



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1231757
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: _____

1231757

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
-----------------------------------	-----------	---------	-------------	---------------	---------

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. <i>(Submit ACO-5)</i> <input type="checkbox"/> Commingled <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
---	---	--

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/25/2014
Job End Date:	10/26/2014
State:	Kansas
County:	Harper
API Number:	15-077-22072-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Hughes 3408-22H
Longitude:	-98.17682680
Latitude:	37.06568480
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,689
Total Base Water Volume (gal):	2,475,564
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Archer	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	96.03204	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	3.55296	None
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.04963	None
			Methyl Alcohol	67-56-1	80.00000	0.00041	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00008	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00092	None
			Citric Acid	77-92-9	30.00000	0.00055	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.00082	None
			Alcohol Ethoxylate Surfactants	NA	10.00000	0.00008	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
		Other Chemicals					
			Water	7732-18-5		0.04274	

		Aliphatic Hydrocarbon	64742-47-8		0.02137	
		Anionic Polymer	N/A		0.02137	
		Water	7732-18-5		0.00876	
		Polyol Ester	N/A		0.00356	
		Oxyalkylated Alcohol	68002-97-1		0.00356	
		Acrylic Polymer	28205-96-1		0.00146	
		Sodium Salt of Phosphate Ester	68131-72-6		0.00146	
		Polyglycol Ester	52624-57-4		0.00071	
		Water	7732-18-5		0.00064	
		Alcohol Ethoxylate Surfactants	N/A		0.00008	
		Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00007	
		n-olefins	N/A		0.00004	
		Propargyl Alcohol	107-19-7		0.00003	
		TRADE SECRET	N/A			
		WATER	7732-18-5			
		Water	7732-18-5			
		Cinnamic Aldehyde	104-55-2			
		METHANOL	67-56-1			
		Buffer	N/A			
		Acetic Acid	64-19-7			
		ISOPROPANOL	67-63-0			
		Surfactant	N/A			

* 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)

JOB SUMMARY

PROJECT NUMBER SOK 4228		TICKET DATE 09/23/14	
COUNTY Harper	State Kansas	COMPANY Bridge Exploration & Produc	CUSTOMER REP Mark Turner
LEASE NAME Hughes 3408	Well No. 2-22H	JOB TYPE Surface	EMPLOYEE NAME Arthur Setzer

EMP NAME	Arthur Setzer	0					
Jared Green							
Frank Reeves							
0.00							

Form. Name _____ Type: _____

Packer Type _____ Set At _____ 0 _____

Bottom Hole Temp. _____ 80 _____ Pressure _____

Retainer Depth _____ Total Depth _____ 750 _____

Date	Called Out	On Location	Job Started	Job Completed
	9/23/2014	9/23/2014	9/23/2014	9/23/2014
Time	0400	0800	1420	1600

Tools and Accessories		
Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float V ₂	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data						
New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing	36#	9 5/8"		Surface	778	1,500
Liner						
Liner						
Tubing		0				
Drill Pipe						
Open Hole		12 1/4"		Surface	774	Shots/Ft.
Perforations						
Perforations						
Perforations						

Materials			
Mud Type	WBM	Density	Lb/Gal
Disp. Fluid	Fresh Water	8.33	
Spacer type	Fresh Water BBL.	10	8.33
Spacer type	BBL.		
Acid Type	Gal.	%	
Acid Type	Gal.	%	
Surfactant	Gal.	ln	
NE Agent	Gal.	ln	
Fluid Loss	Gal/Lb	ln	
Gelling Agent	Gal/Lb	ln	
Fric. Red.	Gal/Lb	ln	
MISC.	Gal/Lb	ln	
Perfpac Balls	Qty.		
Other			
Other			
Other			
Other			
Other			

Hours On Location		Operating Hours		Description of Job
Date	Hours	Date	Hours	
9/23	8.0	9/23	2.0	Surface
Total	8.0	Total	2.0	

Pressures	
MAX 1,500 PSI	AVG. 1500
MAX 6 BPM	Average Rates in BPM
	AVG 5
Cement Left in Pipe	
Feet 46	Reason SHOE JOINT

Cement Data				W/Rq.	Yield	Lbs/Gal
Stage	Sacks	Cement	Additives			
1	180	TEX Lite Premium Plus 65	(6% Gel) 2% Calcium Chloride - 1/2pps Cello-Flake - 0.2% X-Air	11.11	2.01	12.40
2	195	Premium Plus (Class C)	2% Calcium Chloride - 1/2pps Cello-Flake	6.32	1.32	14.80

Summary							
Preflush Breakdown	10.00	Type: Fresh Water	Preflush: BBI	10.00	Type: Fresh Water	Pad:Bbl -Gal	N/A
			Load & Bkdn: Gal - BBI	N/A		Calc.Disp Bbl	57
			Excess /Return BBI	50		Actual Disp.	57.00
			Calc. TOC:	SURFACE		Disp:Bbl	57.00
Average SIP	5 Min.	Bump Plug PSI: 600	Final Circ. PSI:	150			
	10 Min.	15 Min.	Cement Slurry BBI	110.0			
			Total Volume BBI	177.00			

CUSTOMER REPRESENTATIVE _____

Arthur Setzer
SIGNATURE

JOB SUMMARY			PROJECT NUMBER SOK 4262	TICKET DATE 09/29/14
COUNTY Harper	State Kansas	COMPANY Sandridge Exploration & Production	CUSTOMER REP J.T. Hunter	
LEASE NAME Hughes 3408	Well No. 2-22H	JOB TYPE Intermediate	EMPLOYEE NAME Brett Armer	

EMP NAME					
Brett Armer	0				
Cody Bonitz					
James Derry					
0.00					

Form. Name _____ Type: _____

Packer Type _____ Set At **0**

Bottom Hole Temp. **155** Pressure _____

Retainer Depth _____ Total Depth **5202**

Date	Called Out 9/29/2014	On Location 9/29/2014	Job Started 9/29/2014	Job Completed 9/29/2014
Time	0515	0800	0930	1051

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

Well Data						
	New/Used	Weight	Size	Grade	From	To
Casing		26#	7"		Surface	
Liner						
Liner						
Tubing			0			
Drill Pipe						
Open Hole			8 7/8"		Surface	5,202
Perforations						
Perforations						
Perforations						

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

Hours On Location		Operating Hours		Description of Job
Date	Hours	Date	Hours	
9/29	4.5	9/29	1.5	Intermediate
Total	4.5	Total	1.5	

Pressures	
MAX	5,000 PSI
AVG	1000
Average Rates in BPM	
MAX	8 BPM
AVG	6
Cement Left in Pipe	
Feet	86
Reason SHOE JOINT	

Cement Data						
Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	180	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.15% C-20 - 0.1% C-37 - 0.2% X-Air	6.93	1.43	13.60
2	100	Premium	0.2% FL-17 - 0.1% C-51 - 0.15% C-20 - 0.2% X-Air	5.19	1.19	15.60
3	0	0		0	0.00	0.00

Summary			
Preflush	10	Type: Caustic	Preflush: BBI 30.00
Breakdown	MAXIMUM	5,000 PSI	Load & Bkdn: Gal - BBI N/A
	Lost Returns-N	NO/FULL	Excess /Return BBI N/A
Average	Actual TOC		Calc. TOC: 197.00
isir	Bump Plug PSI:		Final Circ. PSI: 1,400
	5 Min.	10 Min.	Cement Slurry: BBI 67.0
		15 Min.	Total Volume BBI 294.00

CUSTOMER REPRESENTATIVE _____ SIGNATURE _____

Hughes 3408 2-22H

Perforations

(1 shot per foot)

Perforations			
Date	Top (ftKB)	Btm (ftKB)	Zone
10/25/2014	5,522.0	5,525.0	Miss Lime, Original Hole
10/25/2014	5,660.0	5,663.0	Miss Lime, Original Hole
10/25/2014	5,808.0	5,811.0	Miss Lime, Original Hole
10/25/2014	5,818.0	6,821.0	Miss Lime, Original Hole
10/25/2014	5,909.0	5,912.0	Miss Lime, Original Hole
10/25/2014	6,055.0	6,058.0	Miss Lime, Original Hole
10/25/2014	6,203.0	6,206.0	Miss Lime, Original Hole
10/25/2014	6,347.0	6,350.0	Miss Lime, Original Hole
10/25/2014	6,537.0	6,540.0	Miss Lime, Original Hole
10/25/2014	6,685.0	6,688.0	Miss Lime, Original Hole
10/25/2014	6,959.0	6,962.0	Miss Lime, Original Hole
10/25/2014	7,092.0	7,095.0	Miss Lime, Original Hole
10/25/2014	7,235.0	7,238.0	Miss Lime, Original Hole
10/25/2014	7,383.0	7,386.0	Miss Lime, Original Hole
10/25/2014	7,530.0	7,533.0	Miss Lime, Original Hole
10/25/2014	7,678.0	7,681.0	Miss Lime, Original Hole
10/25/2014	7,820.0	7,823.0	Miss Lime, Original Hole
10/25/2014	7,964.0	7,967.0	Miss Lime, Original Hole
10/25/2014	8,150.0	8,153.0	Miss Lime, Original Hole
10/25/2014	8,294.0	8,297.0	Miss Lime, Original Hole
10/25/2014	8,482.0	8,485.0	Miss Lime, Original Hole
10/25/2014	8,580.0	8,583.0	Miss Lime, Original Hole
10/25/2014	8,766.0	8,769.0	Miss Lime, Original Hole
10/25/2014	8,914.0	8,917.0	Miss Lime, Original Hole
10/25/2014	9,156.0	9,159.0	Miss Lime, Original Hole

Hughes 3408 2-22H

Field: SandRidge Energy - Harper County, KS S NAD 27 US FT

Map Units: US ft

Vertical Reference Datum (VRD): Mean Sea Level

Projected Coordinate System: NAD27 / Kansas South

Site: Hughes 3408 2-22H

Company Name: SandRidge Energy

Units: US ft

TVD Reference: GL

Position:

Northing:	145455.00US ft	Latitude:	37° 3' 56.47"
Easting:	2094302.00US ft	Longitude:	-98° 10' 36.58"

North Reference: Grid

Elevation above Mean Sea Level: 1299.00US ft

Comment:

Slot: Hughes 3408 2-22H

Position (Relative to Site centre)

+N/-S: 0.00US ft	145455.00US ft	Latitude:	37° 3' 56.47"
+E/-W: 0.00US ft	2094302.00US ft	Longitude:	-98° 10' 36.58"

Elevation above Mean Sea Level: 1299.00US ft

Comment:

Well: Hughes 3408 2-22H

Type: Main well

File Number: Rig Height (Drill Floor): 20.00US ft Relative To Mean Sea Level: 1319.00US ft

Closure Distance: 4772.03US ft

Comment: Closure Azimuth: 8.29316°

Vertical Section:

Position of Origin (Relative to Site centre) +N/-S: 0.00US ft +E/-W: 0.00US ft

Vertical Section Azimuth: 1.78°

Target Set: Hughes 3408 2-22H T2

Number of Targets: 1

Target: PBHL

Position: (Relative to Site centre)

+N/-S: 4722.00	150177.00	Latitude:	37° 4' 43.14"
+E/-W: 657.00	2094999.00	Longitude:	-98° 10' 27.78"

TVD (Drill Floor) : 4680.00 US ft
 SS : -3361.00 US ft

Shape: Cuboid
 Orientation: Inclination: 0.00° Azimuth: 0.00°
 Dimensions: Length: 20.00 Breadth: 20.00 Height: 20.00

Wellpath created using minimum curvature

Survey
 Name: Definitive Survey Company:
 Magnetic Parameters:
 Model: BGGM Field Strength: 51582.3 nT Declination: 4.60° Dip: 65.19° Date: 03/Jul/2014 (dd/mmm/yyyy)

Survey Tool Ranges:

Survey Tool	Start MD (US ft)	End MD (US ft)	Source Survey
Inc Only 3deg_WFTR	0	773	SRE Rig Svy's
MWD	773	9183	WFT/MWD Svy's

Survey Points: (Relative to Site Centre, TVD Relative to Drill Floor)

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	0	0	0	0	0	0	0	
400	0.9	317.45	399.98	2.31	-2.12	2.25	0.22	First SRE Rig Svy
773	0.89	317.45	772.94	6.61	-6.06	6.41	0	Last SRE Rig Svy
859	0.73	317.45	858.93	7.5	-6.89	7.28	0.19	First WFT/MWD Survey
891	0.66	324.75	890.93	7.8	-7.13	7.58	0.35	
986	0.29	56.64	985.92	8.38	-7.25	8.15	0.77	
1081	0.7	97.04	1080.92	8.44	-6.47	8.24	0.54	
1177	0.75	86.57	1176.91	8.41	-5.26	8.24	0.15	
1272	1.53	95.89	1271.89	8.32	-3.38	8.21	0.84	
1367	3.39	107.39	1366.8	7.35	0.56	7.36	2.02	
1462	5.19	111.46	1461.53	4.93	7.24	5.16	1.92	
1557	6.97	112.65	1555.99	1.14	16.56	1.66	1.88	
1651	8.84	119.25	1649.1	-4.58	28.13	-3.71	2.21	
1747	9.25	119.23	1743.91	-11.96	41.3	-10.67	0.43	
1841	9.11	115.57	1836.7	-18.86	54.61	-17.15	0.64	
1937	8.75	112.91	1931.54	-24.98	68.19	-22.85	0.57	
2031	9.76	114.99	2024.31	-31.13	81.99	-28.57	1.13	
2127	10.05	115.75	2118.88	-38.21	96.91	-35.18	0.33	
2222	9.59	115.32	2212.49	-45.19	111.55	-41.71	0.49	
2317	10.4	113.59	2306.05	-52.01	126.55	-48.05	0.91	
2413	9.97	112.83	2400.54	-58.7	142.15	-54.26	0.47	
2509	8.78	113.19	2495.25	-64.81	156.54	-59.92	1.24	
2604	9.8	112.39	2589	-70.74	170.68	-65.41	1.08	
2699	9.98	116.79	2682.59	-77.53	185.5	-71.73	0.82	
2794	9.51	116.15	2776.22	-84.7	199.9	-78.45	0.51	
2889	11.1	115.31	2869.69	-92.07	215.21	-85.34	1.68	
2985	10.31	115.77	2964.02	-99.76	231.3	-92.53	0.83	

3079	8.97	115.15	3056.69	-106.53	245.51	-98.85	1.43
3175	10.39	114.48	3151.32	-113.3	260.16	-105.16	1.48
3270	9.26	113.6	3244.92	-119.91	274.97	-111.31	1.2
3366	9.65	115.6	3339.62	-126.48	289.3	-117.43	0.53
3458	9.41	114.37	3430.35	-132.91	303.1	-123.43	0.34
3549	9.52	109.37	3520.11	-138.48	316.98	-128.56	0.91
3644	11.56	107.4	3613.5	-143.93	333.48	-133.5	2.18
3675	11.15	106.36	3643.9	-145.7	339.32	-135.09	1.48
3705	10.47	107.06	3673.36	-147.32	344.71	-136.54	2.31
3735	9.69	98.64	3702.9	-148.5	349.81	-137.56	5.55
3766	10.34	83.57	3733.44	-148.58	355.15	-137.48	8.68
3797	11.72	73.84	3763.87	-147.39	360.94	-136.11	7.46
3828	13.77	66.82	3794.1	-145.06	367.36	-133.58	8.28
3859	15.41	58.56	3824.1	-141.46	374.27	-129.77	8.53
3891	17.17	50.8	3854.82	-136.26	381.56	-124.34	8.74
3923	19.28	45.1	3885.22	-129.54	388.96	-117.4	8.62
3955	20.07	38.97	3915.35	-121.54	396.16	-109.18	6.9
3987	19.84	34.09	3945.43	-112.78	402.65	-100.21	5.25
4019	19.7	26.87	3975.55	-103.47	408.13	-90.74	7.64
4050	20.44	20.45	4004.67	-93.73	412.39	-80.88	7.49
4082	21.71	18.26	4034.53	-82.88	416.2	-69.91	4.67
4114	22.48	18.41	4064.18	-71.45	419.98	-58.37	2.41
4145	23.97	17.53	4092.67	-59.82	423.75	-46.63	4.93
4177	26.13	17.18	4121.66	-46.89	427.79	-33.58	6.77
4209	28.93	15.68	4150.03	-32.7	431.96	-19.27	9.01
4241	31.54	16.56	4177.68	-17.23	436.44	-3.66	8.27
4273	33.75	16.7	4204.62	-0.69	441.38	13.02	6.91
4305	36.01	16.21	4230.87	16.86	446.56	30.73	7.12
4336	37.64	16.47	4255.68	34.69	451.79	48.71	5.28
4368	39.47	15.46	4280.71	53.87	457.27	68.04	6.05
4400	41.49	14.97	4305.05	73.91	462.72	88.25	6.39
4431	43.58	14.57	4327.89	94.18	468.06	108.67	6.8
4463	45.33	14.29	4350.73	115.88	473.65	130.54	5.5
4495	46.25	14.46	4373.04	138.1	479.34	152.92	2.9
4526	47.68	14.67	4394.2	160.03	485.04	175.02	4.64
4557	49.36	15.48	4414.73	182.45	491.08	197.62	5.76
4588	51.29	15.1	4434.52	205.47	497.37	220.82	6.3
4620	52.92	15.04	4454.17	229.85	503.94	245.39	5.1
4652	54.1	13.74	4473.2	254.77	510.33	270.5	4.93
4684	55.86	12.54	4491.57	280.29	516.28	296.19	6.3
4716	58.57	11.36	4508.89	306.6	521.85	322.67	9.02
4748	59.68	11	4525.31	333.55	527.18	349.76	3.6
4779	59.4	10.89	4541.03	359.78	532.25	376.14	0.95
4811	60.23	10.74	4557.12	386.95	537.44	403.46	2.63
4842	60.8	10.82	4572.38	413.46	542.49	430.11	1.85
4874	60.55	10.74	4588.05	440.87	547.7	457.67	0.81
4905	59.93	11.15	4603.44	467.29	552.81	484.24	2.31
4937	61.24	10.62	4619.15	494.66	558.08	511.76	4.34
4969	63.71	9.76	4633.94	522.59	563.09	539.83	8.08
5001	66.86	8.4	4647.32	551.29	567.68	568.66	10.57
5033	69.7	7.88	4659.16	580.72	571.88	598.2	9

5064	72.31	6.75	4669.25	609.79	575.61	627.37	9.1
5096	75.15	5.28	4678.21	640.33	578.83	658	9.91
5128	77.24	3.54	4685.85	671.31	581.22	689.04	8.4
5160	79.94	2.82	4692.18	702.63	582.96	720.4	8.72
5200	83.77	0.9	4697.85	742.2	584.24	759.99	10.69
5245	87.62	0.94	4701.22	787.06	584.96	804.85	8.56
5307	88.81	1.04	4703.15	849.02	586.03	866.81	1.93
5401	88.74	0.02	4705.16	942.99	586.9	960.76	1.09
5432	88.53	359.81	4705.9	973.98	586.85	991.74	0.96
5463	88.53	359.88	4706.7	1004.97	586.77	1022.71	0.23
5557	89.42	359.69	4708.13	1098.96	586.41	1116.64	1.28
5651	89.44	358.72	4708.82	1192.94	585.11	1210.54	1.07
5745	90.98	358.32	4708.48	1286.91	582.68	1304.39	1.69
5839	90.28	359.67	4707.44	1380.89	581.03	1398.27	1.62
5933	92.03	1.39	4705.55	1474.86	581.9	1492.22	2.61
6028	92.38	3.24	4701.89	1569.7	585.74	1587.14	1.98
6122	91.47	2.92	4698.74	1663.51	590.79	1681.06	1.03
6217	91.54	2.83	4696.24	1758.36	595.55	1776.01	0.12
6312	91.33	2.14	4693.86	1853.24	599.67	1870.97	0.76
6407	91.47	1.95	4691.54	1948.15	603.06	1965.94	0.25
6502	90.35	2.79	4690.03	2043.06	606.98	2060.92	1.47
6597	90.56	2.2	4689.28	2137.96	611.12	2155.91	0.66
6693	89.65	3.1	4689.1	2233.86	615.56	2251.9	1.33
6787	89.79	2.74	4689.56	2327.73	620.35	2345.88	0.41
6882	90.14	2.51	4689.62	2422.63	624.7	2440.87	0.44
6977	89.16	1.74	4690.2	2517.57	628.22	2535.86	1.31
7072	87.97	2.69	4692.58	2612.46	631.89	2630.83	1.6
7167	87.9	2.23	4696	2707.31	635.96	2725.76	0.49
7262	89.58	2.05	4698.09	2802.22	639.51	2820.73	1.78
7357	91.4	1.51	4697.28	2897.17	642.46	2915.72	2
7452	90.42	1.03	4695.77	2992.13	644.57	3010.71	1.15
7547	89.58	0.73	4695.77	3087.12	646.03	3105.69	0.94
7642	88.74	0.22	4697.16	3182.1	646.81	3200.66	1.03
7737	91.26	1.22	4697.16	3277.09	648.01	3295.63	2.85
7832	91.26	0.94	4695.07	3372.05	649.8	3390.6	0.29
7927	91.61	0.41	4692.69	3467.01	650.92	3485.56	0.67
8022	91.82	359.74	4689.85	3561.97	651.04	3580.47	0.74
8117	91.26	1.25	4685.56	3656.93	651.86	3675.41	1.69
8212	90.84	1.27	4685.56	3751.89	653.95	3770.39	0.44
8307	90.63	1.64	4684.34	3846.85	656.36	3865.38	0.45
8402	89.86	2.49	4683.93	3941.78	659.78	3960.38	1.21
8497	90.56	0.44	4683.58	4036.75	662.21	4055.37	2.28
8592	88.88	2.55	4684.05	4131.7	664.69	4150.36	2.84
8687	89.16	2.74	4685.67	4226.59	669.07	4245.33	0.36
8782	89.72	2.8	4686.6	4321.47	673.67	4340.31	0.59
8877	89.37	2.5	4687.36	4416.37	678.06	4435.3	0.49
8972	88.25	1.91	4689.33	4511.28	681.71	4530.27	1.33
9067	90.56	1.51	4690.32	4606.22	684.55	4625.26	2.47
9123	91.54	1.97	4689.29	4662.19	686.25	4681.25	1.93
9183	91.54	1.97	4687.68	4722.13	688.31	4741.23	0

Last WFT/MWD Survey
Proj to TD



Weatherford

Hughes 3408 2-22H
 Patterson 56
 Harper County, KS
 X= 2094302.00'
 Y= 145455.00'
 Plan 6

KB: 1319'
 GI: 1299'

Plan Data for Hughes 3408 2-22H

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

MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.0
1866.67	10.00	114.00	1863.29	-23.60	53.01	-25.56	1.50	114.0
3797.78	10.00	114.00	3765.06	-160.00	359.36	-173.24	0.00	0.0
4695.91	60.00	10.00	4507.91	231.36	513.96	212.10	7.00	250.8
4895.91	60.00	10.00	4607.91	401.93	544.04	381.43	0.00	0.0
5167.22	86.00	1.80	4686.68	657.68	569.16	636.08	10.00	341.8
5467.22	86.00	1.80	4707.61	956.81	578.57	934.64	0.00	0.0
5513.22	90.60	1.80	4708.97	1002.75	580.01	980.50	10.00	0.0
9234.52	90.60	1.80	4670.00	4722.00	697.00	4692.83	0.00	0.0

Target Set Information:
 Name: Hughes 3408 2-22H T1
 Name TVD Northing Easting Lat Long
 (USft) (USft) (USft) (°/'/'") (°/'/'")
 PBHL 4670.00 150177.00 2094999.00 37°4'43.1" -98°10'27.8"

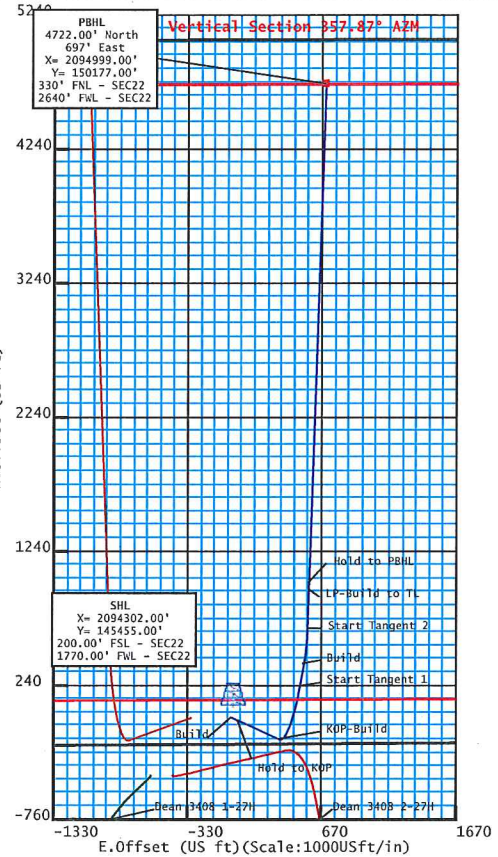
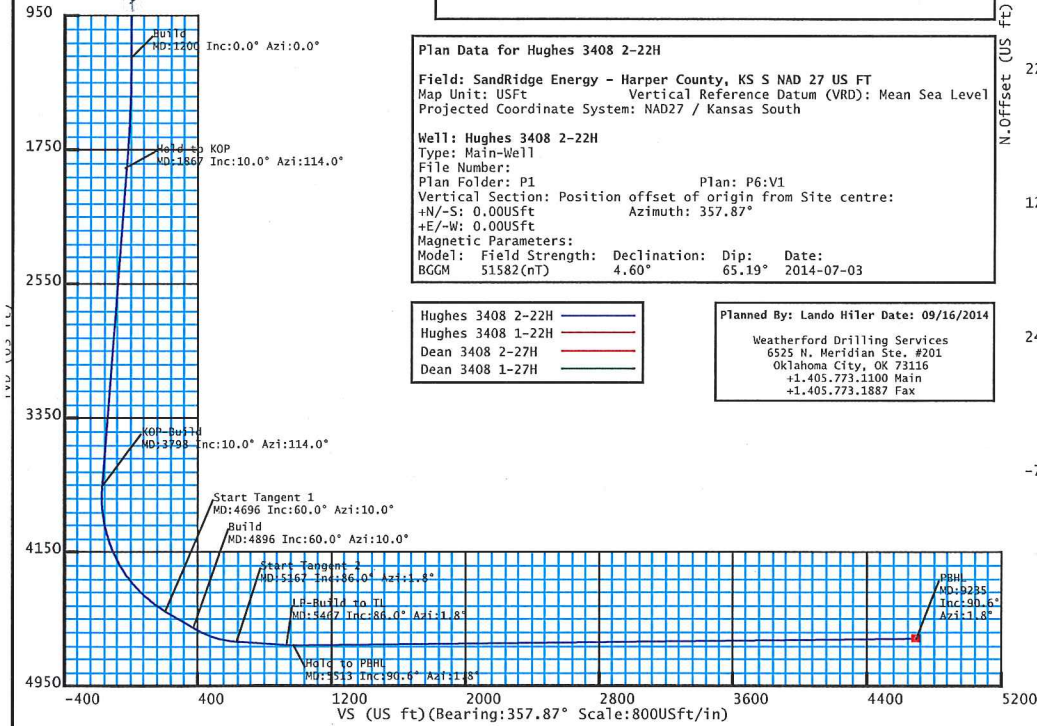
Plan Data for Hughes 3408 2-22H

Field: SandRidge Energy - Harper County, KS S NAD 27 US FT
 Map Unit: USFt Vertical Reference Datum (VRD): Mean Sea Level
 Projected Coordinate System: NAD27 / Kansas South

Well: Hughes 3408 2-22H
 Type: Main-Well
 File Number:
 Plan Folder: P1 Plan: P6:V1
 Vertical Section: Position offset of origin from Site centre:
 +N/-S: 0.00USft Azimuth: 357.87°
 +E/-W: 0.00USft
 Magnetic Parameters:
 Model: Field Strength: Declination: Dip: Date:
 BGGM 51582(nT) 4.60° 65.19° 2014-07-03

Hughes 3408 2-22H
 Hughes 3408 1-22H
 Dean 3408 2-27H
 Dean 3408 1-27H

Planned By: Lando Hiler Date: 09/16/2014
 Weatherford Drilling Services
 6525 N. Meridian Ste. #201
 Oklahoma City, OK 73116
 +1.405.773.1100 Main
 +1.405.773.1887 Fax



True Grid Mag
 Grid Convergence: 0.20°
 Mag Declination: 4.60°
 Bearing:
 True = Mag + 4.60°
 Grid = True - 0.20°
Total Correction 4.40°