	163734.83	1721687.26	37°6'44.74"	-99°27'15.80"		
7364.00	89.93	3.21	5169.27	2322.76	3.80	163822.65	1721692.82	37°6'45.61"	-99°27'15.74"		
7451.00	89.72	2.96	5169.54	2409.64	8.48	163909.53	1721697.51	37°6'46.47"	-99°27'15.69"		

5D Survey Report

Survey Points (Relative to Site centre, TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (° ' ")	Longitude (° ' ")	Comment
7486.00	90.07	3.15	5169.60	2444.59	10.35	163944.48	1721699.37	37°6'46.81"	-99°27'15.67"	Last MWD Survey
7542.00	90.07	3.15	5169.53	2500.50	13.43	164000.39	1721702.45	37°6'47.37"	-99°27'15.64"	Proj. to TD

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/31/2014
Job End Date:	6/3/2014
State:	Kansas
County:	Comanche
API Number:	15-033-21754-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Hank 3420 #1-2H
Longitude:	-99.45430346
Latitude:	37.10629034
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	5,170
Total Base Water Volume (gal):	2,159,388
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	Well Operator	Carrier/Base Fluid	Water	7732-18-5	100.00000	94.44638	None
40/70 Premium Preferred Sand	Cimarron Acid	Proppant, Scouring, Fill	Crystalline Silica (quartz)	14808-60-7	100.00000	3.22198	None
15% Unihibited HCl Acid	Cimarron Acid	Etching, Dissolving, Cleaning	Water	7732-18-5	85.00000	0.59948	None
			Hydrochloric Acid	7647-01-0	15.00000	0.10579	None
			Water	7732-18-5	24.00000	0.00014	None
			Methanol	67-56-1	9.00000	0.00005	None
			Cinnamaldehyde	104-55-2	8.40000	0.00005	None
			Tar Bases-quinoline derivs-benzyl chloride/quaternized	72480-70-7	8.40000	0.00005	None
			Isopropyl Alcohol	67-63-0	8.40000	0.00005	None
			Ethylene Glycol	107-21-1	8.40000	0.00005	None
			Triethyl Phosphate	78-40-0	8.40000	0.00005	None
			2-Butoxyethanol	111-76-2	8.40000	0.00005	None
			N-Dimethylformamide	68-12-2	8.40000	0.00005	None
			Ethoxylated Nonylphenol	68412-54-4	8.40000	0.00005	None
DiKlor	Sabre Energy Services	Oxidizer					

			Chlorine Dioxide	10069-04-4	0.40000	0.28803	
			Water	7732-18-5	99.90000	0.28803	
40/70 Resin Coated Sand	Cimarron Acid	Proppant, Scouring, Fill					
			Crystalline Silica (quartz)	14808-60-7	97.00000	0.35186	None
Iron Control, Sodium Erythorbate	Cimarron Acid	Iron Control					
			Water	7732-18-5	55.50000	0.02770	None
			Methanol	67-56-1	12.70000	0.00636	None
			Poly(ethylene Oxide)	25322-68-3	9.10000	0.00454	None
			Dinanylphenyl Polyoxyethylene	201602-88-2	9.10000	0.00454	None
			Nonylphenal Polyethylene Glycol Ether	127087-87-0	9.10000	0.00454	None
			Isopropanol	67-63-0	4.60000	0.00227	None
			Sodium Erythorbate	6381-77-7	100.00000	0.00023	None
			Water	7732-18-5	54.50000	0.00018	None
			Polyglycol Ethers	52624-57-4	13.60000	0.00005	None
			Isopropanol	67-63-0	13.60000	0.00005	None
			Glycol Ether EB	111-76-2	9.00000	0.00003	None
			Methanol	67-56-1	9.00000	0.00003	None
FR-986, Cationic Friction Reducer	Cimarron Acid	Friction Reducer					
			Water	7732-18-5	50.00000	0.00491	None
			Hydrochloric Acid	7647-01-0	16.80000	0.00165	None
			Phosphoric Acid	7664-38-2	16.80000	0.00165	None
			Petroleum Hydrotreated Light Distillate	64742-47-8	2.50000	0.00126	None
			Ethylene Glycol	107-21-1	12.70000	0.00125	None
			Methanol	67-56-1	3.60000	0.00036	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.

* 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)

Section 35
33S 20W

Section 36
33S 20W

2424' FNL

RALPH BAKER 1

BHL: 7542'
-99.454966 37.113115

888' FEL

Section 2
34S 20W

Bottom Perf: 7419'
-99.454972 37.112868 Comanche County

Section 1
34S 20W

Top Perf: 5600'
-99.45506818 37.107786

Miss Entry: 5557'
-99.455067 37.107671

RUTH ELLEN 3420 1-11H HANK 3420 1-2H

Section 11
34S 20W

BEYLER 1-A

SALLY 3420 1-12H

Section 12
34S 20W



Actual Bottom-Hole Location of Hank 3420 1-2H
T&R: 34S 20W
Section: 2, 888' FEL & 2424' FNL
-99.454966 37.113115

1 in = 667 ft

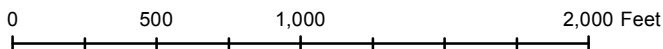


● Actual BH Location

* SandRidge Wells

--- Perf

□ Sections



Draftsman:

Naomi Martinez

Draft Date: 7/10/2014

Drawing Name/Number:

Addendum_Hank_3420_1-2H.mxd

Coordinate System:

NAD 1927 State Plane
Kansas South FIPS: 1502