



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1165981
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: _____



1165981

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 <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 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|

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

| | |
|-----------|------------------------------------------|
| Form | ACO1 - Well Completion |
| Operator | SandRidge Exploration and Production LLC |
| Well Name | Girk 3320 1-12 |
| Doc ID | 1165981 |

Tops

| Name | Top | Datum |
|-------------|------|-------|
| Heebner | 4208 | -2344 |
| Lansing | 4403 | -2529 |
| Marmaton | 4920 | -3046 |
| Pawnee | 5002 | -3128 |
| Cherokee | 5040 | -3166 |
| Mississippi | 5155 | -3281 |
| Kinderhook | 6109 | -4235 |
| Viola | 6140 | -4266 |

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

October 31, 2013

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

Re: ACO1
API 15-033-21723-00-00
Girk 3320 1-12
NE/4 Sec.12-33S-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,
Wanda Ledbetter



BASIN SERVICES, LLC
P O BOX 4268
ABILENE, TX 79608-4268
Phone # (325)690-0053
Fax # (325)698-0055

TICKET

TICKET NUMBER: WY-67-1
TICKET DATE: 07/04/2013

SANDRIDGE ENERGY
123 ROBERT S KERR AVE
OKLAHOMA CITY, OK 73102-6406

YARD: WY WAYNOKA OK
LEASE: Girk
WELL#: 3320 1-12
RIG #: LaMunyon 1
Co/St: COMANCHE, KS

| DESCRIPTION | QUANTITY | RATE | AMOUNT |
|-------------------------------------------------------------------------|----------|------|---------------------|
| 7/3-4/2013 DRILLED 30" CONDUCTOR HOLE | | | |
| 7/3-4/2013 20" CONDUCTOR PIPE (.250 WALL) | | | |
| 7/3-4/2013 DRILL & INSTALL 6' X 6' CELLAR TINHORN | | | |
| 7/3-4/2013 6' X 6' CELLAR TINHORN WITH PROTECTIVE RING | | | |
| 7/3-4/2013 DRILLED 20" RATHOLE (PER FOOT) | | | |
| 7/3-4/2013 16" CONDUCTOR PIPE (.250 WALL) | | | |
| 7/3-4/2013 DRILLED 20" MOUSE HOLE (PER FOOT) | | | |
| 7/3-4/2013 MOBILIZATION OF EQUIPMENT & ROAD PERMITTING FEE | | | |
| 7/3-4/2013 WELDING SERVICES FOR PIPE & LIDS | | | |
| 7/3-4/2013 PROVIDED EQUIPMENT & LABOR TO ASSIST IN PUMPING CONCRETE | | | |
| 7/3-4/2013 PROVIDED METAL LIDS (1 FOR CONDUCTOR & 2 FOR MOUSEHOLE PIPE) | | | |
| 7/3-4/2013 SAFETY FENCING AROUND WELL | | | |
| 7/3-4/2013 10 SACK GROUT | | | |
| 7/3-4/2013 TAXABLE ITEMS | | | 5,240.00 |
| 7/3-4/2013 BID - TAXABLE ITEMS | | | 15,010.00 |
| Sub Total: | | | 20,250.00 |
| Tax COMANCHE COUNTY (6.3 %): | | | 330.12 |
| TICKET TOTAL: | | | <u>\$ 20,580.12</u> |

I, the undersigned, acknowledge the acceptance of the above listed goods and/or services.

Approved Signature _____

Ticket Number: DC 13089
 Well Name: GIRK 3320 1-12
 Rate: 850.00
 Amount: \$ 20,580.12
 By: Man: Emil Johnson
 By: Man Sig.: [Signature]
 Notes: _____



RECEIVED

JUL 15 2013

Cementing Service Report

REGULATORY DEPT
SANDRIDGE ENERGY

| | |
|----------------------------------|------------|
| Customer SANDRIDGE ENERGY INC | Job Number |
|----------------------------------|------------|

| | | | |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------|--------------------------------|
| Well GIRK 3320, 1-12 | Location (legal) | Schlumberger Location EL RENO | Job Start Jul/08/2013 |
| Field | Formation Name/Type | Deviation deg | Bit Size 12.3 in |
| County COMANCHE | State/Province Kansas | BHP psi | Well MD 791.0 ft |
| Well Master | API/UWI | BHST 89 degF | Well TVD 791.0 ft |
| Rig Name | Drilled For Oil & Gas | Service Via Land | Pore Press. Gradient lb/gal |
| Offshore Zone | Well Class New | Well Type Development | |
| Drilling Fluid Type | Max. Density lb/gal | Plastic Viscosity cP | |
| Service Line Cementing | Job Type SURFACE | | |
| Max. Allowed Tub. Press psi | Max. Allowed Ann. Press psi | WH Connection Single Cement head | |
| Service Instructions | | | |
| Casing/Tubing Secured <input checked="" type="checkbox"/> 1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/> | | | |
| Lift Pressure 250 psi | | | |
| Pipe Rotated <input type="checkbox"/> Pipe Reciprocated <input type="checkbox"/> | | | |
| No. Centralizers Top Plugs 1 Bottom Plugs | | | |
| Cement Head Type | | | |
| Job Scheduled For Jul/08/2013 Arrived on Location Jul/08/2013 Leave Location Jul/08/2013 | | | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M |
| 07/08/2013 | 16:53:21 | 0 | 2.7 |
| 07/08/2013 | 16:53:54 | 10 | 0.0 |
| 07/08/2013 | 16:53:57 | 9 | 0.0 |
| 07/08/2013 | 16:56:21 | 188 | 0.0 |
| 07/08/2013 | 16:59:12 | 934 | 1.1 |
| 07/08/2013 | 16:59:21 | 910 | 5.2 |
| 07/08/2013 | 17:01:41 | 685 | 6.4 |
| 07/08/2013 | 17:01:46 | 679 | 6.5 |
| 07/08/2013 | 17:01:47 | 678 | 6.5 |
| 07/08/2013 | 17:02:21 | 645 | 6.5 |
| 07/08/2013 | 17:05:21 | 536 | 6.2 |
| 07/08/2013 | 17:08:21 | 468 | 6.5 |
| 07/08/2013 | 17:11:21 | 421 | 4.2 |
| 07/08/2013 | 17:14:21 | 387 | 6.5 |
| 07/08/2013 | 17:17:21 | 364 | 6.2 |
| 07/08/2013 | 17:20:21 | 345 | 6.0 |
| 07/08/2013 | 17:20:59 | 341 | 5.3 |
| 07/08/2013 | 17:21:03 | 341 | 5.3 |
| 07/08/2013 | 17:23:21 | 323 | 2.5 |
| 07/08/2013 | 17:26:21 | 310 | 0.5 |
| 07/08/2013 | 17:27:45 | 302 | 2.6 |

Called Schlumberger for # of SKS.

| Well | | Field | | Job Start | | Customer | | Job Number | |
|-----------------|------------------|-----------------------|---------------|--------------|------------|-----------------------------|--|------------|--|
| GIRK 3320, 1-12 | | | | Jul/08/2013 | | SANDRIDGE ENERGY INC | | | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message | | | |
| 07/08/2013 | 17:28:38 | 300 | 0.0 | 15.17 | 162.3 | Drop Top Plug | | | |
| 07/08/2013 | 17:28:39 | 300 | 0.0 | 15.17 | 162.3 | Start Displacement | | | |
| 07/08/2013 | 17:28:44 | 300 | 0.0 | 15.17 | 162.3 | Reset Total, Vol = 0.11 bbl | | | |
| 07/08/2013 | 17:29:21 | 300 | 0.0 | 15.15 | 162.3 | | | | |
| 07/08/2013 | 17:32:21 | 297 | 3.3 | 9.67 | 163.2 | | | | |
| 07/08/2013 | 17:35:21 | 279 | 4.4 | 8.46 | 176.1 | | | | |
| 07/08/2013 | 17:38:21 | 272 | 6.5 | 8.45 | 194.2 | | | | |
| 07/08/2013 | 17:41:21 | 270 | 2.3 | 8.46 | 206.5 | | | | |
| 07/08/2013 | 17:44:21 | 273 | 0.0 | 8.46 | 210.1 | | | | |
| 07/08/2013 | 17:46:45 | 273 | 0.0 | 8.46 | 210.1 | Bump Top Plug | | | |
| 07/08/2013 | 17:46:46 | 273 | 0.0 | 8.46 | 210.1 | End Displacement | | | |
| 07/08/2013 | 17:47:21 | 273 | 0.0 | 8.45 | 210.1 | | | | |

Post Job Summary

| Average Pump Rates, bbl/min | | | | Volume of Fluid Injected, bbl | | | |
|---------------------------------------|------------------------|-------------------------|----------------|-------------------------------------|-------------------------------------|--------|---------|
| Slurry | N2 | Mud | Maximum Rate | Total Slurry | Mud | Spacer | N2 |
| 4.6 | | | 7.7 | 146.0 | 0.0 | 20.0 | |
| Treating Pressure Summary, psi | | | | Breakdown Fluid | | | |
| Maximum | Final | Average | Bump Plug to | Breakdown | Type | Volume | Density |
| 3110 | 13 | 350 | 1400 | | | bbl | lb/gal |
| Avg. N2 Percent | Designed Slurry Volume | Displacement | Mix Water Temp | Cement Circulated to Surface? | Volume | | |
| % | 146.0 bbl | 47.8 bbl | degF | <input checked="" type="checkbox"/> | 55.0 bbl | | |
| Customer or Authorized Representative | | Schlumberger Supervisor | | Washed Thru Perfs | To | | |
| PAUL BECKELHEIMER | | NATHAN SMITH | | <input type="checkbox"/> | ft | | |
| | | | | Circulation Lost | Job Completed | | |
| | | | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| | | | | - | - | | |



Cementing Service Report

| Customer Sandridge | | | | Job Number CDL7-00276 | | | |
|-----------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------|----------------------------------|---------------------------------|-----------------------------|
| Well Girk 3320 1-12H Girk 3320 1-12 | | Location (legal) Lamunyon #1 | | Schlumberger Location EL RENO | | Job Start Jul/16/2013 | |
| Field Mississippi Lime | | Formation Name/Type Shale | | Deviation | | Bit Size 7.9 in | Well MD 6170.0 ft |
| County Comanche | | State/Province Kansas | | BHP | BHST 152 degF | BHCT 39 degF | Pore Press. Gradient |
| Well Master 0631479460 | | API/UWI 1503321723 | | Casing/Liner | | | |
| Rig Name Lamunyon #1 | Drilled For Oil & Gas | Service Via Land | | Depth, ft | Size, in | Weight, lb/ft | Grade |
| Offshore Zone | Well Class New | Well Type Development | | 6174.0 | 5.500 | 17.0 | P110 |
| | | | | 0.0 | 0.000 | 0.0 | |
| Drilling Fluid Type Bentonite | | Max. Density 9.00 lb/gal | Plastic Viscosity 42.000 cP | Tubing/OH Pipe | | | |
| Service Line Cementing | Job Type 5.5 production | | | Depth, | Size, | Weight, | Grade |
| | | | | | | | Thread |
| Max. Allowed Tub. Press 3000 psi | | Max. Allowed Ann. Press | WH Connection Single Cement head | | Perforations/Open Hole | | |
| Service Instructions | | | | Top, | Bottom, | No. of Shots | Total Interval |
| | | | | | | | Diameter |
| | | | | | | | |
| | | | | Treat Down Casing | Displacement 141.1 bbl | Packer Type | Packer Depth |
| | | | | Tubing Vol. | Casing Vol. 143.1 bbl | Annular Vol. | Openhole Vol. |
| Casing/Tubing Secured <input checked="" type="checkbox"/> | | 1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/> | | Casing Tools | | Squeeze Job | |
| Lift Pressure 950 psi | | Pipe Rotated <input type="checkbox"/> | | Shoe Type Guide | | Squeeze Type | |
| Pipe Reciprocated <input type="checkbox"/> | | Shoe Depth 6174.0 ft | | Tool Type | | | |
| No. Centralizers 6 | Top Plugs 1 | Bottom Plugs | Stage Tool Type | | Tool Depth | | |
| Cement Head Type Single | | Stage Tool Depth | | Tail Pipe Size | | | |
| Job Scheduled For Jul/16/2013 | Arrived on Location Jul/16/2013 | Leave Location Jul/16/2013 | | Collar Type Float | | Tail Pipe Depth | |
| | | | | Collar Depth 6084.0 ft | | Sqz. Total Vol. | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message | |
| 07/17/2013 | 01:33:36 | | | | | Started Acquisition | |
| 07/17/2013 | 02:41:32 | 3 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:41:34 | | | | | Safety meeting | |
| 07/17/2013 | 02:41:34 | | | | | Rig up rig floor | |
| 07/17/2013 | 02:41:34 | | | | | Flush lines | |
| 07/17/2013 | 02:41:34 | 3 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:41:36 | 3 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:42:06 | 2 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:42:36 | 3 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:43:06 | 2 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:43:36 | 3 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:44:06 | 2 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:44:36 | 2 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:45:06 | 3 | 0.0 | 8.40 | 0.0 | | |
| 07/17/2013 | 02:45:36 | 4 | 0.0 | 7.50 | 0.0 | | |
| 07/17/2013 | 02:46:06 | 7 | 0.1 | 7.71 | 0.0 | | |
| 07/17/2013 | 02:46:36 | 0 | 0.0 | 8.43 | 0.1 | | |
| 07/17/2013 | 02:47:06 | 249 | 2.4 | 8.33 | 0.6 | | |
| 07/17/2013 | 02:47:36 | 314 | 2.5 | 8.35 | 1.9 | | |
| 07/17/2013 | 02:48:06 | 326 | 2.5 | 8.39 | 3.1 | | |
| 07/17/2013 | 02:48:36 | 189 | 1.5 | 8.39 | 4.3 | | |

| Well | | Field | Job Start | Customer | Job Number | |
|--------------------------------|------------------|----------------------|---------------|--------------|------------|------------------------------|
| Girk 3300 1-12H Girk 3320 1-12 | | Mississippi Lime | Jul/16/2013 | Sandridge | CDL7-00276 | |
| Date | Time 24-hr clock | Flowing Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message |
| 07/17/2013 | 02:49:35 | | | | | Low psi test |
| 07/17/2013 | 02:49:35 | 1844 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:49:36 | 1836 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:50:06 | 1757 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:50:36 | 3492 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:51:06 | 4259 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:51:36 | 4059 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:52:06 | 4305 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:52:36 | 5338 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:53:06 | 5111 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:53:36 | 4911 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:54:06 | 4767 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:54:36 | 4734 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:54:54 | | | | | Psi test |
| 07/17/2013 | 02:54:54 | 4704 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:55:06 | 4680 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:55:35 | | | | | Reset Total, Vol = 4.40 bbl |
| 07/17/2013 | 02:55:35 | 8 | 0.0 | 8.40 | 4.4 | |
| 07/17/2013 | 02:55:36 | 8 | 0.0 | 8.40 | 0.0 | |
| 07/17/2013 | 02:55:37 | | | | | Start gelled water |
| 07/17/2013 | 02:55:37 | 8 | 0.0 | 8.40 | 0.0 | |
| 07/17/2013 | 02:56:06 | 76 | 0.0 | 8.40 | 0.0 | |
| 07/17/2013 | 02:56:36 | 402 | 3.1 | 8.40 | 0.4 | |
| 07/17/2013 | 02:56:59 | | | | | Well has returns |
| 07/17/2013 | 02:56:59 | 383 | 5.0 | 8.41 | 2.1 | |
| 07/17/2013 | 02:57:06 | 427 | 5.1 | 8.41 | 2.7 | |
| 07/17/2013 | 02:57:36 | 461 | 5.1 | 8.41 | 5.2 | |
| 07/17/2013 | 02:58:06 | 430 | 5.1 | 8.41 | 7.7 | |
| 07/17/2013 | 02:58:36 | 472 | 5.1 | 8.41 | 10.3 | |
| 07/17/2013 | 02:59:06 | 421 | 5.1 | 8.40 | 12.8 | |
| 07/17/2013 | 02:59:36 | 362 | 2.6 | 8.40 | 14.7 | |
| 07/17/2013 | 03:00:06 | 411 | 2.6 | 8.40 | 16.0 | |
| 07/17/2013 | 03:00:36 | 341 | 2.6 | 8.42 | 17.3 | |
| 07/17/2013 | 03:01:06 | 473 | 3.6 | 8.41 | 18.8 | |
| 07/17/2013 | 03:01:36 | 376 | 3.6 | 8.40 | 20.6 | |
| 07/17/2013 | 03:02:06 | 441 | 3.6 | 8.40 | 22.3 | |
| 07/17/2013 | 03:02:36 | 379 | 3.6 | 8.40 | 24.1 | |
| 07/17/2013 | 03:03:06 | 483 | 3.6 | 8.40 | 25.9 | |
| 07/17/2013 | 03:03:17 | | | | | Reset Total, Vol = 29.55 bbl |
| 07/17/2013 | 03:03:17 | 491 | 3.6 | 8.40 | 26.6 | |
| 07/17/2013 | 03:03:18 | | | | | Start lead slurry |
| 07/17/2013 | 03:03:18 | 507 | 3.6 | 8.40 | 0.1 | |
| 07/17/2013 | 03:03:36 | 498 | 2.9 | 12.77 | 1.1 | |
| 07/17/2013 | 03:04:06 | 508 | 2.8 | 13.85 | 2.5 | |
| 07/17/2013 | 03:04:36 | 611 | 4.3 | 13.84 | 4.5 | |
| 07/17/2013 | 03:05:06 | 621 | 4.4 | 13.84 | 6.7 | |
| 07/17/2013 | 03:05:36 | 621 | 4.5 | 13.84 | 8.9 | |
| 07/17/2013 | 03:06:06 | 574 | 4.5 | 13.84 | 11.2 | |
| 07/17/2013 | 03:06:36 | 521 | 4.5 | 13.83 | 13.4 | |
| 07/17/2013 | 03:07:06 | 501 | 4.5 | 13.82 | 15.7 | |
| 07/17/2013 | 03:07:36 | 507 | 4.6 | 13.82 | 17.9 | |
| 07/17/2013 | 03:08:06 | 486 | 4.6 | 13.84 | 20.2 | |
| 07/17/2013 | 03:08:36 | 374 | 4.6 | 13.85 | 22.5 | |
| 07/17/2013 | 03:09:06 | 491 | 4.6 | 13.82 | 24.8 | |

| Well | | Field | Job Start | Customer | Job Number | |
|--------------------------------|------------------|-----------------------|---------------|--------------|------------|------------------------------|
| Girk 3320 1-12H Girk 3320 1-12 | | Mississippi Lime | Jul/16/2013 | Sandridge | CDL7-00276 | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message |
| 07/17/2013 | 03:10:06 | 447 | 4.6 | 13.82 | 29.3 | |
| 07/17/2013 | 03:10:36 | 337 | 4.5 | 13.83 | 31.6 | |
| 07/17/2013 | 03:11:06 | 231 | 4.6 | 13.84 | 33.9 | |
| 07/17/2013 | 03:11:36 | 305 | 4.6 | 13.84 | 36.2 | |
| 07/17/2013 | 03:12:06 | 299 | 4.6 | 13.83 | 38.5 | |
| 07/17/2013 | 03:12:36 | 240 | 4.6 | 13.83 | 40.8 | |
| 07/17/2013 | 03:13:06 | 229 | 4.7 | 13.82 | 43.1 | |
| 07/17/2013 | 03:13:36 | 277 | 4.5 | 13.82 | 45.4 | |
| 07/17/2013 | 03:14:06 | 105 | 2.8 | 13.83 | 47.2 | |
| 07/17/2013 | 03:14:36 | 102 | 2.8 | 13.78 | 48.6 | |
| 07/17/2013 | 03:15:06 | 101 | 2.7 | 13.85 | 50.0 | |
| 07/17/2013 | 03:15:36 | 259 | 4.6 | 13.82 | 51.5 | |
| 07/17/2013 | 03:16:06 | 239 | 4.7 | 13.82 | 53.9 | |
| 07/17/2013 | 03:16:36 | 223 | 4.8 | 13.82 | 56.3 | |
| 07/17/2013 | 03:17:06 | 114 | 3.1 | 13.82 | 58.1 | |
| 07/17/2013 | 03:17:36 | 114 | 3.1 | 13.82 | 59.6 | |
| 07/17/2013 | 03:18:03 | | | | | Reset Total, Vol = 64.93 bbl |
| 07/17/2013 | 03:18:03 | 105 | 2.8 | 14.54 | 60.9 | |
| 07/17/2013 | 03:18:05 | | | | | Start tail slurry |
| 07/17/2013 | 03:18:05 | 104 | 2.9 | 14.75 | 0.1 | |
| 07/17/2013 | 03:18:06 | 104 | 2.9 | 14.75 | 0.1 | |
| 07/17/2013 | 03:18:36 | 115 | 2.8 | 15.34 | 1.6 | |
| 07/17/2013 | 03:19:06 | 118 | 3.1 | 15.59 | 3.1 | |
| 07/17/2013 | 03:19:36 | 124 | 3.2 | 15.73 | 4.6 | |
| 07/17/2013 | 03:20:06 | 120 | 3.2 | 15.76 | 6.2 | |
| 07/17/2013 | 03:20:36 | 124 | 3.3 | 15.84 | 7.9 | |
| 07/17/2013 | 03:21:06 | 115 | 3.2 | 15.82 | 9.5 | |
| 07/17/2013 | 03:21:36 | 116 | 3.2 | 15.81 | 11.0 | |
| 07/17/2013 | 03:22:06 | 129 | 3.5 | 15.82 | 12.7 | |
| 07/17/2013 | 03:22:36 | 122 | 3.4 | 15.76 | 14.4 | |
| 07/17/2013 | 03:23:06 | 123 | 3.5 | 15.75 | 16.1 | |
| 07/17/2013 | 03:23:36 | 119 | 3.4 | 15.69 | 17.9 | |
| 07/17/2013 | 03:24:06 | 120 | 3.4 | 15.68 | 19.6 | |
| 07/17/2013 | 03:24:36 | 126 | 3.5 | 15.67 | 21.3 | |
| 07/17/2013 | 03:25:06 | 92 | 3.4 | 15.40 | 23.1 | |
| 07/17/2013 | 03:25:11 | | | | | Reset Total, Vol = 23.33 bbl |
| 07/17/2013 | 03:25:11 | 41 | 2.3 | 15.56 | 23.3 | |
| 07/17/2013 | 03:25:13 | | | | | Remark |
| 07/17/2013 | 03:25:13 | 44 | 1.8 | 15.64 | 0.1 | |
| 07/17/2013 | 03:25:36 | 13 | 0.0 | 15.41 | 0.2 | |
| 07/17/2013 | 03:26:06 | 13 | 0.0 | 15.38 | 0.2 | |
| 07/17/2013 | 03:26:36 | 13 | 0.0 | 15.40 | 0.2 | |
| 07/17/2013 | 03:27:06 | 13 | 0.0 | 15.48 | 0.2 | |
| 07/17/2013 | 03:27:36 | 10 | 0.0 | 15.83 | 0.2 | |
| 07/17/2013 | 03:28:06 | 342 | 3.8 | 11.00 | 1.0 | |
| 07/17/2013 | 03:28:36 | 129 | 3.5 | 9.51 | 2.8 | |
| 07/17/2013 | 03:29:06 | 133 | 3.6 | 8.80 | 4.6 | |
| 07/17/2013 | 03:29:36 | 144 | 3.6 | 8.68 | 6.4 | |
| 07/17/2013 | 03:30:06 | 125 | 3.5 | 9.19 | 8.1 | |
| 07/17/2013 | 03:30:36 | 141 | 3.6 | 8.76 | 9.9 | |
| 07/17/2013 | 03:31:06 | 136 | 3.6 | 8.58 | 11.7 | |
| 07/17/2013 | 03:31:36 | 142 | 3.6 | 8.57 | 13.5 | |
| 07/17/2013 | 03:32:06 | 124 | 3.6 | 8.50 | 15.2 | |
| 07/17/2013 | 03:32:36 | 142 | 3.6 | 8.44 | 17.0 | |

| Well | | Field | Job Start | Customer | Job Number | |
|--------------------------------|------------------|-----------------------|---------------|--------------|------------|------------------------------|
| Girk 3320 1-12H Girk 3320 1-12 | | Mississippi Lime | Jul/16/2013 | Sandridge | CDL7-00276 | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message |
| 07/17/2013 | 03:33:36 | 18 | 1.6 | 8.41 | 20.0 | |
| 07/17/2013 | 03:34:06 | 18 | 1.5 | 8.41 | 21.5 | |
| 07/17/2013 | 03:34:36 | 11 | 0.2 | 8.50 | 21.8 | |
| 07/17/2013 | 03:35:06 | 6 | 0.0 | 8.42 | 21.8 | |
| 07/17/2013 | 03:35:36 | 5 | 0.0 | 8.42 | 21.8 | |
| 07/17/2013 | 03:36:06 | 13 | 1.0 | 8.41 | 21.9 | |
| 07/17/2013 | 03:36:36 | 122 | 5.1 | 8.41 | 23.4 | |
| 07/17/2013 | 03:37:06 | 118 | 5.1 | 8.41 | 26.0 | |
| 07/17/2013 | 03:37:36 | 158 | 6.5 | 8.41 | 28.7 | |
| 07/17/2013 | 03:38:06 | 229 | 7.9 | 8.40 | 32.6 | |
| 07/17/2013 | 03:38:36 | 223 | 7.8 | 8.40 | 36.5 | |
| 07/17/2013 | 03:39:06 | 218 | 7.8 | 8.40 | 40.4 | |
| 07/17/2013 | 03:39:15 | | | | | Reset Total, Vol = 25.60 bbl |
| 07/17/2013 | 03:39:15 | 230 | 7.8 | 8.40 | 41.6 | |
| 07/17/2013 | 03:39:16 | | | | | Start displacement |
| 07/17/2013 | 03:39:16 | | | | | Top plug lunched |
| 07/17/2013 | 03:39:16 | 230 | 7.8 | 8.40 | 0.1 | |
| 07/17/2013 | 03:39:36 | 217 | 7.8 | 8.40 | 2.7 | |
| 07/17/2013 | 03:40:06 | 216 | 7.8 | 8.40 | 6.7 | |
| 07/17/2013 | 03:40:36 | 231 | 7.8 | 8.40 | 10.6 | |
| 07/17/2013 | 03:41:06 | 159 | 6.5 | 8.40 | 14.0 | |
| 07/17/2013 | 03:41:36 | 149 | 6.5 | 8.40 | 17.2 | |
| 07/17/2013 | 03:42:06 | 153 | 6.5 | 8.40 | 20.4 | |
| 07/17/2013 | 03:42:36 | 152 | 6.5 | 8.40 | 23.7 | |
| 07/17/2013 | 03:43:06 | 170 | 6.5 | 8.40 | 26.9 | |
| 07/17/2013 | 03:43:36 | 152 | 6.5 | 8.40 | 30.1 | |
| 07/17/2013 | 03:44:06 | 171 | 6.5 | 8.40 | 33.4 | |
| 07/17/2013 | 03:44:36 | 157 | 6.5 | 8.40 | 36.6 | |
| 07/17/2013 | 03:45:06 | 110 | 5.2 | 8.40 | 39.5 | |
| 07/17/2013 | 03:45:36 | 102 | 5.1 | 8.40 | 42.0 | |
| 07/17/2013 | 03:46:06 | 102 | 5.2 | 8.40 | 44.6 | |
| 07/17/2013 | 03:46:36 | 103 | 5.1 | 8.40 | 47.2 | |
| 07/17/2013 | 03:47:06 | 99 | 5.1 | 8.40 | 49.8 | |
| 07/17/2013 | 03:47:36 | 102 | 5.2 | 8.40 | 52.3 | |
| 07/17/2013 | 03:48:06 | 110 | 5.1 | 8.40 | 54.9 | |
| 07/17/2013 | 03:48:36 | 106 | 5.2 | 8.40 | 57.5 | |
| 07/17/2013 | 03:49:06 | 100 | 5.2 | 8.40 | 60.0 | |
| 07/17/2013 | 03:49:36 | 116 | 5.2 | 8.40 | 62.6 | |
| 07/17/2013 | 03:50:06 | 100 | 5.1 | 8.40 | 65.2 | |
| 07/17/2013 | 03:50:36 | 193 | 5.0 | 8.40 | 67.7 | |
| 07/17/2013 | 03:51:06 | 204 | 5.0 | 8.40 | 70.3 | |
| 07/17/2013 | 03:51:36 | 253 | 5.0 | 8.40 | 72.8 | |
| 07/17/2013 | 03:52:06 | 294 | 5.0 | 8.40 | 75.3 | |
| 07/17/2013 | 03:52:36 | 357 | 5.0 | 8.40 | 77.8 | |
| 07/17/2013 | 03:53:06 | 335 | 5.0 | 8.40 | 80.2 | |
| 07/17/2013 | 03:53:36 | 463 | 5.0 | 8.40 | 82.7 | |
| 07/17/2013 | 03:54:06 | 394 | 5.0 | 8.40 | 85.2 | |
| 07/17/2013 | 03:54:36 | 531 | 5.0 | 8.40 | 87.7 | |
| 07/17/2013 | 03:55:06 | 546 | 5.0 | 8.40 | 90.2 | |
| 07/17/2013 | 03:55:07 | | | | | Well has returns |
| 07/17/2013 | 03:55:07 | 570 | 5.0 | 8.40 | 90.3 | |
| 07/17/2013 | 03:55:36 | 581 | 5.0 | 8.40 | 92.7 | |
| 07/17/2013 | 03:56:06 | 610 | 5.0 | 8.40 | 95.2 | |
| 07/17/2013 | 03:56:36 | 692 | 5.0 | 8.40 | 97.7 | |

| Well | | Field | | Job Start | | Customer | | Job Number | |
|--------------------------------|------------------|-----------------------|---------------|--------------|------------|---------------------------|--|------------|--|
| Girk 3320 1-12H Girk 3320 1-12 | | Mississippi Lime | | Jul/16/2013 | | Sandridge | | CDL7-00276 | |
| Date | Time 24-hr clock | Treating Pressure Pst | Flow Rate B/M | Density LB/G | Volume BBL | Message | | | |
| 07/17/2013 | 03:57:36 | 678 | 5.0 | 8.40 | 102.6 | | | | |
| 07/17/2013 | 03:58:06 | 884 | 5.0 | 8.40 | 105.1 | | | | |
| 07/17/2013 | 03:58:36 | 777 | 5.0 | 8.40 | 107.6 | | | | |
| 07/17/2013 | 03:59:06 | 763 | 3.0 | 8.40 | 110.0 | | | | |
| 07/17/2013 | 03:59:36 | 810 | 2.5 | 8.40 | 111.3 | | | | |
| 07/17/2013 | 04:00:06 | 781 | 2.5 | 8.40 | 112.5 | | | | |
| 07/17/2013 | 04:00:36 | 863 | 2.5 | 8.40 | 113.8 | | | | |
| 07/17/2013 | 04:01:06 | 816 | 2.5 | 8.40 | 115.0 | | | | |
| 07/17/2013 | 04:01:36 | 922 | 2.5 | 8.40 | 116.3 | | | | |
| 07/17/2013 | 04:02:06 | 871 | 2.5 | 8.40 | 117.5 | | | | |
| 07/17/2013 | 04:02:36 | 931 | 2.5 | 8.40 | 118.7 | | | | |
| 07/17/2013 | 04:03:06 | 952 | 2.5 | 8.40 | 120.0 | | | | |
| 07/17/2013 | 04:03:36 | 972 | 2.5 | 8.40 | 121.2 | | | | |
| 07/17/2013 | 04:04:06 | 1042 | 2.5 | 8.40 | 122.5 | | | | |
| 07/17/2013 | 04:04:36 | 1051 | 2.5 | 8.40 | 123.7 | | | | |
| 07/17/2013 | 04:05:06 | 1070 | 2.4 | 8.40 | 124.9 | | | | |
| 07/17/2013 | 04:05:36 | 1077 | 2.4 | 8.40 | 126.1 | | | | |
| 07/17/2013 | 04:06:05 | | | | | Bump plug | | | |
| 07/17/2013 | 04:06:05 | 1485 | 0.4 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:06:06 | 1415 | 0.2 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:06:36 | 1457 | 0.0 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:07:06 | 1417 | 0.0 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:07:36 | | | | | Check floats | | | |
| 07/17/2013 | 04:07:36 | 1437 | 0.0 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:08:06 | 1331 | 0.0 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:08:36 | 0 | 0.0 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:08:52 | | | | | Floats holding 1 bbl back | | | |
| 07/17/2013 | 04:08:52 | 2 | 0.0 | 8.41 | 127.2 | | | | |
| 07/17/2013 | 04:08:53 | | | | | End job | | | |
| 07/17/2013 | 04:08:53 | 1 | 0.0 | 8.41 | 127.2 | | | | |

Post Job Summary

| Average Pump Rates, bbl/min | | | | Volume of Fluid Injected, bbl | | | |
|---------------------------------------|------------------------|---------|--------------|-------------------------------|-------------------------------|--------------------------|-------------------------------------|
| Slurry | N2 | Mud | Maximum Rate | Total Slurry | Mud | Spacer | N2 |
| 4.1 | | 0.0 | 7.9 | 85.5 | 0.0 | 30.0 | |
| Treating Pressure Summary, psi | | | | Breakdown Fluid | | | |
| Maximum | Final | Average | Bump Plug to | Breakdown | Type | Volume | Density |
| 5427 | 1378 | 590 | 1411 | | FreshWater | 5.0 bbl | 8.34 lb/gal |
| Avg. N2 Percent | Designed Slurry Volume | | Displacement | Mix Water Temp | Cement Circulated to Surface? | Volume | |
| | 85.5 bbl | | 141.1 bbl | 75 degF | <input type="checkbox"/> | To | |
| Customer or Authorized Representative | | | | Schlumberger Supervisor | | Circulation Lost | Job Completed |
| Sandridge Representative | | | | Anthony Cucci | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|--------------------|
| Job Start Date: | 8/19/2013 |
| Job End Date: | 8/19/2013 |
| State: | Kansas |
| County: | Comanche |
| API Number: | 15-033-21723-00-00 |
| Operator Name: | SandRidge Energy |
| Well Name and Number: | Girk 3320 #1-12 |
| Longitude: | -99.43604837 |
| Latitude: | 37.19163112 |
| Datum: | NAD27 |
| Federal/Tribal Well: | NO |
| True Vertical Depth: | 5,576 |
| Total Base Water Volume (gal): | 257,544 |
| Total Base Non Water Volume: | 0 |



Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Service Abstract Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments |
|-------------------------|--------------|--------------------|------------------------------------|------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|----------|
| Water | SandRidge | Carrier/Base Fluid | Water | 7732-18-5 | 100.00000 | 84.94456 | None |
| Sand (Proppant) | Consolidated | Proppant | Silica Substrate | 14808-60-7 | 85.00000 | 3.35952 | None |
| Hydrochloric Acid (15%) | Consolidated | Acidizing | Hydrochloric Acid | 7647-01-0 | 15.00000 | 1.56164 | None |
| GA-15L | Consolidated | Gelling agent | Petroleum Distillates | 64742-47-8 | 65.00000 | 0.00679 | None |
| | | | Proprietary non-hazardous polymers | Proprietary | 45.00000 | 0.00470 | None |
| LEB-4 | Consolidated | Gel breaker | TRADE SECRET | NA | 100.00000 | 0.01044 | None |
| Ammonium Persulfate | Consolidated | Gel breaker | Ammonium Persulfate | 7727-54-0 | 100.00000 | 0.01044 | None |
| AI-260 | Consolidated | Acid Inhibitor | Ethylene Glycol | 107-21-1 | 40.00000 | 0.00418 | None |
| | | | N,N Dimethyl Formamide | 68-12-2 | 20.00000 | 0.00209 | None |
| | | | 2-Butoxyethanol | 111-76-2 | 6.00000 | 0.00063 | None |
| | | | Cinnamaldehyde | 104-55-2 | 6.00000 | 0.00063 | None |

| | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|-------------------------|------------|----------|---------|------|
| | | | Ethoxylated nonylphenol | 68412-54-4 | 5.00000 | 0.00052 | None |
| | | | 1-Decanol | 112-30-1 | 5.00000 | 0.00052 | None |
| | | | Triethyl phosphate | 78-40-0 | 2.50000 | 0.00026 | None |
| | | | 1-Octanol | 111-87-5 | 2.50000 | 0.00026 | None |
| | | | Isopropanol | 67-63-0 | 2.50000 | 0.00026 | None |
| Biostat 650 | Consolidated | | Biocide | | | | |
| | | | Methanol | 67-56-1 | 20.00000 | 0.00411 | None |
| | | | Isopropanol | 67-63-0 | 5.00000 | 0.00103 | None |
| PS-102 | Consolidated | | Scale Inhibitor | | | | |
| | | | Methyl Alcohol | 60-56-1 | 25.00000 | 0.00261 | 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 | | | | |
| | | | Isopropanol | 67-63-0 | | | |
| | | | Citric Acid | 77-92-9 | | | |

* 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)



Standard Wellpath Report
Sandridge
Sec 12 - 33S - 20W, Kansas
Comanche County
Wellbore: Girk 3320 1-12 (Actual)

Wellbore

| Name | Created | Last Revised |
|-------------------------|------------|--------------|
| Girk 3320 1-12 (Actual) | 5-Jul-2013 | 16-Jul-2013 |

Well

| Name | Government ID | Last Revised |
|----------------|---------------|--------------|
| Girk 3320 1-12 | | 5-Jul-2013 |

Slot

| Name | Grid Northing | Grid Easting | Latitude | Longitude | North | East |
|----------------|---------------|--------------|----------------|---------------|---------|---------|
| Girk 3320 1-12 | 192517.7000 | 1727324.7000 | N37 11 29.8718 | W99 26 9.7738 | 334.30S | 195.30W |

Installation

| Name | Easting | Northing | Coord System Name | North Alignment |
|-----------------|--------------|-------------|-----------------------------------------|-----------------|
| Comanche County | 1727520.0000 | 192852.0000 | KS-S on NORTH AMERICAN DATUM 1927 datum | Grid |

Field

| Name | Easting | Northing | Coord System Name | North Alignment |
|--------------------|--------------|-------------|-----------------------------------------|-----------------|
| Sec 12 - 33S - 20W | 1727520.0000 | 192852.0000 | KS-S on NORTH AMERICAN DATUM 1927 datum | Grid |

| Created By |
|------------|
| |

| Comments |
|----------------------------------------------------|
| FINAL SURVEYS: 6170 is a projection to bit @ TD |



Standard Wellpath Report
 Sandridge
 Sec 12 - 33S - 20W, Kansas
 Comanche County
 Wellbore: Girk 3320 1-12 (Actual)

Wellpath (Grid) Report

| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | Easting | Northing |
|---------|----------|----------|---------|-----------|----------|-----------------------|-------------------------|------------|-----------|
| 0.00 | 0.00 | 0.000 | 0.00 | 0.00N | 0.00E | | 0.00 | 1727324.70 | 192517.70 |
| 842.00 | 0.60 | 13.300 | 841.98 | 4.29N | 1.01E | 0.07 | -1.44 | 1727325.71 | 192521.99 |
| 937.00 | 0.30 | 41.900 | 936.98 | 4.96N | 1.29E | 0.39 | -1.78 | 1727325.99 | 192522.66 |
| 968.00 | 0.60 | 5.400 | 967.98 | 5.18N | 1.36E | 1.29 | -1.87 | 1727326.06 | 192522.88 |
| 1000.00 | 0.50 | 22.600 | 999.98 | 5.48N | 1.43E | 0.60 | -1.97 | 1727326.13 | 192523.18 |
| 1032.00 | 0.90 | 338.600 | 1031.98 | 5.84N | 1.40E | 2.01 | -1.97 | 1727326.10 | 192523.54 |
| 1064.00 | 1.40 | 331.200 | 1063.97 | 6.42N | 1.12E | 1.63 | -1.75 | 1727325.82 | 192524.12 |
| 1095.00 | 3.10 | 315.200 | 1094.95 | 7.34N | 0.34E | 5.79 | -1.07 | 1727325.04 | 192525.04 |
| 1127.00 | 3.30 | 310.800 | 1126.90 | 8.56N | 0.96W | 0.99 | 0.11 | 1727323.74 | 192526.26 |
| 1159.00 | 3.40 | 304.000 | 1158.84 | 9.69N | 2.45W | 1.28 | 1.47 | 1727322.25 | 192527.39 |
| 1191.00 | 3.40 | 297.600 | 1190.79 | 10.66N | 4.08W | 1.19 | 2.99 | 1727320.62 | 192528.36 |
| 1222.00 | 3.90 | 288.200 | 1221.72 | 11.42N | 5.89W | 2.51 | 4.73 | 1727318.81 | 192529.12 |
| 1254.00 | 4.40 | 279.100 | 1253.64 | 11.95N | 8.14W | 2.58 | 6.91 | 1727316.56 | 192529.65 |
| 1286.00 | 4.50 | 269.100 | 1285.54 | 12.13N | 10.61W | 2.44 | 9.35 | 1727314.09 | 192529.83 |
| 1317.00 | 4.80 | 264.700 | 1316.44 | 11.99N | 13.11W | 1.50 | 11.85 | 1727311.59 | 192529.69 |
| 1349.00 | 4.80 | 253.800 | 1348.33 | 11.49N | 15.73W | 2.85 | 14.51 | 1727308.97 | 192529.19 |
| 1381.00 | 5.10 | 248.700 | 1380.21 | 10.60N | 18.34W | 1.66 | 17.20 | 1727306.36 | 192528.30 |
| 1412.00 | 5.10 | 251.000 | 1411.09 | 9.65N | 20.93W | 0.66 | 19.86 | 1727303.77 | 192527.35 |
| 1507.00 | 4.40 | 252.800 | 1505.76 | 7.20N | 28.40W | 0.75 | 27.55 | 1727296.30 | 192524.90 |
| 1539.00 | 4.20 | 251.300 | 1537.67 | 6.46N | 30.69W | 0.72 | 29.89 | 1727294.01 | 192524.16 |
| 1603.00 | 3.70 | 244.400 | 1601.52 | 4.82N | 34.77W | 1.08 | 34.12 | 1727289.93 | 192522.52 |
| 1666.00 | 3.50 | 258.700 | 1664.40 | 3.56N | 38.49W | 1.46 | 37.94 | 1727286.21 | 192521.26 |
| 1730.00 | 3.40 | 260.900 | 1728.28 | 2.88N | 42.28W | 0.26 | 41.78 | 1727282.42 | 192520.58 |
| 1793.00 | 3.50 | 261.300 | 1791.17 | 2.29N | 46.02W | 0.16 | 45.57 | 1727278.68 | 192519.99 |
| 1857.00 | 3.20 | 263.800 | 1855.06 | 1.80N | 49.73W | 0.52 | 49.30 | 1727274.97 | 192519.50 |
| 1920.00 | 2.40 | 256.100 | 1917.98 | 1.30N | 52.76W | 1.40 | 52.37 | 1727271.94 | 192519.00 |
| 1952.00 | 2.20 | 252.000 | 1949.95 | 0.95N | 53.99W | 0.81 | 53.63 | 1727270.71 | 192518.65 |
| 2015.00 | 2.20 | 252.800 | 2012.91 | 0.21N | 56.30W | 0.05 | 56.00 | 1727268.40 | 192517.91 |
| 2079.00 | 2.00 | 259.000 | 2076.87 | 0.36S | 58.57W | 0.47 | 58.31 | 1727266.13 | 192517.34 |
| 2142.00 | 2.30 | 254.600 | 2139.82 | 0.91S | 60.86W | 0.54 | 60.65 | 1727263.83 | 192516.79 |
| 2206.00 | 3.40 | 251.900 | 2203.74 | 1.84S | 63.91W | 1.73 | 63.77 | 1727260.79 | 192515.86 |
| 2270.00 | 3.20 | 253.700 | 2267.63 | 2.93S | 67.43W | 0.35 | 67.38 | 1727257.27 | 192514.77 |
| 2333.00 | 2.90 | 251.500 | 2330.55 | 3.93S | 70.62W | 0.51 | 70.66 | 1727254.07 | 192513.77 |
| 2397.00 | 2.80 | 248.100 | 2394.47 | 5.03S | 73.61W | 0.31 | 73.74 | 1727251.09 | 192512.67 |
| 2460.00 | 3.10 | 260.100 | 2457.38 | 5.89S | 76.72W | 1.09 | 76.92 | 1727247.98 | 192511.81 |
| 2524.00 | 3.20 | 264.600 | 2521.29 | 6.36S | 80.20W | 0.42 | 80.43 | 1727244.50 | 192511.34 |
| 2587.00 | 3.00 | 268.300 | 2584.19 | 6.57S | 83.60W | 0.45 | 83.84 | 1727241.10 | 192511.13 |
| 2651.00 | 2.90 | 265.500 | 2648.11 | 6.75S | 86.89W | 0.27 | 87.13 | 1727237.81 | 192510.95 |
| 2714.00 | 2.70 | 268.500 | 2711.03 | 6.91S | 89.96W | 0.39 | 90.20 | 1727234.74 | 192510.79 |
| 2778.00 | 2.50 | 244.500 | 2774.97 | 7.55S | 92.72W | 1.72 | 93.02 | 1727231.97 | 192510.15 |
| 2873.00 | 2.50 | 259.800 | 2869.88 | 8.81S | 96.63W | 0.70 | 97.03 | 1727228.07 | 192508.89 |
| 2937.00 | 2.40 | 257.800 | 2933.82 | 9.34S | 99.32W | 0.21 | 99.75 | 1727225.38 | 192508.36 |
| 3000.00 | 2.30 | 259.500 | 2996.77 | 9.85S | 101.85W | 0.19 | 102.32 | 1727222.85 | 192507.85 |
| 3064.00 | 2.10 | 264.700 | 3060.72 | 10.19S | 104.28W | 0.44 | 104.78 | 1727220.42 | 192507.51 |
| 3127.00 | 2.50 | 256.700 | 3123.67 | 10.62S | 106.77W | 0.81 | 107.29 | 1727217.93 | 192507.08 |
| 3191.00 | 2.70 | 259.200 | 3187.61 | 11.22S | 109.61W | 0.36 | 110.18 | 1727215.09 | 192506.48 |
| 3254.00 | 2.40 | 263.500 | 3250.54 | 11.65S | 112.37W | 0.56 | 112.97 | 1727212.33 | 192506.05 |
| 3318.00 | 2.40 | 261.600 | 3314.49 | 12.00S | 115.03W | 0.12 | 115.65 | 1727209.67 | 192505.70 |
| 3381.00 | 2.90 | 266.600 | 3377.42 | 12.28S | 117.93W | 0.87 | 118.56 | 1727206.77 | 192505.42 |
| 3445.00 | 3.00 | 263.500 | 3441.34 | 12.57S | 121.21W | 0.29 | 121.86 | 1727203.49 | 192505.13 |
| 3508.00 | 2.70 | 265.600 | 3504.26 | 12.87S | 124.32W | 0.50 | 124.99 | 1727200.37 | 192504.83 |
| 3572.00 | 2.70 | 261.800 | 3568.19 | 13.20S | 127.32W | 0.28 | 128.00 | 1727197.38 | 192504.50 |
| 3636.00 | 2.70 | 264.800 | 3632.12 | 13.55S | 130.31W | 0.22 | 131.01 | 1727194.39 | 192504.15 |
| 3699.00 | 2.50 | 266.100 | 3695.05 | 13.78S | 133.16W | 0.33 | 133.87 | 1727191.54 | 192503.92 |
| 3763.00 | 2.20 | 260.800 | 3759.00 | 14.07S | 135.77W | 0.58 | 136.49 | 1727188.93 | 192503.63 |
| 3826.00 | 2.20 | 252.400 | 3821.95 | 14.63S | 138.11W | 0.51 | 138.88 | 1727186.59 | 192503.07 |
| 3890.00 | 2.30 | 246.000 | 3885.90 | 15.52S | 140.46W | 0.42 | 141.30 | 1727184.24 | 192502.18 |
| 3953.00 | 1.40 | 260.500 | 3948.87 | 16.16S | 142.37W | 1.60 | 143.27 | 1727182.33 | 192501.54 |
| 4017.00 | 1.30 | 257.900 | 4012.85 | 16.45S | 143.85W | 0.18 | 144.77 | 1727180.85 | 192501.25 |
| 4080.00 | 1.20 | 243.600 | 4075.84 | 16.89S | 145.14W | 0.52 | 146.10 | 1727179.56 | 192500.81 |
| 4144.00 | 0.50 | 330.200 | 4139.83 | 16.94S | 145.88W | 1.99 | 146.84 | 1727178.82 | 192500.76 |
| 4207.00 | 0.30 | 10.300 | 4202.83 | 16.54S | 145.99W | 0.53 | 146.91 | 1727178.71 | 192501.16 |
| 4303.00 | 0.10 | 12.700 | 4298.83 | 16.21S | 145.92W | 0.21 | 146.81 | 1727178.77 | 192501.49 |
| 4398.00 | 0.30 | 353.800 | 4393.83 | 15.89S | 145.93W | 0.22 | 146.79 | 1727178.77 | 192501.81 |
| 4493.00 | 0.40 | 49.800 | 4488.83 | 15.42S | 145.71W | 0.36 | 146.52 | 1727178.99 | 192502.28 |
| 4588.00 | 0.50 | 33.300 | 4583.82 | 14.86S | 145.23W | 0.17 | 145.98 | 1727179.47 | 192502.84 |
| 4684.00 | 0.60 | 23.500 | 4679.82 | 14.05S | 144.79W | 0.14 | 145.47 | 1727179.90 | 192503.65 |
| 4779.00 | 0.60 | 25.400 | 4774.81 | 13.15S | 144.38W | 0.02 | 144.97 | 1727180.32 | 192504.55 |
| 4874.00 | 0.70 | 29.400 | 4869.81 | 12.19S | 143.88W | 0.12 | 144.38 | 1727180.81 | 192505.51 |
| 4970.00 | 0.50 | 233.300 | 4965.80 | 11.93S | 143.93W | 1.22 | 144.41 | 1727180.77 | 192505.77 |

All data is in Feet unless otherwise stated
 Coordinates are from Slot MD's are from Slot and TVD's are from Slot (Girk 3320 1-12 0.00ft above Mean Sea Level)
 Vertical Section is from 0.00N 0.00E on azimuth 264.290 degrees
 Bottom hole distance is 147.42 Feet on azimuth 262.84 degrees from Wellhead
 Calculation method uses Minimum Curvature method
 Prepared by
 Date Printed: 16-Jul-2013



Standard Wellpath Report
 Sandridge
 Sec 12 - 33S - 20W, Kansas
 Comanche County
 Wellbore: Girk 3320 1-12 (Actual)

Wellpath (Grid) Report

| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | Easting | Northing |
|---------|----------|----------|---------|-----------|----------|-----------------------|-------------------------|------------|-----------|
| 5065.00 | 0.60 | 237.600 | 5060.80 | 12.45S | 144.68W | 0.11 | 145.21 | 1727180.01 | 192505.25 |
| 5160.00 | 0.70 | 225.900 | 5155.79 | 13.12S | 145.52W | 0.17 | 146.10 | 1727179.18 | 192504.58 |
| 5255.00 | 0.50 | 224.400 | 5250.79 | 13.82S | 146.23W | 0.21 | 146.88 | 1727178.47 | 192503.88 |
| 5351.00 | 0.50 | 215.100 | 5346.79 | 14.46S | 146.76W | 0.08 | 147.47 | 1727177.94 | 192503.24 |
| 5446.00 | 0.40 | 211.000 | 5441.78 | 15.08S | 147.17W | 0.11 | 147.94 | 1727177.53 | 192502.62 |
| 5541.00 | 0.40 | 212.000 | 5536.78 | 15.65S | 147.52W | ==> | 148.34 | 1727177.18 | 192502.05 |
| 5637.00 | 0.40 | 200.600 | 5632.78 | 16.25S | 147.81W | 0.08 | 148.70 | 1727176.88 | 192501.45 |
| 5732.00 | 0.50 | 214.300 | 5727.77 | 16.90S | 148.16W | 0.15 | 149.11 | 1727176.53 | 192500.80 |
| 5827.00 | 0.30 | 150.900 | 5822.77 | 17.46S | 148.28W | 0.48 | 149.28 | 1727176.42 | 192500.24 |
| 5923.00 | 0.20 | 142.800 | 5918.77 | 17.81S | 148.05W | 0.11 | 149.09 | 1727176.65 | 192499.89 |
| 6018.00 | 0.50 | 110.000 | 6013.77 | 18.09S | 147.56W | 0.37 | 148.63 | 1727177.13 | 192499.61 |
| 6120.00 | 0.50 | 98.700 | 6115.77 | 18.30S | 146.70W | 0.10 | 147.80 | 1727177.99 | 192499.40 |
| 6170.00 | 0.50 | 98.700 | 6165.76 | 18.37S | 146.27W | ==> | 147.38 | 1727178.42 | 192499.33 |

All data is in Feet unless otherwise stated
 Coordinates are from Slot MD's are from Slot and TVD's are from Slot (Girk 3320 1-12 0.00ft above Mean Sea Level)
 Vertical Section is from 0.00N 0.00E on azimuth 264.290 degrees
 Bottom hole distance is 147.42 Feet on azimuth 262.84 degrees from Wellhead
 Calculation method uses Minimum Curvature method
 Prepared by
 Date Printed: 16-Jul-2013

Sandridge

Location Kansas Installation Comanche County
Field Sec 12 - 33S - 20W Well Girk 3320 1-12

Installation Data

| Name | Latitude | Longitude | Northing | Easting |
|-------------------|------------------------------------|-------------|-----------|------------|
| Comanche County | N87 11 33.20 | W99 26 7.40 | 192852.00 | 1727520.00 |
| Coordinate System | Kansas State Planes, Southern Zone | | | |

Slot Data

| Name | North [ft] | East [ft] | Longitude | Northing | Easting |
|----------------|------------|-----------|--------------|-----------|------------|
| Girk 3320 1-12 | -334.30 N | -195.30 E | N87 11 29.87 | 192517.70 | 1727524.70 |

Elevation Data

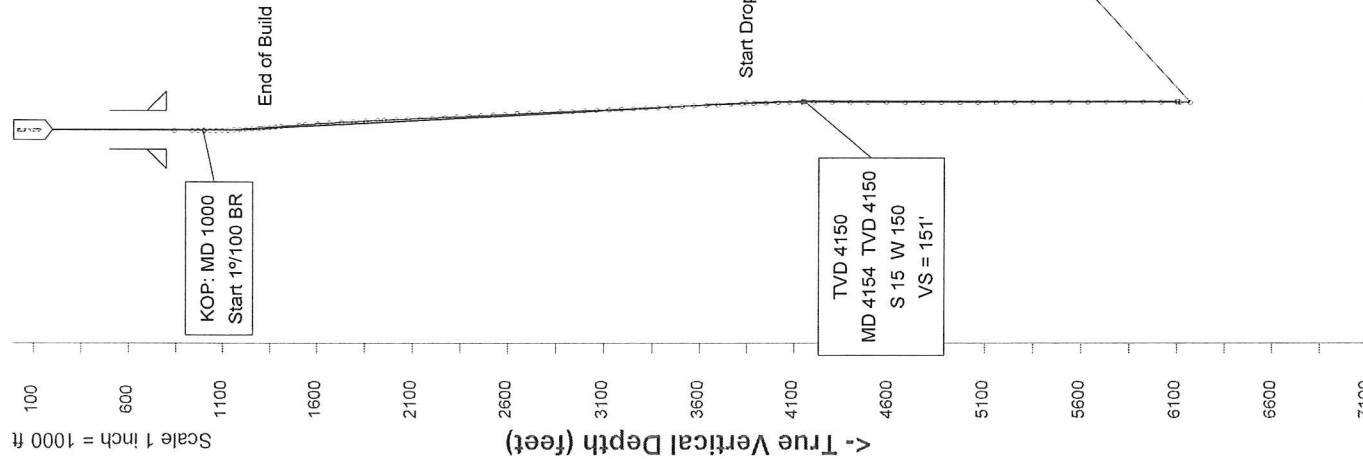
| Slot - Mean Sea Level [ft] | Mean Sea Level - Mudline/Ground level [ft] | Slot - Mudline/Ground level [ft] |
|----------------------------|--------------------------------------------|----------------------------------|
| 0.00 | 0.00 | 0.00 |

WELL PROFILE DATA

| Point | MD | Inc | Azi | TVD | North | East | csg/100ft | V. Sect |
|-------------------------|---------|-------|--------|---------|--------|---------|-----------|---------|
| Tie on | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.00 |
| KOP | 1000.00 | 0.00 | 0.00 | 1000.00 | 0.00 | 0.00 | 0.00 | -0.00 |
| End of Build | 1303.12 | 3.03 | 264.29 | 1302.98 | -0.80 | -7.98 | 1.00 | 8.02 |
| End of Hold | 3850.73 | 3.03 | 264.29 | 3847.02 | -14.20 | -142.02 | 0.00 | 142.73 |
| Target Girk 1-12 TVD 4 | 4153.85 | -0.00 | 0.00 | 4150.00 | -15.00 | -150.00 | 1.00 | 150.75 |
| T.D. & Target Girk 1-12 | 6103.85 | 0.00 | 0.00 | 6100.00 | -15.00 | -150.00 | 0.00 | 150.75 |

TARGET DATA

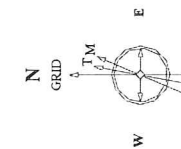
| MD | Inc | Azi | TVD | North | East | Position |
|---------|-------|------|---------|--------|---------|---------------------------------------------------------|
| 4153.85 | -0.00 | 0.00 | 4150.00 | -15.00 | -150.00 | Girk 1-12 TVD 4150 1727174.70 East : 192502.70 North |
| 6103.85 | 0.00 | 0.00 | 6100.00 | -15.00 | -150.00 | Girk 1-12 BHL 1727174.70 East : 192502.70 North |



Scale 1 inch = 1000 ft

Scale 1 inch = 40 ft

Scale 1 inch = 40 ft



9630 Pole Rd.
Oklahoma City, OK 73160
Tel: (405) 604-2969

Created by admin
Date plotted 16-Jul-2013
Plot reference is Girk 3320 1-12 (Plan).
Ref wellpath is Girk 3320 1-12 (PWP#1).
Coordinates are in feet reference Girk 3320 1-12.
True Vertical Depths are reference Girk 3320 1-12.
Measured Depths are reference Slot.
Plot North is aligned to GRID North.

6-Jul-2013
IGRF Model (1990.0,2015.0) Dip: 65.11 deg Field: 41704.0 nT
Magnetic North is 5.34 deg East of True North
GRID North is 0.57 deg West of True North
To correct azimuth from True to GRID add 0.57 deg
To correct azimuth from Magnetic to GRID add 5.92 deg

Scale 1 inch = 1000 ft
-1000 0 500
Vertical Section (feet) ->

Azimuth 264.29 with reference 0.00 N, 0.00 E from Girk 3320 1-12