Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1136318

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.
Wellsite Geologist: Joe Hileman
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 #:

4/5/2013	4/21/2013	7/9/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-033-21707-01-00
Spot Description:
_ N2 _ NW _ SE Sec. 13 Twp. 31 S. R. 20 ☐ East ☑ West
2310 Feet from ☐ North / ☑ South Line of Section
1980 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Comanche
Lease Name: Hazel 3120 Well #: 2-24H
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 2048 Kelly Bushing: 2068
Total Vertical Depth: 9999 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 950 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: 18000 ppm Fluid volume: 6440 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Lojo Disposal
Lease Name: unnamed License #: 99999
Quarter SW Sec. 10 Twp. 26 S. R. 15 ☐ East ☑ West
County: Woods, OK Permit #: 563714

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 08/01/2013
☑ **Confidential Release Date:** 08/01/2015
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ I ☐ II ☐ III **Approved by:** NAOMI JAMES **Date:** 08/01/2013

1136318

Operator Name: SandRidge Exploration and Production LLC Lease Name: Hazel 3120 Well #: 2-24H

Sec. 13 Twp. 31 S. R. 20 ☐ East ☑ West County: Comanche

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

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

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

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Attached

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

Name	Top	Datum
Base Heebner	4171	
Lansing	4317	
Cherokee	4941	
Mississippian Lime	5042	

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
Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached

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. 7/11/2013

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:

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

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hazel 3120 2-24H
Doc ID	1136318

All Electric Logs Run

Prizm Analysis
Mud log
Vertical MD
Porosity
Resistivity
Boresight

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hazel 3120 2-24H
Doc ID	1136318

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	10330-10672	6000 gals 15% HCL Acid, 6332 bbls Fresh Slickwater, Running TLTR 6332	
5	9856-10238	6000 gals 15% HCL Acid, 6205 bbls Fresh Slickwater, Running TLTR 12769	
5	9428-9750	1500 gals 15% HCL Acid, 6013 bbls Fresh Slickwater, Running TLTR 18995	
5	8988-9350	1500 gals 15% HCL Acid, 6246 bbls Fresh Slickwater, Running TLTR 25403	
5	8635-8930	1500 gals 15% HCL Acid, 6528 bbls Fresh Slickwater, Running TLTR 32119	
5	8192-8580	1500 gals 15% HCL Acid, 6334 bbls Fresh Slickwater, Running TLTR 38609	
5	7804-8122	1500 gals 15% HCL Acid, 6141 bbls Fresh Slickwater, Running TLTR 44917	
5	7406-7720	1500 gals 15% HCL Acid, 6250 bbls Fresh Slickwater, Running TLTR 51278	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hazel 3120 2-24H
Doc ID	1136318

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	6948-7262	1500 gals 15% HCL Acid, 6115 bbls Fresh Slickwater, Running TLTR 57494	
5	6564-6880	1500 gals 15% HCL Acid, 6113 bbls Fresh Slickwater, Running TLTR 63665	
5	6078-6435	1500 gals 15% HCL Acid, 6084 bbls Fresh Slickwater, Running TLTR 69812	
5	5596-5960	1500 gals 15% HCL Acid, 5923 bbls Fresh Slickwater, Running TLTR 75785	
5	5258-5518	1500 gals 15% HCL Acid, 6057 bbls Fresh Slickwater, Running TLTR 81883	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Hazel 3120 2-24H
Doc ID	1136318

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	32	20	75	120	Edge Services Grade A Cement	14	none
Surface	12.25	9.63	36	950	Halliburton Extendacem and Swiftcem Systems	445	3% Calcium Chloride, .25 lbm Poly-E-Flake
Intermeidate	8.75	7	26	5506	Halliburton Econocem and Halcem Systems	210	.4% Halad(R)-9, 2 lbm Kol-Seal, 2% Bentonite
Production Liner	6.12	4.5	11.6	10779	Halliburton Econocem System	560	5 lbm Kol-Seal, .25% SA-1015, .2% CFR-3

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

Kansas
Corporation Commission

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

April 23, 2013

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

Re: ACO1
API 15-033-21707-01-00
Hazel 3120 2-24H
SE/4 Sec.13-31S-20W
Comanche County, Kansas

Dear Production Department:

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

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

Respectfully,
Tiffany Golay

EDGE SERVICES
580-254-3216
Woodward, OK

INVOICE

DATE	INVOICE #
4/8/2013	3871

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, ...	4/8/2013	3069	LARIAT 38	HAZEL 3120 2-24H	Due on rec...

Description
DRILLED 130' OF 30" CONDUCTOR HOLE DRILLED 6' OF 76" HOLE FURNISHED AND SET 6' X 6' TINHORN CELLAR FURNISHED 130' OF 20" CONDUCTOR PIPE FURNISHED 1 LOAD(S) MUD FURNISHED WELDER AND MATERIALS FURNISHED 14 YARDS OF GRADE A CEMENT FURNISHED GROUT PUMP DRILL MOUSE HOLE FURNISHED 80' OF 14" CONDUCTOR PIPE TOTAL BID $ 19,000.00

Sales Tax (6.3%)	$394.70
TOTAL	$19,394.70

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 305021	**Ship To #:** 2991408	**Quote #:**	**Sales Order #:** 900350397
Customer: SANDRIDGE ENERGY INC EBUSINESS		**Customer Rep:**	
Well Name: Hazel 3120	**Well #:** 2-24H		**API/UWI #:** 15-033-21707
Field:	**City (SAP):** COLDWATER	**County/Parish:** Comanche	**State:** Kansas
Legal Description: Section 13 Township 31S Range 20W			
Contractor: Lariat	**Rig/Platform Name/Num:** 38		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	**Job Type:** Cement Surface Casing		
Sales Person: FRENCH, JEREMY	**Srvc Supervisor:** RODRIGUEZ, EDGAR	**MBU ID Emp #:** 442125	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
JOURNAGAN, MICHAEL	18	524224	NASH, ANDREW Mark	18	536983	RAMIREZ, JORGE	18	498481
RODRIGUEZ, EDGAR Alejandro	18	442125						

Equipment

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

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
4/9/2013	17.5	2.5	4/10/2013	0.5	0.5			
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name					
Formation Depth (MD)	**Top**		**Bottom**		
Form Type		**BHST**			
Job depth MD	953. ft	**Job Depth TVD**	950. ft		
Water Depth		**Wk Ht Above Floor**	5. ft		
Perforation Depth (MD)	**From**		**To**		

Job Times

	Date	Time	Time Zone
Called Out	08 - Apr - 2013	23:00	CST
On Location	09 - Apr - 2013	05:00	CST
Job Started	09 - Apr - 2013	22:06	CST
Job Completed	09 - Apr - 2013	22:57	CST
Departed Loc	10 - Apr - 2013	00:40	CST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
12.25" Open Hole				12.25				90.	950.		
9.625" Surface Casing	Unknown		9.625	8.921	36.	LTC	J-55	.	950.		
Preset Conductor	Unknown		20.	19.124	94.			.	90.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA	1	EA		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	9 5/8	1	HES
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	9 5/8	1	HES
Stage Tool										Centralizers			

Miscellaneous Materials

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

Fluid Data

Stage/Plug #: 1

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water		10.00	bbl	8.33	.0	.0	.0	
2	Lead Cement	EXTENDACEM (TM) SYSTEM (452981)	250.0	sacks	12.4	2.11	11.64		11.64
3 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
0.25 lbm		POLY-E-FLAKE (101216940)							
11.637 Gal		FRESH WATER							
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)	195.0	sacks	15.6	1.2	5.32		5.32
2 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
0.125 lbm		POLY-E-FLAKE (101216940)							
5.319 Gal		FRESH WATER							
4	Displacement		70.00	bbl	8.33	.0	.0	.0	

Calculated Values		Pressures		Volumes					
Displacement	70	Shut In: Instant		Lost Returns		Cement Slurry	136	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	27	Actual Displacement	70	Treatment	
Frac Gradient		15 Min		Spacers	10	Load and Breakdown		Total Job	216

Rates							
Circulating	5	Mixing	5	Displacement	5	Avg. Job	5

Cement Left In Pipe	Amount	46.20 ft	Reason	Shoe Joint

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

The Information Stated Herein Is Correct	Customer Representative Signature

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 305021	**Ship To #:** 2991408	**Quote #:**	**Sales Order #:** 900364242
Customer: SANDRIDGE ENERGY INC EBUSINESS		**Customer Rep:** ., cm	
Well Name: Hazel 3120	**Well #:** 2-24H		**API/UWI #:** 15-033-21707
Field:	**City (SAP):** COLDWATER	**County/Parish:** Comanche	**State:** Kansas
Legal Description: Section 13 Township 31S Range 20W			
Contractor: Lariat	**Rig/Platform Name/Num:** 38		
Job Purpose: Cement Intermediate Casing			
Well Type: Development Well	**Job Type:** Cement Intermediate Casing		
Sales Person: FRENCH, JEREMY	**Srvc Supervisor:** RODRIGUEZ, EDGAR	**MBU ID Emp #:** 442125	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
JOURNAGAN, MICHAEL	6.5	524224	RAMIREZ, JORGE	6.5	498481	RODRIGUEZ, EDGAR Alejandro	6.5	442125

Equipment

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

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
4/14/2013	1	1	4/15/2013	5.5	2.5			
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name			
Formation Depth (MD)	**Top**		**Bottom**
Form Type		**BHST**	
Job depth MD	5506. ft	**Job Depth TVD**	5506. ft
Water Depth		**Wk Ht Above Floor**	6. ft
Perforation Depth (MD)	**From**		**To**

Job Times

	Date	Time	Time Zone
Called Out	14 - Apr - 2013	15:30	CST
On Location	14 - Apr - 2013	21:00	CST
Job Started	15 - Apr - 2013	03:03	CST
Job Completed	15 - Apr - 2013	04:11	CST
Departed Loc	15 - Apr - 2013	05:40	CST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
8.75" Open Hole				8.75				950.	5540.		
7" Intermediate Casing	Unknown		7.	6.276	26.	LTC	P-110	.	5540.		
9.625" Surface Casing	Unknown		9.625	8.921	36.	LTC	J-55	.	950.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP,7,HWE,5.66 MIN/6.54 MAX CS	1	EA		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	7	1	HES
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	7	1	HES
Stage Tool										Centralizers			

Miscellaneous Materials

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

Fluid Data

Stage/Plug #: 1

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Rig Supplied Gel Spacer		30.00	bbl	8.33	.0	.0	.0	
2	Lead Cement	ECONOCEM (TM) SYSTEM (452992)	110.0	sacks	13.6	1.53	7.24		7.24
0.4 %		HALAD(R)-9, 50 LB (100001617)							
2 lbm		KOL-SEAL, BULK (100064233)							
2 %		BENTONITE, BULK (100003682)							
7.24 Gal		FRESH WATER							
3	Tail Cement	HALCEM (TM) SYSTEM (452986)	100.0	sacks	15.6	1.19	5.08		5.08
0.4 %		HALAD(R)-9, 50 LB (100001617)							
2 lbm		KOL-SEAL, BULK (100064233)							
5.076 Gal		FRESH WATER							
4	Displacement		207.00	bbl	8.33	.0	.0	.0	

Calculated Values		Pressures		Volumes					
Displacement	207	Shut In: Instant		Lost Returns		Cement Slurry	51	Pad	
Top Of Cement	4845 / TOT	Top Of Cement	3725 / TOL	Cement Returns		Actual Displacement	207	Treatment	
Frac Gradient		15 Min		Spacers	30	Load and Breakdown		Total Job	288

Rates

Circulating	5	Mixing	5	Displacement	6	Avg. Job	5.5

Cement Left In Pipe	Amount	86 ft	Reason	Shoe Joint

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

The Information Stated Herein Is Correct	Customer Representative Signature

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 305021	**Ship To #:** 2991408	**Quote #:**	**Sales Order #:** 900381434
Customer: SANDRIDGE ENERGY INC EBUSINESS		**Customer Rep:** SANDRIDGE, FELIX	
Well Name: Hazel 3120	**Well #:** 2-24H		**API/UWI #:** 15-033-21707
Field:	**City (SAP):** COLDWATER	**County/Parish:** Comanche	**State:** Kansas
Legal Description: Section 13 Township 31S Range 20W			
Contractor: Lariat	**Rig/Platform Name/Num:** 38		
Job Purpose: Cement Production Liner			
Well Type: Development Well	**Job Type:** Cement Production Liner		
Sales Person: FRENCH, JEREMY	**Srvc Supervisor:** WILTSHIRE, MERSHEK	**MBU ID Emp #:** 195811	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
Berumen, Eduardo	8.5	267804	WILTSHIRE, MERSHEK TonJe	8.5	195811			

Equipment

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

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name			
Formation Depth (MD)	**Top**		**Bottom**
Form Type		**BHST**	
Job depth MD	10797. ft	**Job Depth TVD**	5115. ft
Water Depth		**Wk Ht Above Floor**	
Perforation Depth (MD)	**From**		**To**

Job Times

	Date	Time	Time Zone
Called Out	22 - Apr - 2013	21:30	CST
On Location	23 - Apr - 2013	04:00	CST
Job Started	23 - Apr - 2013	09:04	CST
Job Completed	23 - Apr - 2013	10:41	GMT
Departed Loc	23 - Apr - 2013	12:30	CST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
6.125" Open Hole				6.125				5540.	10797.		
4.5" Production Liner	Unknown		4.5	4.	11.6	LTC	N-80	5140.	10797.		
7" Intermediate Casing	Unknown		7.	6.276	26.	LTC	P-110	.	5540.		
4" Drill Pipe	Unknown		4.	3.34	14.	Unknown		.	5140.		

Tools and Accessories

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

Miscellaneous Materials

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

Fluid Data

Stage/Plug #: 1

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Rig Supplied Gel Spacer		30.00	bbl	8.5	.0	.0	.0	
2	Primary Cement E923	ECONOCEM (TM) SYSTEM (452992)	560.0	sacks	13.6	1.5	6.76		6.76
	5 lbm	KOL-SEAL, BULK (100064233)							
	0.25 %	SA-1015, 50 LB SACK (102077046)							
	0.2 %	CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
	6.756 Gal	FRESH WATER							
3	Displacement		142.00	bbl	8.33	.0	.0	.0	

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

Rates

Circulating		Mixing		Displacement		Avg. Job	

Cement Left In Pipe	Amount	84 ft	Reason	Shoe Joint

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

The Information Stated Herein Is Correct	Customer Representative Signature

BAKER HUGHES INTEQ

Company: Sandridge Energy
Well: Hazel 3120 2-24H
Location: Comanche Co, KS
Rig: Lariat 38

Job Number: 5413380
Magnetic Decl.: 5.48
Grid Corr.: 0.58
Total Grid Corr.: 6.06

Calculation Method Minimum Curvature
Proposed Azimuth 181.27
Depth Reference Rig Flo Plan # 1
Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
Tie In Coordinates														
Suface	20	0.00	0.00	N 0.0 E	0	20.00	0.00	0.00 S	0.00 W					
Gyro	246	0.50	219.13	S 39.1 W	226	246.00	0.78	0.76 S	0.62 W	0.99	219.13	0.22	0.22	96.96
Gyro	492	0.60	219.13	S 39.1 W	246	491.99	2.64	2.60 S	2.11 W	3.35	219.13	0.04	0.04	0.00
Gyro	767	0.30	219.13	S 39.1 W	275	766.98	4.35	4.27 S	3.48 W	5.51	219.13	0.11	-0.11	0.00
ATC1	998	0.54	219.13	S 39.1 W	231	997.97	5.68	5.59 S	4.54 W	7.20	219.13	0.10	0.10	0.00
ATC1	1456	0.30	217.31	S 37.3 W	458	1455.96	8.36	8.21 S	6.63 W	10.56	218.92	0.05	-0.05	-0.40
ATC1	1952	0.29	44.52	N 44.5 E	496	1951.95	8.49	8.35 S	6.54 W	10.61	218.06	0.12	0.00	-34.84
ATC1	2427	0.20	49.41	N 49.4 E	475	2426.95	7.07	6.95 S	5.07 W	8.61	216.08	0.02	-0.02	1.03
ATC1	2902	0.06	300.04	N 60.0 W	475	2901.95	6.39	6.29 S	4.65 W	7.82	216.49	0.05	-0.03	-23.03
ATC1	3376	0.06	154.66	S 25.3 E	474	3375.95	6.49	6.39 S	4.76 W	7.97	216.69	0.02	0.00	-30.67
ATC1	3850	0.28	201.39	S 21.4 W	474	3849.95	7.80	7.69 S	5.08 W	9.22	213.43	0.05	0.05	9.86
ATC1	4199	0.72	159.71	S 20.3 E	349	4198.93	10.64	10.54 S	4.63 W	11.52	203.70	0.16	0.13	-11.94
ATC1	4230	1.96	170.10	S 9.9 E	31	4229.92	11.35	11.25 S	4.47 W	12.10	201.67	4.06	4.00	33.52
ATC1	4262	3.94	176.12	S 3.9 E	32	4261.88	12.98	12.89 S	4.30 W	13.58	198.46	6.25	6.19	18.81
ATC1	4294	5.68	174.43	S 5.6 E	32	4293.77	15.65	15.56 S	4.07 W	16.08	194.67	5.45	5.44	-5.28
ATC1	4325	7.85	175.67	S 4.3 E	31	4324.55	19.28	19.20 S	3.76 W	19.56	191.10	7.02	7.00	4.00
ATC1	4357	10.42	173.75	S 6.3 E	32	4356.14	24.32	24.25 S	3.28 W	24.47	187.71	8.09	8.03	-6.00
ATC1	4389	13.50	174.30	S 5.7 E	32	4387.44	30.90	30.85 S	2.60 W	30.96	184.81	9.63	9.63	1.72
ATC1	4420	16.43	172.80	S 7.2 E	31	4417.39	38.83	38.80 S	1.69 W	38.84	182.49	9.53	9.45	-4.84
ATC1	4452	19.17	173.10	S 6.9 E	32	4447.85	48.51	48.51 S	0.49 W	48.51	180.58	8.57	8.56	0.94
ATC1	4484	20.94	175.48	S 4.5 E	32	4477.91	59.40	59.42 S	0.59 E	59.43	179.43	6.09	5.53	7.44
ATC1	4515	23.12	178.94	S 1.1 E	31	4506.65	70.99	71.03 S	1.14 E	71.04	179.08	8.18	7.03	11.16
ATC1	4547	25.26	183.09	S 3.1 W	32	4535.84	84.10	84.14 S	0.89 E	84.14	179.39	8.54	6.69	12.97
ATC1	4579	26.36	186.04	S 6.0 W	32	4564.65	98.00	98.02 S	0.23 W	98.02	180.13	5.28	3.44	9.22
ATC1	4610	28.15	187.23	S 7.2 W	31	4592.20	112.13	112.12 S	1.87 W	112.13	180.96	6.04	5.77	3.84
ATC1	4642	30.15	186.89	S 6.9 W	32	4620.15	127.64	127.59 S	3.79 W	127.64	181.70	6.27	6.25	-1.06
ATC1	4674	32.08	185.85	S 5.8 W	32	4647.54	144.11	144.02 S	5.62 W	144.13	182.23	6.26	6.03	-3.25
ATC1	4705	34.19	185.27	S 5.3 W	31	4673.50	161.01	160.89 S	7.26 W	161.05	182.58	6.88	6.81	-1.87
ATC1	4737	34.83	183.69	S 3.7 W	32	4699.87	179.11	178.96 S	8.67 W	179.17	182.77	3.44	2.00	-4.94
ATC1	4769	36.54	182.11	S 2.1 W	32	4725.86	197.76	197.60 S	9.61 W	197.83	182.78	6.07	5.34	-4.94
ATC1	4800	38.23	181.37	S 1.4 W	31	4750.49	216.58	216.41 S	10.18 W	216.65	182.69	5.64	5.45	-2.39
ATC1	4832	40.35	180.53	S 0.5 W	32	4775.26	236.85	236.67 S	10.51 W	236.90	182.54	6.83	6.63	-2.63
ATC1	4864	43.12	180.77	S 0.8 W	32	4799.14	258.14	257.97 S	10.75 W	258.19	182.39	8.67	8.66	0.75
ATC1	4895	45.44	181.00	S 1.0 W	31	4821.33	279.79	279.61 S	11.09 W	279.83	182.27	7.50	7.48	0.74
ATC1	4927	47.60	181.43	S 1.4 W	32	4843.35	303.00	302.82 S	11.58 W	303.04	182.19	6.82	6.75	1.34
ATC1	4959	49.34	182.08	S 2.1 W	32	4864.56	326.96	326.76 S	12.32 W	327.00	182.16	5.65	5.44	2.03
ATC1	4990	49.35	182.67	S 2.7 W	31	4884.76	350.47	350.26 S	13.29 W	350.51	182.17	1.44	0.03	1.90

BAKER HUGHES INTEQ

Company: Sandridge Energy
Well: Hazel 3120 2-24H
Location: Comanche Co, KS
Rig: Lariat 38

Job Number: 5413380
Magnetic Decl.: 5.48
Grid Corr.: 0.58
Total Grid Corr.: 6.06

Calculation Method Minimum Curvature
Proposed Azimuth 181.27
Depth Reference Rig Flo Plan # 1
Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
ATC1	5022	49.38	183.14	S 3.1 W	32	4905.60	374.74	374.51 S	14.52 W	374.80	182.22	1.12	0.09	1.47
ATC1	5054	49.33	183.72	S 3.7 W	32	4926.44	399.01	398.75 S	15.98 W	399.07	182.29	1.38	-0.16	1.81
ATC1	5085	49.44	183.46	S 3.5 W	31	4946.62	422.52	422.24 S	17.45 W	422.60	182.37	0.73	0.35	-0.84
ATC1	5117	49.24	183.06	S 3.1 W	32	4967.47	446.78	446.47 S	18.83 W	446.87	182.41	1.14	-0.62	-1.25
ATC1	5149	51.78	181.69	S 1.7 W	32	4987.82	471.47	471.14 S	19.85 W	471.56	182.41	8.60	7.94	-4.28
ATC1	5180	54.94	180.16	S 0.2 W	31	5006.32	496.34	496.01 S	20.24 W	496.42	182.34	10.94	10.19	-4.94
ATC1	5212	57.78	179.98	S 0.0 E	32	5024.05	522.97	522.65 S	20.27 W	523.04	182.22	8.89	8.88	-0.56
ATC1	5244	60.82	179.10	S 0.9 E	32	5040.38	550.47	550.16 S	20.05 W	550.53	182.09	9.79	9.50	-2.75
ATC1	5275	64.49	178.48	S 1.5 E	31	5054.62	577.97	577.68 S	19.47 W	578.01	181.93	11.97	11.84	-2.00
ATC1	5307	67.98	178.22	S 1.8 E	32	5067.51	607.22	606.95 S	18.62 W	607.24	181.76	10.93	10.91	-0.81
ATC1	5339	70.45	178.43	S 1.6 E	32	5078.87	637.09	636.86 S	17.75 W	637.10	181.60	7.74	7.72	0.66
ATC1	5370	72.96	179.39	S 0.6 E	31	5088.60	666.50	666.28 S	17.19 W	666.50	181.48	8.61	8.10	3.10
ATC1	5402	76.61	179.44	S 0.6 E	32	5096.99	697.36	697.15 S	16.87 W	697.36	181.39	11.41	11.41	0.16
ATC1	5434	79.50	179.17	S 0.8 E	32	5103.62	728.64	728.46 S	16.49 W	728.64	181.30	9.07	9.03	-0.84
ATC1	5465	82.90	178.61	S 1.4 E	31	5108.36	759.25	759.08 S	15.90 W	759.25	181.20	11.11	10.97	-1.81
LCPG1	5534	89.69	180.77	S 0.8 W	69	5112.81	828.03	827.89 S	15.53 W	828.04	181.07	10.32	9.84	3.13
LCPG1	5566	90.49	180.98	S 1.0 W	32	5112.76	860.03	859.89 S	16.02 W	860.04	181.07	2.58	2.50	0.66
LCPG1	5661	89.32	180.52	S 0.5 W	95	5112.92	955.02	954.88 S	17.27 W	955.03	181.04	1.32	-1.23	-0.48
LCPG1	5756	90.25	181.22	S 1.2 W	95	5113.28	1050.02	1049.86 S	18.71 W	1050.03	181.02	1.23	0.98	0.74
LCPG1	5851	88.71	180.12	S 0.1 W	95	5114.14	1145.01	1144.85 S	19.82 W	1145.02	180.99	1.99	-1.62	-1.16
LCPG1	5946	90.28	181.38	S 1.4 W	95	5114.98	1239.99	1239.83 S	21.06 W	1240.01	180.97	2.12	1.65	1.33
LCPG1	6041	90.68	182.03	S 2.0 W	95	5114.18	1334.99	1334.79 S	23.89 W	1335.00	181.03	0.80	0.42	0.68
LCPG1	6135	90.87	181.29	S 1.3 W	94	5112.91	1428.98	1428.74 S	26.61 W	1428.98	181.07	0.81	0.20	-0.79
LCPG1	6231	91.03	181.63	S 1.6 W	96	5111.32	1524.96	1524.69 S	29.06 W	1524.97	181.09	0.39	0.17	0.35
LCPG1	6322	89.45	181.43	S 1.4 W	91	5110.94	1615.96	1615.66 S	31.49 W	1615.96	181.12	1.75	-1.74	-0.22
LCPG1	6414	90.12	180.65	S 0.7 W	92	5111.28	1707.95	1707.64 S	33.16 W	1707.96	181.11	1.12	0.73	-0.85
LCPG1	6506	90.58	180.36	S 0.4 W	92	5110.72	1799.94	1799.63 S	33.97 W	1799.95	181.08	0.59	0.50	-0.32
LCPG1	6597	90.62	179.57	S 0.4 E	91	5109.77	1890.91	1890.63 S	33.91 W	1890.93	181.03	0.87	0.04	-0.87
LCPG1	6688	88.31	178.88	S 1.1 E	91	5110.62	1981.85	1981.61 S	32.68 W	1981.88	180.94	2.65	-2.54	-0.76
LCPG1	6780	88.92	180.32	S 0.3 W	92	5112.84	2073.78	2073.58 S	32.04 W	2073.82	180.89	1.70	0.66	1.57
LCPG1	6872	88.30	180.79	S 0.8 W	92	5115.07	2165.74	2165.54 S	32.93 W	2165.79	180.87	0.85	-0.67	0.51
LCPG1	6964	87.97	182.00	S 2.0 W	92	5118.07	2257.69	2257.47 S	35.17 W	2257.74	180.89	1.36	-0.36	1.32
LCPG1	7055	89.35	182.67	S 2.7 W	91	5120.20	2348.65	2348.36 S	38.87 W	2348.69	180.95	1.69	1.52	0.74
LCPG1	7147	89.75	181.98	S 2.0 W	92	5120.92	2440.63	2440.28 S	42.61 W	2440.66	181.00	0.87	0.43	-0.75
LCPG1	7239	90.83	182.75	S 2.8 W	92	5120.45	2532.61	2532.20 S	46.40 W	2532.63	181.05	1.44	1.17	0.84
LCPG1	7331	91.02	181.98	S 2.0 W	92	5118.97	2624.58	2624.11 S	50.20 W	2624.59	181.10	0.86	0.21	-0.84
LCPG1	7423	91.08	181.75	S 1.8 W	92	5117.28	2716.56	2716.05 S	53.19 W	2716.57	181.12	0.26	0.07	-0.25
LCPG1	7515	90.83	181.84	S 1.8 W	92	5115.75	2808.54	2807.99 S	56.07 W	2808.55	181.14	0.29	-0.27	0.10

BAKER HUGHES INTEQ

Company: Sandridge Energy
Well: Hazel 3120 2-24H
Location: Comanche Co, KS
Rig: Lariat 38

Job Number: 5413380
Magnetic Decl.: 5.48
Grid Corr.: 0.58
Total Grid Corr.: 6.06

Calculation Method Minimum Curvature
Proposed Azimuth 181.27
Depth Reference Rig Flo Plan # 1
Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
LCPG1	7606	91.09	182.27	S 2.3 W	91	5114.22	2899.52	2898.92 S	59.34 W	2899.52	181.17	0.55	0.29	0.47
LCPG1	7701	90.49	182.34	S 2.3 W	95	5112.91	2994.50	2993.83 S	63.16 W	2994.50	181.21	0.64	-0.63	0.07
LCPG1	7796	90.87	182.32	S 2.3 W	95	5111.79	3089.47	3088.75 S	67.02 W	3089.47	181.24	0.40	0.40	-0.02
LCPG1	7891	89.01	182.09	S 2.1 W	95	5111.89	3184.46	3183.67 S	70.67 W	3184.46	181.27	1.97	-1.96	-0.24
LCPG1	7986	88.18	182.90	S 2.9 W	95	5114.22	3279.40	3278.55 S	74.81 W	3279.40	181.31	1.22	-0.87	0.85
LCPG1	8081	88.49	182.17	S 2.2 W	95	5116.98	3374.34	3373.42 S	79.01 W	3374.34	181.34	0.83	0.33	-0.77
LCPG1	8176	91.17	182.00	S 2.0 W	95	5117.26	3469.32	3468.34 S	82.46 W	3469.33	181.36	2.83	2.82	-0.18
LCPG1	8271	89.35	181.24	S 1.2 W	95	5116.83	3564.31	3563.30 S	85.15 W	3564.32	181.37	2.08	-1.92	-0.80
LCPG1	8366	91.17	180.98	S 1.0 W	95	5116.40	3659.31	3658.28 S	86.99 W	3659.31	181.36	1.94	1.92	-0.27
LCPG1	8461	91.60	180.54	S 0.5 W	95	5114.10	3754.28	3753.24 S	88.25 W	3754.28	181.35	0.65	0.45	-0.46
LCPG1	8556	89.69	180.34	S 0.3 W	95	5113.03	3849.26	3848.23 S	88.98 W	3849.26	181.32	2.02	-2.01	-0.21
LCPG1	8651	88.77	180.05	S 0.1 W	95	5114.31	3944.23	3943.22 S	89.30 W	3944.23	181.30	1.02	-0.97	-0.31
LCPG1	8746	88.95	180.09	S 0.1 W	95	5116.20	4039.19	4038.20 S	89.42 W	4039.19	181.27	0.19	0.19	0.04
LCPG1	8841	89.97	179.67	S 0.3 E	95	5117.09	4134.16	4133.19 S	89.22 W	4134.16	181.24	1.16	1.07	-0.44
LCPG1	8936	90.09	179.70	S 0.3 E	95	5117.04	4229.12	4228.19 S	88.70 W	4229.12	181.20	0.13	0.13	0.03
LCPG1	9031	90.83	180.13	S 0.1 W	95	5116.28	4324.09	4323.19 S	88.56 W	4324.09	181.17	0.90	0.78	0.45
LCPG1	9126	90.89	179.71	S 0.3 E	95	5114.85	4419.05	4418.18 S	88.42 W	4419.06	181.15	0.45	0.06	-0.44
LCPG1	9221	90.49	179.85	S 0.2 E	95	5113.71	4514.01	4513.17 S	88.06 W	4514.03	181.12	0.45	-0.42	0.15
LCPG1	9316	91.20	180.20	S 0.2 W	95	5112.31	4608.98	4608.16 S	88.10 W	4609.00	181.10	0.83	0.75	0.37
LCPG1	9411	90.52	179.98	S 0.0 E	95	5110.88	4703.95	4703.15 S	88.25 W	4703.97	181.07	0.75	-0.72	-0.23
LCPG1	9506	90.06	179.59	S 0.4 E	95	5110.40	4798.91	4798.14 S	87.89 W	4798.95	181.05	0.63	-0.48	-0.41
LCPG1	9601	89.41	179.26	S 0.7 E	95	5110.84	4893.86	4893.14 S	86.94 W	4893.91	181.02	0.77	-0.68	-0.35
LCPG2	9631	89.38	179.09	S 0.9 E	30	5111.16	4923.84	4923.13 S	86.51 W	4923.89	181.01	0.58	-0.10	-0.57
LCPG2	9726	89.08	179.91	S 0.1 E	95	5112.43	5018.79	5018.12 S	85.68 W	5018.85	180.98	0.92	-0.32	0.86
LCPG2	9821	88.34	180.79	S 0.8 W	95	5114.57	5113.75	5113.09 S	86.26 W	5113.82	180.97	1.21	-0.78	0.93
LCPG2	9916	88.76	181.02	S 1.0 W	95	5116.98	5208.72	5208.05 S	87.76 W	5208.79	180.97	0.50	0.44	0.24
LCPG2	10011	88.74	180.37	S 0.4 W	95	5119.05	5303.69	5303.02 S	88.91 W	5303.77	180.96	0.68	-0.02	-0.68
LCPG2	10106	89.51	181.61	S 1.6 W	95	5120.50	5398.67	5397.99 S	90.55 W	5398.75	180.96	1.54	0.81	1.31
LCPG2	10201	89.66	181.53	S 1.5 W	95	5121.19	5493.67	5492.95 S	93.15 W	5493.74	180.97	0.18	0.16	-0.08
LCPG2	10296	91.60	182.57	S 2.6 W	95	5120.14	5588.65	5587.88 S	96.55 W	5588.72	180.99	2.32	2.04	1.09
LCPG2	10391	89.69	182.84	S 2.8 W	95	5119.07	5683.61	5682.77 S	101.04 W	5683.66	181.02	2.03	-2.01	0.28
LCPG2	10486	90.86	182.29	S 2.3 W	95	5118.62	5778.58	5777.67 S	105.29 W	5778.63	181.04	1.36	1.23	-0.58
LCPG2	10581	91.51	183.51	S 3.5 W	95	5116.65	5873.52	5872.52 S	110.09 W	5873.55	181.07	1.45	0.68	1.28
LCPG2	10676	91.20	183.31	S 3.3 W	95	5114.41	5968.43	5967.33 S	115.74 W	5968.45	181.11	0.39	-0.33	-0.21
LCPG2	10737	90.43	182.42	S 2.4 W	61	5113.54	6029.40	6028.24 S	118.79 W	6029.41	181.13	1.93	-1.26	-1.46
Proj.	10779	90.43	182.42	S 2.4 W	42	5113.22	6071.39	6070.21 S	120.56 W	6071.40	181.14	0.00	0.00	0.00

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/2/2013
Job End Date:	7/6/2013
State:	Kansas
County:	Comanche
API Number:	15-033-21707-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Hazel 3120 2-24H
Longitude:	-99.44238100
Latitude:	37.34425900
Datum:	NAD27
Federal/Tribal Well:	NO
Total Base Water Volume (gal):	3,374,217
Total Base Non Water Volume:	

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	Operator	Carrier					
			Water	7732-18-5	100.00000	95.63971	
40/70 White	FTSI	Proppant					
			40/70 White	14808-60-7	100.00000	3.32763	
Hydrochloric Acid (HCl)	FTSI	Acid					
			Water	7732-18-5	85.00000	0.76485	
			Hydrogen Chloride	7647-01-0	15.00000	0.13497	
FRW-200	FTSI	Friction reducer					
			Water	7732-18-5	48.00000	0.02843	
			Copolymer of acrylamide and sodium acrylate	25987-30-8	33.00000	0.01955	
			Petroleum distillate hydrotreated light	64742-47-8	26.00000	0.01540	
			Acrylamide P/W acrylic acid, ammonium salt	26100-47-0	25.00000	0.01481	
			Ammonium Chloride	12125-02-9	12.00000	0.00711	
			Surfactant	Proprietary	7.00000	0.00415	
			Alcohols (C10-C16), ethoxylated	68002-97-1	4.00000	0.00237	
			Alcohols (C12-C14), ethoxylated	68439-50-9	4.00000	0.00237	
			Alcohols (C12-C16), ethoxylated	68551-12-2	4.00000	0.00237	
			Sorbitan Monooleate	1338-43-8	3.00000	0.00178	

			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00178	
			Sorbitol Tetraoleate	61723-83-9	2.00000	0.00118	
			Proprietary Component	Proprietary	1.50000	0.00089	
			Alkyloxypolyethyleneoxyethanol	84133-50-6	1.00000	0.00059	
			Ammonium Acrylate	10604-69-0	0.50000	0.00030	
			Acrylamide	79-06-1	0.10000	0.00006	
NE-100	FTSI	Non-emulsifier					
			Water	7732-18-5	90.00000	0.04265	
			2-Propanol	67-63-0	10.00000	0.00474	
			2-Butoxyethanol	111-76-2	10.00000	0.00474	
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00237	
			Benzene, C10-16 Alkyl Derivatives	68648-87-3	0.04200	0.00002	
			Unsulphonated Matter	3rd Party Proprietar	0.02800	0.00001	
			Sulfuric Acid	7664-93-9	0.01400	0.00001	
			Sulfur Dioxide	7446-09-5	0.00140	0.00000	
CS-250 SI	FTSI	Scale Inhibitor					
			Water	7732-18-5	81.00000	0.00871	
			Ethylene glycol	107-21-1	10.00000	0.00108	
			Sodium Polyacrylate	9003-04-7	10.00000	0.00108	
			Sodium chloride	7647-14-5	6.00000	0.00065	
BIO-150	FTSI	Biocide					
			Gluteral	111-30-8	50.00000	0.00551	
			Water	7732-18-5	50.00000	0.00551	
			Methanol	67-56-1	0.50000	0.00006	
CI-150	FTSI	Acid Corrosion Inhibitor					
			Isopropanol	67-63-0	30.00000	0.00076	
			Ethylene Glycol	107-21-1	30.00000	0.00076	
			Organic amine resin salt	Proprietary	30.00000	0.00076	
			Alkylene Oxide Block Polymer	Proprietary	10.00000	0.00025	
			Dimethylformamide	68-12-2	10.00000	0.00025	
			Quaternary ammonium compound	Proprietary	10.00000	0.00025	
			Aromatic aldehyde	Proprietary	10.00000	0.00025	
			Water	7732-18-5	5.00000	0.00013	
			Diethylene glycol	111-46-6	1.00000	0.00003	
			Aliphatic alcohol	Proprietary	0.10000	0.00000	
			Fatty Acid	Proprietary	0.10000	0.00000	
			Fatty Acid Salt	Proprietary	0.10000	0.00000	
FE-100L	FTSI	Iron control					
			Water	7732-18-5	60.00000	0.00114	
			Citric acid	77-92-9	55.00000	0.00105	

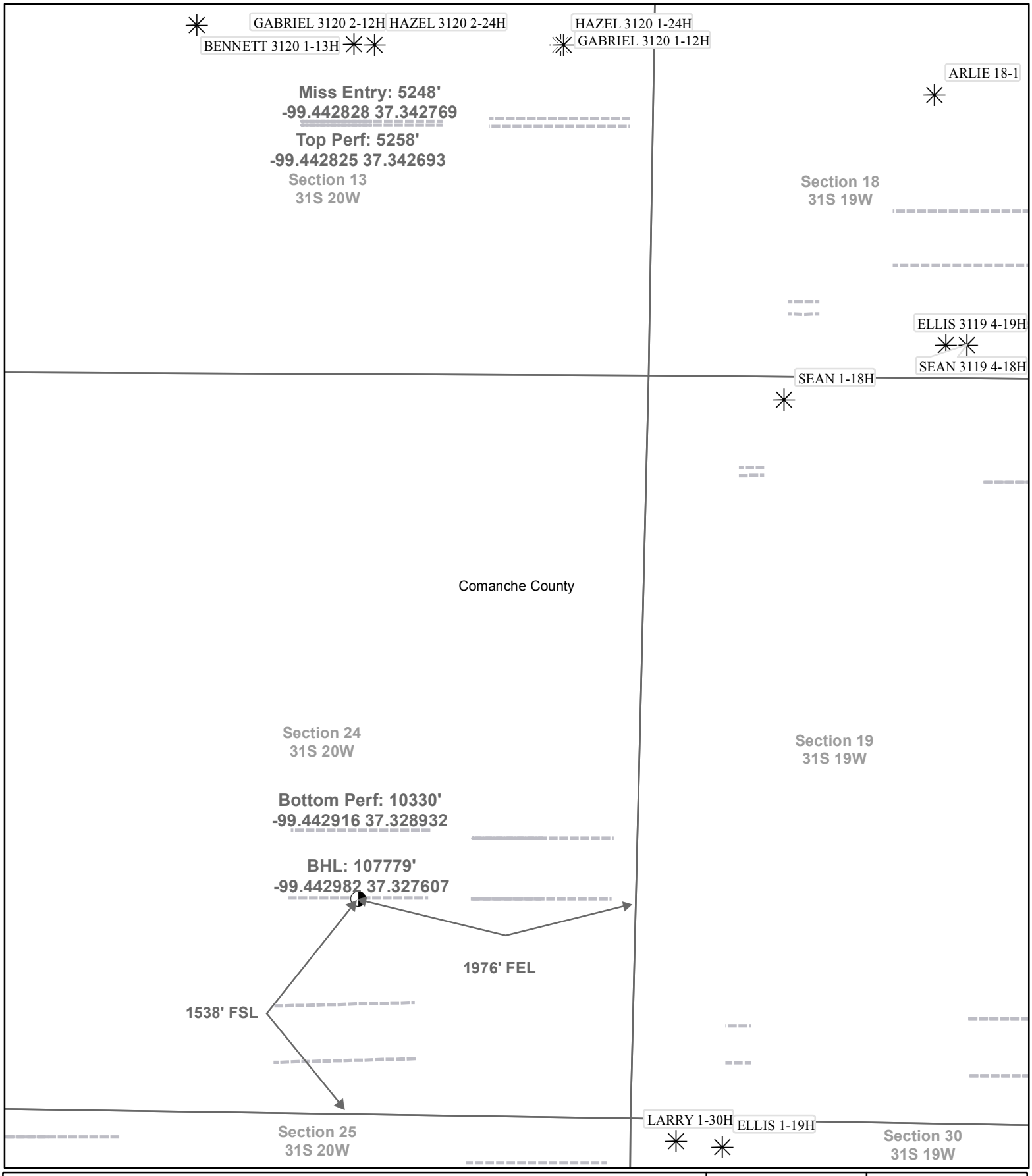
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* 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)

Remarks

Tiffany Golay 07/09/013 10:47 am	Conductor weight= 94 lbs/ft
Tiffany Golay 04/23/013 09:54 am	TD 10,779'



SANDRIDGE
THE POWER OF US

Actual BH Location

SandRidge Wells

Perf

Sections

Actual Bottom-Hole Location of Hazel 1320 2-24H
Comanche County, Kansas
T&R: 31S 20W
Section: 24, 1976' FEL & 1538' FSL
-99.442982 37.327607

1 in = 898 ft

0 650 1,300 2,600 Feet

N

Draftsman: Aaron Birk	Draft Date: 8/1/2013
Drawing Name/Number: Addendum_Hazel 1320 2-24H.mxd	
Coordinate System: NAD 1927 State Plane Kansas South FIPS: 1502	