



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1149093  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1149093

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](mailto:kcc-well-logs@kcc.ks.gov). Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*  
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*  
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

TUBING RECORD: Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Bryant 3508 2-10H
Doc ID	1149093

All Electric Logs Run

Boresight
Prizm Log
Porosity
Resistivity
Mud Log

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Bryant 3508 2-10H
Doc ID	1149093

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	8126-8455	1500 gals 15% HCL, 4149 bbls Fresh Slickwater, Running TLTR 4422	
5	7758-8059	1500 gals 15% HCL, 4199 bbls Fresh Slickwater, Running TLTR 8877	
5	7362-7691	1500 gals 15% HCL, 4094 bbls Fresh Slickwater, Running TLTR 13166	
5	7044-7308	1500 gals 15% HCL, 4090 bbls Fresh Slickwater, Running TLTR 17367	
5	6780-6932	1500 gals 15% HCL, 4092 bbls Fresh Slickwater, Running TLTR 21563	
5	6183-6518	1500 gals 15% HCL, 4088 bbls Fresh Slickwater, Running TLTR 25741	
5	5830-6101	1500 gals 15% HCL, 3994 bbls Fresh Slickwater, Running TLTR 29811	
5	4933-5996	2000 gals 15% HCL, 3112 bbls Fresh Slickwater, Running TLTR 4257	

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



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

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

June 21, 2013

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

Re: ACO1  
API 15-077-21930-01-00  
Bryant 3508 2-10H  
NE/4 Sec.10-35S-08W  
Harper 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

# Mid-Continent Conductor, LLC

## Invoice

P.O. Box 1570  
Woodward, OK 73802  
Phone: (580)254-5400  
Fax: (580)254-3242

Date	Invoice #
5/17/2013	1911

Bill To
SandRidge Energy, Inc. Attn: Purchasing Mgr. 123 Robert S. Kerr Avenue Oklahoma City, OK. 73102

Ordered By	Terms	Date of Service	Lease Name/Legal Desc.	Drilling Rig
Ricky Beene	Net 45	5/17/2013	Bryant 3508 2-10H, Harper Cnty, KS	Horizon 15

Item	Quantity	Description
Conductor Hole	90	Drilled 90 ft. conductor hole
20" Pipe	90	Furnished 90 ft. of 20 inch conductor pipe
Mouse Hole	80	Drilled 80 ft. mouse hole
16" Pipe	80	Furnished 80 ft. of 16 inch mouse hole pipe
Cellar Hole	1	Drilled 6' X 6' cellar hole
6' X 6' Tinchom	1	Furnished and set 6' X 6' tinchom
Mud and Water	1	Furnished mud and water
Transport Truck - Conductor	1	Transport mud and water to location
Grout & Trucking	10	Furnished grout and trucking to location
Grout Pump	1	Furnished grout pump
Transport Truck - Conductor	1	Furnished transport truck and water to displace cement down center of conductor pipe
Fence Panels	4	Furnished safety netting around conductor holes
Welder & Materials	1	Furnished welder and materials
Dirt Removal	1	Furnished labor and equipment for dirt removal
Cover Plate	1	Furnished cover plates
Permits	1	Permits

AFE: DC 12693  
Well: BRYANT 3508 2-10H  
Code: 850-010  
AMT: 19,340  
Co Man: Doug Sanders

<b>Subtotal</b>	\$19,340.00
<b>Sales Tax (0.0%)</b>	\$0.00
<b>Total</b>	<b>\$19,340.00</b>



**Service Order for i-District Job 990217**

<b>Customer Name:</b> SANDRIDGE ENERGY INC. - FOR ELECTRONIC INVOICING O	<b>Person Taking Call:</b>	<b>Location:</b> El Reno, OK WS	<b>Order Date:</b> 25-May-13 13:54	<b>Job Number:</b> 990217		
<b>Service Order Number:</b>	<b>Service Line:</b> Cementing El Reno	<b>Supervisor:</b>	<b>Legal Location:</b> SEC 10-35S-8W			
<b>Well Name and Number:</b> BRYANT -3508-, 2-10 H	<b>Pad/Platform:</b>	<b>Field:</b>	<b>County:</b> Harper	<b>State/Prov:</b> Kansas		
<b>Well Master Number:</b> 0631469437	<b>API/UWI:</b> 15077219300100	<b>Rig Name:</b> HORIZON #15	<b>Well Age:</b> New	<b>Sales Engineer:</b>		
<b>Job Type:</b> Cementing El Reno – Surface	<b>Time Well Ready:</b>	<b>Deviation:</b> 0 deg	<b>Hole Size:</b> 12.25 in	<b>Well MD:</b> 800 ft		
<b>Well TVD:</b> 800 ft	<b>BHP:</b>	<b>BHST:</b> 89 °F	<b>BHCT:</b> 81 °F	<b>Treat Down:</b> Casing		
<b>Packer Type:</b>	<b>Packer Depth:</b>	<b>Min and Max Densities:</b> Lead: 12.3-13.3 ppg Tail: 14.3-15.3 ppg	<b>HHP on Location:</b>	<b>Max Allowed Pressure:</b> 5000 psi		
<b>Max Allowed Ann Pressure:</b>		<b>Job Stage Description:</b> 9 5/8" Surface	<b>FTL Ticket/Quote Number :</b> C1YQ-00196			
<b>Casing/Tubing</b>			<b>Service Instructions:</b>			
<b>String Type</b>	<b>Depth</b>	<b>Size</b>	<b>Weight</b>	<b>Grade</b>	<b>Thread</b>	Provide equipment, materials, services and personnel to safely cement 9 5/8" surface casing per customer specifications.  Pump 10 bbl water, 270 sks 35:65 Poz:C Lead @ 12.8, 170 sks Class C Tail @ 14.8, drop top plug and displace per customer request.
Casing	800 ft	9.625 in	36 lb/ft	J-55	LTC	
<b>Client Contact</b>						
<b>Name</b>	<b>Voice</b>	<b>Fax</b>	<b>Email</b>	<b>Title</b>	<b>Company</b>	<b>Notes</b>
Tim and Doug	281-617-4694					
<b>Notes:</b>						
TOC: Surface -- volumes based on 12.25" OH + 150% XS						
Equipment: 9 5/8" HM and QC (8RD and BTC), top and bottom plugs (rubber and wooden top), D110, D047, 1 pump, 2 ABTs, air hoses, water hoses, mud hoses (contingency), washup hoses						
GET FIELD TICKET STAMPED.						
<b>Directions:</b>						
From Medford Okla go west on hwy 11 24.0 miles turn north on CR-720 2.0 miles turn west on Jefferson rd 4.9 miles turn south on lease rd 0.5 miles into location						

Materials			
Name	Description	Quantity	Density
LEAD SLURRY	270 SKS 35:65 POZ:C + ADDS	542.70 ft3	12.40 lb/gal
TAIL SLURRY	170 SKS CLASS C + ADDS	226.10 ft3	14.80 lb/gal

**Fluid Systems:**

LEAD SLURRY				
270 SKS 35:65 POZ:C + ADDS				
<i>Sacks Of:</i>	Cement		<i>Total Blend/Cem:</i>	23,490.00 lb
<i>Sack Weight:</i>	87.00 lb		<i>Sacks Blend/Cem:</i>	270.00 sks
<i>Yield:</i>	2.01 ft3/sk		<i>Final Fluid Density:</i>	12.40 lb/gal
<i>Mix Water:</i>	11.12 gal/sk			
Code	Conc	Design	Total by design	Load out with excess
D903	61.000 lb/sk	WTSK	16,470.00 lb	16,470.00 lb
D035	26.000 lb/sk	WTSK	7,020.00 lb	7,020.00 lb
D020	6.000 %	BWOB	1,409.40 lb	1,409.40 lb
S001	2.000 %	BWOB	469.80 lb	469.80 lb
D130	0.125 lb/sk	WTSK	33.75 lb	33.75 lb

TAIL SLURRY				
170 SKS CLASS C + ADDS				
<i>Sacks Of:</i>	Cement		<i>Total Blend/Cem:</i>	15,980.00 lb
<i>Sack Weight:</i>	94.00 lb		<i>Sacks Blend/Cem:</i>	170.00 sks
<i>Yield:</i>	1.33 ft3/sk		<i>Final Fluid Density:</i>	14.80 lb/gal
<i>Mix Water:</i>	6.35 gal/sk			
Code	Conc	Design	Total by design	Load out with excess
D903	94.000 lb/sk	WTSK	15,980.00 lb	15,980.00 lb
D130	130.000 lb/sk	WTSK	22,100.00 lb	22,100.00 lb





**Service Order for i-District Job 991861**

<b>Customer Name:</b> SANDRIDGE ENERGY INC. - FOR ELECTRONIC INVOICING O	<b>Person Taking Call:</b>	<b>Location:</b> El Reno, OK WS	<b>Order Date:</b> 28-May-13 16:43	<b>Job Number:</b> 991861		
<b>Service Order Number:</b>	<b>Service Line:</b> Cementing El Reno	<b>Supervisor:</b>	<b>Legal Location:</b> SEC 10-35S-8W			
<b>Well Name and Number:</b> BRYANT -3508-, 2-10 H	<b>Pad/Platform:</b>	<b>Field:</b>	<b>County:</b> Harper	<b>State/Prov:</b> Kansas		
<b>Well Master Number:</b> 0631469437	<b>API/UWI:</b> 15077219300100	<b>Rig Name:</b> HORIZON #15	<b>Well Age:</b> New	<b>Sales Engineer:</b>		
<b>Job Type:</b> Cementing El Reno – Intermediate	<b>Time Well Ready:</b>	<b>Deviation:</b> 90 deg	<b>Hole Size:</b> 8.75 in	<b>Well MD:</b> 5500 ft		
<b>Well TVD:</b> 4858 ft	<b>BHP:</b>	<b>BHST:</b> 138 °F	<b>BHCT:</b> 128 °F	<b>Treat Down:</b> Casing		
<b>Packer Type:</b>	<b>Packer Depth:</b>	<b>Min and Max Densities:</b> Lead: 13.4-13.8 ppg Tail: 15.4-15.8 ppg	<b>HHP on Location:</b>	<b>Max Allowed Pressure:</b> 5000 psi		
<b>Max Allowed Ann Pressure:</b>	<b>Job Stage Description:</b> 7" Intermediate		<b>FTL Ticket/Quote Number :</b> C1YQ-00203			
<b>Casing/Tubing</b>			<b>Service Instructions:</b>			
<b>String Type</b>	<b>Depth</b>	<b>Size</b>	<b>Weight</b>	<b>Grade</b>	<b>Thread</b>	
Casing	5476 ft	7 in	26 lb/ft	P-110		
			To provide equipment, materials, services and personnel to safely cement 7" surface casing per customer request.			
			Pump 30 bbl gel water, 210 sks lead slurry @ 13.6ppg, 100 sks tail slurry @ 15.6ppg, drop top plug and displace per customer specifications.			
<b>Client Contact</b>						
<b>Name</b>	<b>Voice</b>	<b>Fax</b>	<b>Email</b>	<b>Title</b>	<b>Company</b>	<b>Notes</b>
Israel	281-617-4654					
<b>Notes:</b>						
TOC: 3567.1' -- volumes based on 8.75" OH + 40% XS						
Equipment: 7" HM and QC (8RD and BTC), top and bottom plugs, water hoses, air hoses, mud hoses (contingency), washup hoses (contingency), D110, D047, B306, 1 pump, 2 ABTS						
GET FIELD TICKET STAMPED if applicable						
<b>Directions:</b>						
From Medford Okla go west on hwy 11 16.5 miles turn north on hwy 132 to state line go north on hwy 179 1.7 miles turn west on SW-90-rd 4.5 miles turn south on SW-50 1.0 miles turn west on SW-100 rd 2.0 miles turn north 1.0 miles turn west into location						

Materials			
Name	Description	Quantity	Density
Gel Water	30 bbl gel water	30.00 bbl	8.33 lb/gal
Lead Slurry	210 sks 50:50 Poz:H + adds	197.20 ft3	13.60 lb/gal
Tail Slurry	100 sks Class H + adds	119.00 ft3	15.60 lb/gal

**Fluid Systems:**

Gel Water				
<b>30 bbl gel water</b>				
<i>Final Fluid</i>				
Density: 8.33 lb/gal				
Volume: 30.00 bbl				
Code	Conc	Design	Total by design	Load out with excess
B306	0.200 gal/bbl	BVOWashVO	6.00 gal	6.00 gal

Lead Slurry				
<b>210 sks 50:50 Poz:H + adds</b>				
<i>Sacks Of:</i> Blend <i>Total Blend/Cem:</i> 17,640.00 lb				
<i>Sack Weight:</i> 84.00 lb <i>Sacks Blend/Cem:</i> 210.00 sks				
<i>Yield:</i> 1.45 ft3/sk <i>Final Fluid Density:</i> 13.60 lb/gal				
<i>Mix Water:</i> 6.88 gal/sk				
Code	Conc	Design	Total by design	Load out with excess
D079	0.200 %	BWOB	35.28 lb	35.28 lb
D042	2.000 lb/sk	WTSK	420.00 lb	420.00 lb
D065	0.100 %	BWOB	17.64 lb	17.64 lb
D112	0.600 %	BWOB	105.84 lb	105.84 lb
D020	4.000 %	BWOB	705.60 lb	705.60 lb
D035	37.000 lb/sk	WTSK	7,770.00 lb	7,770.00 lb
D909	47.000 lb/sk	WTSK	9,870.00 lb	9,870.00 lb

Tail Slurry				
<b>100 sks Class H + adds</b>				
<i>Sacks Of:</i> Cement <i>Total Blend/Cem:</i> 9,400.00 lb				
<i>Sack Weight:</i> 94.00 lb <i>Sacks Blend/Cem:</i> 100.00 sks				
<i>Yield:</i> 1.19 ft3/sk <i>Final Fluid Density:</i> 15.60 lb/gal				
<i>Mix Water:</i> 5.32 gal/sk				
Code	Conc	Design	Total by design	Load out with excess
D909	94.000 lb/sk	WTSK	9,400.00 lb	9,400.00 lb
D013	0.030 %	BWOC	2.82 lb	2.82 lb

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/14/2013
Job End Date:	7/14/2013
State:	Kansas
County:	Harper
API Number:	15-077-21930-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Bryant 3508 2-10H
Longitude:	-98.16640000
Latitude:	37.02100000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,825
Total Base Water Volume (gal):	1,214,731
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
C102	Bosque Disposal Systems, LLC	Oxidizer					
			Chlorine Dioxide	10049-04-4	15.00000	100.00000	
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.							
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Potassium hydroxide	1310-58-3	0.00023		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Ethane-1,2-diol	107-21-1	0.00801		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Fatty acids, tall-oil	61790-12-3	0.00998		

HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Ethoxylated oleic acid	9004-96-0	0.02999		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Alcohols, C10-C16, ethoxylated	68002-97-1	0.00600		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00508		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Sodium erythorbate	6381-77-7	0.02005		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Ammonium chloride	12125-02-9	0.14997		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Hydrogen chloride	7647-01-0	3.19156		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Alkenes, C>10 a-	64743-02-8	0.00170		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Propan-2-ol	67-63-0	0.00102		

HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Thiourea, polymer with formaldehyde and 1- phenylethanone	68527-49-1	0.00821		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Sodium sulfocyanate	540-72-7	0.00780		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Sorbitan monooleate	1338-43-8	0.02999		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Distillates (petroleum), hydrotreated light	64742-47-8	0.31494		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Alcohols, C12-C14, ethoxylated	68439-50-9	0.00450		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Crystalline silica	14808-60-7	95.71372		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Acrylamide/ammonium acrylate copolymer	26100-47-0	0.23996		

HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Trisodium ortho phosphate	7601-54-9	0.02813		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			2-propenamid	79-06-1	0.00135		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Alcohols, C12-C16, ethoxylated	68551-12-2	0.00450		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Water (Including Mix Water Supplied by Client)*	NA			
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			C14 alpha olefin ethoxylate	84133-50-6	0.00450		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Sorbitol Tetraoleate	61723-83-9	0.00900		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			2-Propenoic acid, ammonium salt	10604-69-0	0.00735		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					

			Polyethylene glycol monohexyl ether	31726-34-8	0.11589		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Prop-2-yn-1-ol	107-19-7	0.00255		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Alcohols, C14-15, ethoxylated (7EO)	68951-67-7	0.00382		
HCL 15, Slickwater	Schlumberger	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Surfactant , Acid, Iron Control Agent, Propping Agent					
			Methanol	67-56-1	0.01358		

\* 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)

# Archer

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

Harper Co. (KS27S)

Sec 10-T35S-R08W

Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15

Wellbore #1

Design: Wellbore #1

## **Standard Survey Report**

19 June, 2013





<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15
<b>Project:</b>	Harper Co. (KS27S)	<b>TVD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Site:</b>	Sec 10-T35S-R08W	<b>MD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Well:</b>	Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDB

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

<b>Site</b>	Sec 10-T35S-R08W				
<b>Site Position:</b>		<b>Northing:</b>	124,086.00 usft	<b>Latitude:</b>	37° 0' 25.250 N
<b>From:</b>	Map	<b>Easting:</b>	2,092,783.00 usft	<b>Longitude:</b>	98° 10' 56.218 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.20 °

<b>Well</b>	Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	129,208.00 usft	<b>Latitude:</b>	37° 1' 15.732 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	2,097,397.00 usft	<b>Longitude:</b>	98° 9' 59.113 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,289.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2013/05/17	4.56	65.13	51,696

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	179.66	

<b>Survey Program</b>	<b>Date</b>	2013/06/18			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
250.0	750.0	Single Shot Surveys (Wellbore #1)	MWD	MWD - Standard	
953.0	9,178.0	Archer MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
250.0	0.20	97.10	250.0	-0.1	0.4	0.1	0.08	0.08	0.00	
<b>First Single Shot MWD Survey</b>										
500.0	0.10	97.10	500.0	-0.1	1.1	0.1	0.04	-0.04	0.00	
750.0	0.60	97.10	750.0	-0.3	2.6	0.3	0.20	0.20	0.00	
<b>Last Single Shot MWD Survey</b>										
953.0	0.70	97.10	953.0	-0.6	4.9	0.6	0.05	0.05	0.00	
<b>First Archer MWD Survey</b>										

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15
<b>Project:</b>	Harper Co. (KS27S)	<b>TVD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Site:</b>	Sec 10-T35S-R08W	<b>MD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Well:</b>	Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDB

### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,411.0	0.70	312.00	1,411.0	0.9	5.6	-0.9	0.29	0.00	-31.68
1,883.0	0.30	26.40	1,883.0	4.0	4.0	-3.9	0.14	-0.08	15.76
2,356.0	0.60	350.20	2,355.9	7.5	4.1	-7.5	0.08	0.06	-7.65
2,831.0	0.50	36.80	2,830.9	11.6	4.9	-11.6	0.09	-0.02	9.81
3,304.0	0.10	85.30	3,303.9	13.3	6.6	-13.3	0.09	-0.08	10.25
3,779.0	0.60	247.00	3,778.9	12.4	4.7	-12.3	0.15	0.11	34.04
4,001.0	0.30	282.00	4,000.9	12.0	3.1	-12.0	0.18	-0.14	15.77
4,032.0	0.20	250.40	4,031.9	12.0	2.9	-12.0	0.54	-0.32	-101.94
4,064.0	1.10	176.60	4,063.9	11.7	2.9	-11.7	3.32	2.81	-230.63
4,095.0	3.10	171.70	4,094.9	10.6	3.0	-10.6	6.47	6.45	-15.81
4,127.0	5.50	168.50	4,126.8	8.2	3.5	-8.2	7.53	7.50	-10.00
4,158.0	7.60	166.90	4,157.6	4.8	4.2	-4.7	6.80	6.77	-5.16
4,190.0	9.30	165.90	4,189.2	0.2	5.3	-0.2	5.33	5.31	-3.13
4,222.0	10.90	166.30	4,220.7	-5.3	6.7	5.3	5.00	5.00	1.25
4,254.0	12.70	165.40	4,252.1	-11.6	8.3	11.6	5.65	5.63	-2.81
4,285.0	15.30	165.80	4,282.1	-18.9	10.2	18.9	8.39	8.39	1.29
4,317.0	17.80	165.90	4,312.8	-27.7	12.4	27.8	7.81	7.81	0.31
4,348.0	19.90	166.40	4,342.1	-37.4	14.8	37.5	6.79	6.77	1.61
4,380.0	22.20	167.00	4,372.0	-48.6	17.4	48.7	7.22	7.19	1.88
4,411.0	24.50	167.40	4,400.5	-60.6	20.1	60.7	7.44	7.42	1.29
4,443.0	25.50	165.50	4,429.5	-73.7	23.3	73.9	4.01	3.13	-5.94
4,475.0	25.10	168.60	4,458.4	-87.1	26.4	87.2	4.32	-1.25	9.69
4,506.0	25.00	172.10	4,486.5	-100.0	28.6	100.2	4.79	-0.32	11.29
4,538.0	25.10	172.30	4,515.5	-113.4	30.4	113.6	0.41	0.31	0.63
4,569.0	27.10	172.50	4,543.3	-126.9	32.2	127.1	6.46	6.45	0.65
4,601.0	30.60	174.30	4,571.3	-142.3	34.0	142.5	11.27	10.94	5.63
4,632.0	34.10	175.50	4,597.5	-158.8	35.4	159.0	11.48	11.29	3.87
4,664.0	37.90	176.50	4,623.4	-177.5	36.7	177.8	12.02	11.88	3.13
4,696.0	41.20	178.00	4,648.1	-197.9	37.7	198.1	10.74	10.31	4.69
4,727.0	42.90	177.90	4,671.1	-218.6	38.5	218.9	5.49	5.48	-0.32
4,759.0	45.40	178.60	4,694.0	-240.9	39.1	241.1	7.96	7.81	2.19
4,790.0	48.00	178.60	4,715.3	-263.5	39.7	263.7	8.39	8.39	0.00
4,822.0	50.50	177.40	4,736.2	-287.7	40.5	287.9	8.31	7.81	-3.75
4,853.0	54.20	176.20	4,755.1	-312.2	41.9	312.4	12.32	11.94	-3.87
4,885.0	57.80	175.20	4,773.0	-338.6	43.9	338.9	11.54	11.25	-3.13
4,916.0	61.20	174.30	4,788.7	-365.2	46.4	365.5	11.25	10.97	-2.90
4,947.0	65.70	174.00	4,802.6	-392.8	49.2	393.1	14.54	14.52	-0.97
4,979.0	69.60	174.30	4,814.8	-422.3	52.2	422.6	12.22	12.19	0.94
5,011.0	72.40	175.10	4,825.2	-452.4	55.0	452.7	9.06	8.75	2.50
5,043.0	76.20	176.40	4,833.8	-483.1	57.3	483.4	12.50	11.88	4.06
5,074.0	78.70	177.20	4,840.6	-513.3	59.0	513.6	8.45	8.06	2.58
5,105.0	81.80	177.50	4,845.8	-543.8	60.4	544.2	10.05	10.00	0.97
5,137.0	85.10	178.70	4,849.5	-575.6	61.4	575.9	10.96	10.31	3.75

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15
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<b>Site:</b>	Sec 10-T35S-R08W	<b>MD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Well:</b>	Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDB

### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,168.0	87.40	179.30	4,851.5	-606.5	62.0	606.9	7.67	7.42	1.94
5,200.0	88.00	179.40	4,852.8	-638.5	62.3	638.8	1.90	1.88	0.31
5,231.0	88.40	179.70	4,853.8	-669.5	62.6	669.8	1.61	1.29	0.97
5,263.0	88.50	179.80	4,854.6	-701.5	62.7	701.8	0.44	0.31	0.31
5,294.0	88.70	179.40	4,855.4	-732.5	62.9	732.8	1.44	0.65	-1.29
5,327.0	88.60	179.50	4,856.2	-765.4	63.2	765.8	0.43	-0.30	0.30
5,359.0	89.00	180.00	4,856.8	-797.4	63.4	797.8	2.00	1.25	1.56
5,390.0	90.40	180.20	4,857.0	-828.4	63.3	828.8	4.56	4.52	0.65
5,422.0	91.30	180.60	4,856.5	-860.4	63.1	860.8	3.08	2.81	1.25
5,448.0	91.70	180.60	4,855.8	-886.4	62.8	886.8	1.54	1.54	0.00
5,518.0	90.20	180.80	4,854.7	-956.4	62.0	956.8	2.16	-2.14	0.29
5,549.0	90.10	180.70	4,854.6	-987.4	61.6	987.7	0.46	-0.32	-0.32
5,580.0	90.30	181.30	4,854.5	-1,018.4	61.0	1,018.7	2.04	0.65	1.94
5,675.0	91.50	181.40	4,853.0	-1,113.4	58.8	1,113.7	1.27	1.26	0.11
5,769.0	90.20	182.10	4,851.6	-1,207.3	55.9	1,207.6	1.57	-1.38	0.74
5,864.0	91.20	182.10	4,850.4	-1,302.2	52.4	1,302.5	1.05	1.05	0.00
5,957.0	87.40	182.80	4,851.6	-1,395.1	48.5	1,395.4	4.15	-4.09	0.75
6,051.0	88.30	182.80	4,855.1	-1,488.9	43.9	1,489.2	0.96	0.96	0.00
6,146.0	89.90	183.80	4,856.6	-1,583.8	38.4	1,584.0	1.99	1.68	1.05
6,240.0	91.20	184.40	4,855.7	-1,677.5	31.7	1,677.7	1.52	1.38	0.64
6,335.0	89.60	183.70	4,855.0	-1,772.3	25.0	1,772.4	1.84	-1.68	-0.74
6,430.0	89.60	183.00	4,855.7	-1,867.1	19.4	1,867.2	0.74	0.00	-0.74
6,525.0	89.90	182.90	4,856.1	-1,962.0	14.5	1,962.0	0.33	0.32	-0.11
6,619.0	90.40	182.50	4,855.9	-2,055.9	10.1	2,055.9	0.68	0.53	-0.43
6,714.0	90.90	182.90	4,854.8	-2,150.8	5.6	2,150.8	0.67	0.53	0.42
6,809.0	91.50	183.00	4,852.8	-2,245.6	0.8	2,245.6	0.64	0.63	0.11
6,904.0	91.10	182.20	4,850.6	-2,340.5	-3.6	2,340.4	0.94	-0.42	-0.84
6,999.0	91.20	182.20	4,848.7	-2,435.4	-7.2	2,435.3	0.11	0.11	0.00
7,094.0	91.20	180.50	4,846.7	-2,530.4	-9.4	2,530.3	1.79	0.00	-1.79
7,189.0	90.60	181.00	4,845.3	-2,625.3	-10.7	2,625.2	0.82	-0.63	0.53
7,283.0	92.40	181.20	4,842.8	-2,719.3	-12.5	2,719.2	1.93	1.91	0.21
7,378.0	89.00	180.40	4,841.6	-2,814.2	-13.8	2,814.1	3.68	-3.58	-0.84
7,472.0	89.40	180.20	4,842.9	-2,908.2	-14.3	2,908.1	0.48	0.43	-0.21
7,567.0	89.10	181.40	4,844.2	-3,003.2	-15.6	3,003.1	1.30	-0.32	1.26
7,663.0	89.40	179.00	4,845.4	-3,099.2	-16.0	3,099.1	2.52	0.31	-2.50
7,757.0	88.40	178.80	4,847.2	-3,193.2	-14.2	3,193.0	1.08	-1.06	-0.21
7,852.0	90.90	179.30	4,847.8	-3,288.1	-12.6	3,288.0	2.68	2.63	0.53
7,947.0	90.60	179.00	4,846.6	-3,383.1	-11.2	3,383.0	0.45	-0.32	-0.32
8,042.0	88.50	177.70	4,847.3	-3,478.1	-8.4	3,478.0	2.60	-2.21	-1.37
8,163.0	93.40	176.40	4,845.3	-3,598.9	-2.2	3,598.8	4.19	4.05	-1.07
8,258.0	95.50	175.40	4,838.0	-3,693.3	4.5	3,693.3	2.45	2.21	-1.05
8,353.0	93.20	176.10	4,830.8	-3,787.8	11.6	3,787.8	2.53	-2.42	0.74

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15
<b>Project:</b>	Harper Co. (KS27S)	<b>TVD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Site:</b>	Sec 10-T35S-R08W	<b>MD Reference:</b>	WELL @ 1307.0usft (Original Well Elev)
<b>Well:</b>	Bryant 3508 2-10H/ Job #04269-431-22/ Horizon 15	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDMDB

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,447.0	90.50	177.30	4,827.7	-3,881.6	17.0	3,881.6	3.14	-2.87	1.28
8,541.0	91.00	176.00	4,826.5	-3,975.4	22.5	3,975.5	1.48	0.53	-1.38
8,636.0	90.40	175.10	4,825.3	-4,070.1	29.8	4,070.2	1.14	-0.63	-0.95
8,730.0	89.40	174.60	4,825.5	-4,163.7	38.3	4,163.9	1.19	-1.06	-0.53
8,825.0	89.80	176.10	4,826.2	-4,258.4	46.0	4,258.6	1.63	0.42	1.58
8,920.0	90.10	176.50	4,826.2	-4,353.2	52.1	4,353.4	0.53	0.32	0.42
9,014.0	89.60	176.00	4,826.5	-4,447.0	58.3	4,447.3	0.75	-0.53	-0.53
9,108.0	90.90	175.90	4,826.1	-4,540.8	64.9	4,541.1	1.39	1.38	-0.11
<b>Last Archer MWD Survey</b>									
9,178.0	90.90	175.90	4,825.0	-4,610.6	69.9	4,610.9	0.00	0.00	0.00
<b>Projection to TD - PBHL Bryant 2-10H</b>									

**Design Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.0	250.0	-0.1	0.4	First Single Shot MWD Survey
750.0	750.0	-0.3	2.6	Last Single Shot MWD Survey
953.0	953.0	-0.6	4.9	First Archer MWD Survey
9,108.0	4,826.1	-4,540.8	64.9	Last Archer MWD Survey
9,178.0	4,825.0	-4,610.6	69.9	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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Section 3  
35S 8W

Section 2  
35S 8W

BRYANT 3508 1-10H

BRYANT 3508 4-10H

BRYANT 3508 2-10H

Miss Entry: 4896'  
-98.166618 37.020133

Top Perf: 4933'  
-98.1666 37.019984

Section 10  
35S 8W

Harper County

Section 11  
35S 8W

Bottom Perf: 8126'  
-98.166816 37.01118

BHL: 9178'  
-98.166581 37.008401

482' FSL

599' FEL

Section 15  
35S 8W

Section 14  
35S 8W



Actual Bottom-Hole Location of Bryant 3508 2-10H  
Harper County, Kansas  
T&R: 35S 8W  
Section: 10, 599' FEL & 482' FSL  
-98.166581 37.008401

1 in = 632 ft

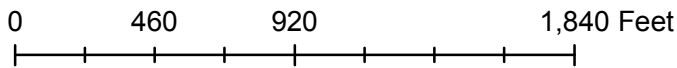


● Actual BH Location

\* SandRidge Wells

--- Perf

□ Sections



Draftsman:

Aaron Birk

Draft Date: 9/4/2013

Drawing Name/Number:

Addendum\_Bryant 3508 2-10H.mxd

Coordinate System:

NAD 1927 State Plane  
Kansas South FIPS: 1502