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ATTACHMENT B
URS SHALE GAS EMISSIONS ANALYSIS



November 28, 2011

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Amy Farrell, Vice President of Regulatory Affairs
America's Natural Gas Alliance (ANGA)
1201 New York Ave. NW Suite 1110
Washington, DC

Gas Well Completions

Dear Sara and Amy,

URS has assembled gas well completion data supplied by seven (7) upstream exploration and production companies in the United States. Each of these companies voluntarily provided data in the past two weeks. URS consolidated, blinded and summarized the data in order to avoid any anti-trust concerns. All supplied data was reviewed and used in this analysis.

This data was provided in response to a request by ANGA for actual current data that could be compared to EPA's assumptions used in the newly proposed "Oil and Natural Gas Air Pollution Standards, Subpart quad O". Some of the key EPA assumptions regarding completions were:

- Amount of flowback venting for fractured unconventional gas wells. (*EPA assumes 7623 Mscf of CH₄/event, or 9175 Mscf of total gas/event*). Note: This emission estimate was originally published in the "Background Technical Support Document, Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry" in support of Subpart W of the EPA's GHG Mandatory Reporting Rule.
- Duration of flowback (*EPA assumes 3-10 days*),
- Percent of completions that are controlled (*EPA assumes 15%*),
- Flaring vs Venting (*EPA assumes 51% venting*).

Treatment of Data

Data was gathered by distributing an empty template spreadsheet formatted to receive completions data, with a separate tab for "green completion" information and a separate tab for ordinary completion (i.e. "non-green completions").



For non-green completions, the following data was gathered on each well completion reported: date of completion, AAPG basin location, type (horizontal or vertical), formation type, whether it was a recompletion or a new well, flowback duration, choke size, casing pressure, and whether the flowback gas was flared. There were ninety-eight (98) well completions in the non-green completion dataset from four unique companies. Only two (2) of those were recompletions, the rest were new wells.

For green completions, the following data was gathered on each well completion reported: date of completion, basin, and flowback duration (time). There were 1076 wells in the green completion dataset from five companies.

The data has been scrubbed of company name, company division, and well name, so that there would be no impression of any conflict of interest nor unintended distribution of confidential business information. The resulting detailed data is attached to this memorandum.

Using EPA's recommended method for calculating emissions from gas well completions (as listed in the proposed September 9, 2011 revisions to Subpart W of the Mandatory GHG Reporting Rule), calculations were added to the data spreadsheet, using Equation W-11B for sonic flow conditions. Sonic flow was a reasonable assumption in since most upstream pressures were very high (see histogram on casing pressures reported).

$$FR = 1.27 * 10^5 * A * \sqrt{187.08 * T_u} \quad (\text{Eq. W-11B})$$

Where:

FR = Average flow rate in cubic feet per hour, under sonic flow conditions.
A = Cross sectional area of orifice (m²).
T_u = Upstream temperature (degrees Kelvin).
187.08 = Constant with units of m²/(sec² * K).
1.27*10⁵ = Conversion from m³/second to ft³/hour.

Some of the conservative assumptions used in the calculations were as follows:

- Equation W-11B measures 100% Gas – The flowback fluid contains a mixture of water, hydrocarbon liquids, and hydrocarbon gas that comes back from the well, and gas flow during a flowback may start and stop. The calculations presented here assume that the flow is all gas, that no water or hydrocarbon liquids exist in this outlet stream.
- Maximum Choke Size – Throughout flowback, operators alter choke sizes depending on the percentage of liquid and vapor, flow rate, and pressure of the stream. For the purposes of this analysis, the data gathered was only for the maximum choke size used while the flowback is making gas. This may overpredict gas flow.
- Maximum Casing Pressure – Casing pressure varies depending on how long the well has been flowing, due to formation pressure changes and production pipe pressure drops. To



be conservative, only the maximum casing pressure found while the flowback is making gas was used. This may overpredict the gas flowrate.

- Temperature – A temperature of 200 °F was assumed for all flowbacks. Equation results are not overly sensitive to temperature.

Summary of Results

For non-green completions, data was summarized by basin, and then the basins were averaged to produce a national average value. As can be seen in the following attached table, the resulting non-green completion flowback rate, using EPA's methodology, was 765 Mscf of gas. This is only a small fraction (8%) of the 9175 Mscf of gas per flowback that EPA had used as a basis for the subpart quad O - Oil and Natural Gas Air Pollution Standards. There was variability among the basins, which had averages ranging from 340 Mscf to 1160 Mscf. However, all of these averages, and in fact the individual company averages, which ranged from 443 to 1455 Mscf, are far below EPA's assumed value.

The percent of wells in the dataset that were green completions was 92% of 2011 well completions. Even among the 8% that were non-green completed, 55% of those were flared (rather than directly vented). This leaves approximately 4% of the well completions in the dataset that were uncontrolled. This is far lower than EPA's assumed value of 85% of the completions that are uncontrolled, with only 15% being green completed. EPA had also assumed 50% were flared.

The average duration of non-green completions in the dataset was 3.5 days (a histogram of duration distribution is shown), and the average duration of a green completion in the dataset was 5.8 days (again, a histogram of duration distribution is shown). EPA had assumed flowback duration of 3-10 days, but the dataset shows the non-green completions to be much shorter. Only the green completions cover the 3-10 day span that EPA had assumed.

Conclusions

While the dataset is limited to seven companies and just under 1200 wells, there is a reasonable representation across many of the unconventional gas development regions that are being developed in the United States. The attachment shows 2 maps of the locations of the wells in this dataset by AAPG basin. A comparative map from the Energy Information Administration of US Shale gas plays demonstrates a good overlap with many of those developing areas.



It appears that the EPA's 9175 Mscf/completion event for unconventional fractured wells is potentially overestimated by 1200%. The ANGA data may not be robust enough to provide a definitive new national flowback emission factor because of its reliance on conservative assumptions and limited regional data. However it is far more current, and certainly collected on a far more consistent and transparent basis than any of the data EPA used to generate its 9175 Mscf. According to the Technical Support Document (TSD) for Subpart W of the EPA's GHG Mandatory Reporting Rule the 9175 Mscf was based upon some presentations by companies at the EPA's voluntary Natural Gas Star program, mostly from a technology transfer session in 2004 (reference http://www.epa.gov/climatechange/emissions/downloads10/Subpart-W_TSD.pdf),. While the Natural Gas Star companies presented data on their completions that were now recovered, this data was never meant to represent emissions from average well completions, was never documented with the quality needed for national inventory numbers, and in fact may represent only the subset of wells where the company had implemented their new practice.

ANGA may now wish to recommend that EPA retract the 9175 Mscf being used in the proposed standard. To provide a new well completions emission estimate, ANGA could recommend that EPA use the still conservatively high estimate of 765 Mscf/completion, based on the new ANGA data. Although ANGA may not wish to recommend the value be used directly as a new national emission factor, it provides a much more representative emissions estimate for use in establishing EPA standards.

Since EPA's proposed New Source Performance Standard for well completions and recompletions is based on a cost effectiveness analysis that was calculated using the Agency's 9175 Mscf estimate, this ANGA data calls into question the economics of requiring green completions and use of reduced-emissions-completion equipment in the newly proposed rules. Therefore ANGA may now also wish to request that EPA reconsider the proposed requirement for green completions equipment.

In addition, ANGA should consider recommending that EPA revise its Subpart W TSD to reflect the new findings. Continued dissemination and reliance upon this older and less consistent information by the agency raises serious quality concerns wherever the data may be used. The current EPA overestimate is frequently cited in studies and reports, leading to inaccurate conclusions about industry emissions and increasing the potential for federal or state governmental agencies to rely upon the inaccurate data in their decision making.



Thank you for the opportunity to provide this technical support.

Kind Regards,

A handwritten signature in black ink that reads "Matt Harrison". The signature is written in a cursive style with a horizontal line under the name.

Matthew R. Harrison, P.E.
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GHG and CC National Practice Leader

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ATTACHMENTS

Table 1: Summary of Compiled Data

| | | |
|---|------------------|-----------|
| % of Wells GC | 92% | |
| % of Non-GC Flared | 55% | |
| | | |
| Average Non-GC Flowback - AAPG Basin #160A | 19 Samples | 1,126 mcf |
| Non-GC Flowback - AAPG Basin #345 | 28 Samples | 1,031 mcf |
| Non-GC Flowback - AAPG Basin #360 | 29 Samples | 386 mcf |
| Non-GC Flowback - AAPG Basin #430 | 5 Samples | 943 mcf |
| Non-GC Flowback - AAPG Basin #535 | 17 Samples | 340 mcf |
| | | |
| Average Flowback of Basins | 765.1 mcf | |
| Average total flowback of all non-GC events | 765.4 mcf | |
| Estimated emissions from well completions with hydraulic fracturing (Table 4-2, EPA TSD) | 9,175 mcf | |
| ***Using Equation W-11B*** | | |

Figure 2: Distribution of Single-Event Flowback Volumes (Non-Green Completions only)

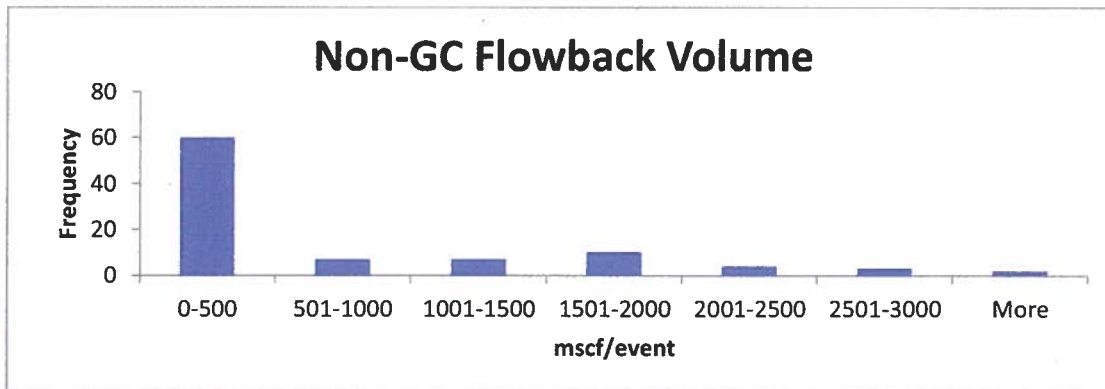


Figure 3: Distribution of Casing Pressures (Non-Green Completions only)

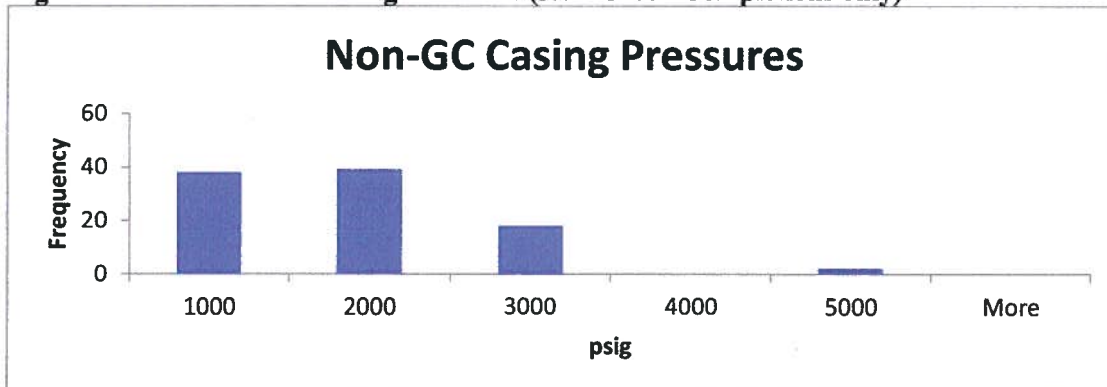


Figure 4: AAPG Basins Represented in Survey Sample (Non-GC Only)

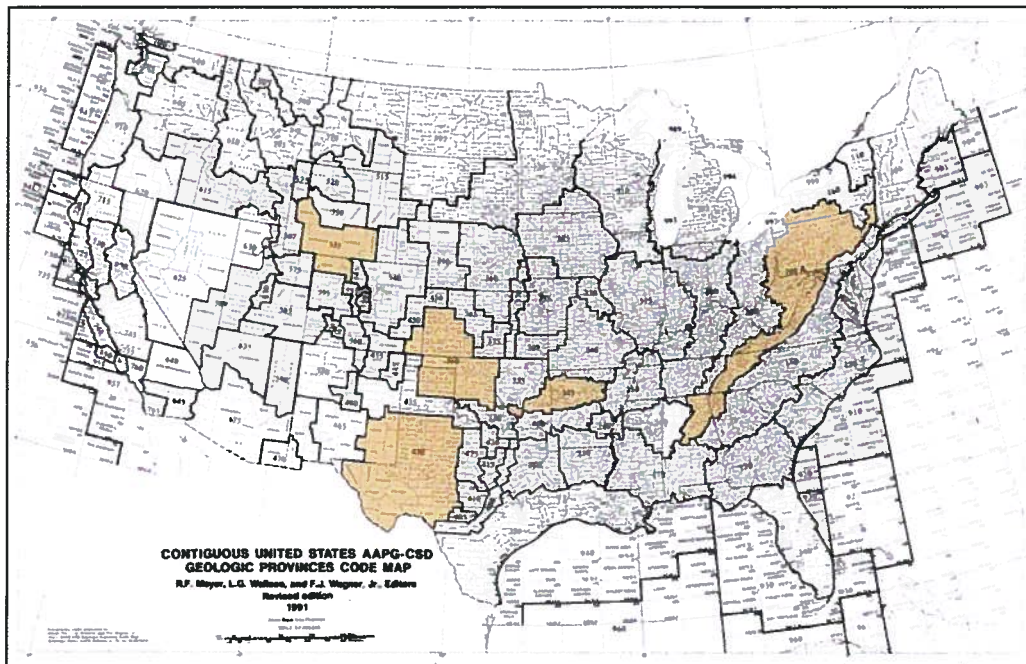
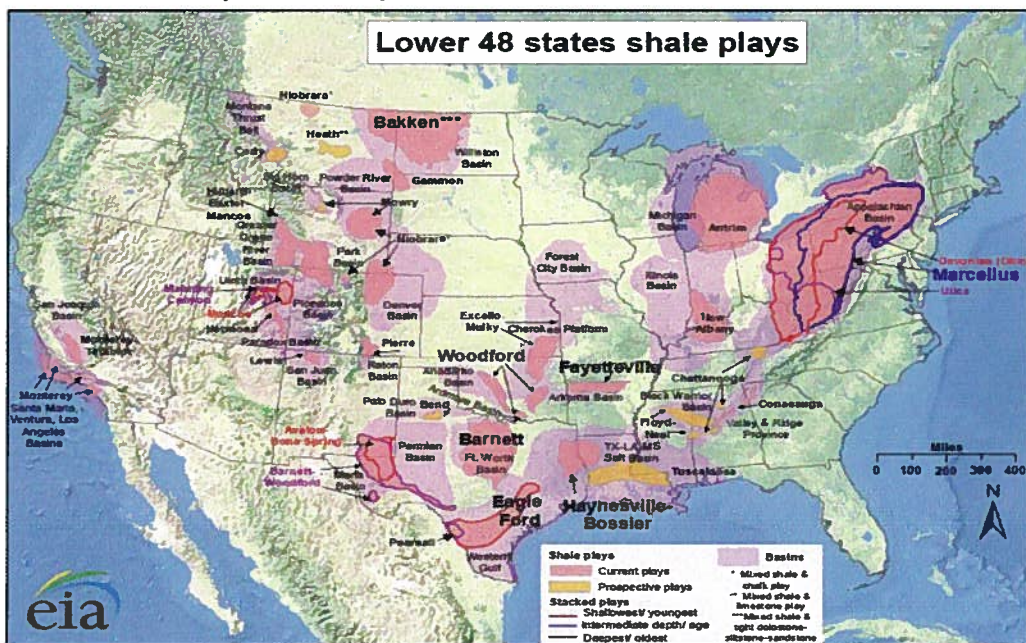


Figure 5: Location of Major Shale Plays in Continental US



Source:
http://www.slb.com/services/industry_challenges/~media/Files/industry_challenges/unconventional_gas/other/shale_plays_lower_48.ashx



Table 6: Survey Data (Non-Green Completions, non-GC)

| Well Number | Date Well Completed | Basin | Type of Well: Tight Sand, CBM, or Shale? | New Completion or Re-Completion? | Type of Frac: H ₂ O, N ₂ , CO ₂ , or Other | Green Completed? (#/Total) (Yes or No) | If No, Flared or Vented? | When Making Gas | | | Flowback (Mscf) | Duration (Days) | AAPG Basin |
|--------------|---------------------|---------------------|--|----------------------------------|---|--|--------------------------|---------------------------|------------------------|-----------------------------|-----------------|-----------------|------------|
| | | | | | | | | Flowback Duration (Hours) | MAX Choke Size (64ths) | MAX Casting Pressure (psig) | | | |
| R1 - Well 1 | 6/1/2011 | Delaware | Shale | New Completion | H2O | No | Flared | 336 | 14 | 4175 | 271 | 14.0 | 430 |
| R1 - Well 2 | 2/23/2011 | Delaware | Shale | New Completion | H2O | No | Flared | 120 | 14 | 4200 | 97 | 5.0 | 430 |
| R1 - Well 3 | 6/28/2011 | Delaware | Shale | New Completion | H2O | No | Flared | 257 | 46 | 500 | 2,236 | 30.7 | 430 |
| R1 - Well 4 | 7/26/2011 | Delaware | Shale | New Completion | H2O | No | Flared | 758 | 24 | 1900 | 1,795 | 31.6 | 430 |
| R1 - Well 5 | 5/4/2011 | Delaware | Shale | New Completion | H2O | No | Flared | 192 | 20 | 1900 | 316 | 8.0 | 430 |
| R1 - Well 6 | 2/4/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 144 | 24 | 1100 | 341 | 6.0 | 535 |
| R1 - Well 7 | 2/15/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 216 | 24 | 1500 | 511 | 9.0 | 535 |
| R1 - Well 8 | 2/16/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 48 | 18 | 2300 | 64 | 2.0 | 535 |
| R1 - Well 9 | 2/24/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 96 | 18 | 1900 | 128 | 4.0 | 535 |
| R1 - Well 10 | 6/7/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 192 | 22 | 1100 | 382 | 8.0 | 535 |
| R1 - Well 11 | 6/8/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 48 | 24 | 1650 | 114 | 2.0 | 535 |
| R1 - Well 12 | 6/9/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 120 | 20 | 1300 | 197 | 5.0 | 535 |
| R1 - Well 13 | 7/28/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 96 | 22 | 2200 | 191 | 4.0 | 535 |
| R1 - Well 14 | 7/29/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 72 | 20 | 1450 | 118 | 3.0 | 535 |
| R1 - Well 15 | 8/2/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 144 | 64 | 1250 | 2,425 | 6.0 | 535 |
| R1 - Well 16 | 8/27/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 72 | 22 | 1350 | 143 | 3.0 | 535 |
| R1 - Well 17 | 8/28/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 120 | 22 | 1625 | 239 | 5.0 | 535 |
| R1 - Well 18 | 8/28/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 96 | 22 | 1550 | 191 | 4.0 | 535 |
| R1 - Well 19 | 8/30/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 96 | 24 | 1600 | 227 | 4.0 | 535 |
| R1 - Well 20 | 8/31/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 96 | 20 | 700 | 158 | 4.0 | 535 |
| R1 - Well 21 | 8/31/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 96 | 20 | 1080 | 158 | 4.0 | 535 |
| R1 - Well 22 | 8/31/2011 | Eastern Green River | Tight Sand | New Completion | H2O | No | Flared | 120 | 20 | 900 | 197 | 5.0 | 535 |
| R1 - Well 23 | 5/27/2011 | MidCon - Cana | Shale | New Completion | H2O | No | Flared | 59 | 32 | 2900 | 248 | 2.5 | 360 |
| R1 - Well 24 | 5/18/2011 | MidCon - Cana | Shale | New Completion | H2O | No | Flared | 184 | 20 | 2400 | 303 | 7.7 | 360 |
| R1 - Well 25 | 5/27/2011 | MidCon - Cana | Shale | New Completion | H2O | No | Flared | 36 | 20 | 4500 | 59 | 1.5 | 360 |
| R1 - Well 26 | 6/14/2011 | MidCon - Cana | Shale | New Completion | H2O | No | Flared | 48 | 22 | 2000 | 96 | 2.0 | 360 |
| R1 - Well 27 | 1/14/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 15 | 24 | 0 | 36 | 0.6 | 360 |
| R1 - Well 28 | 2/4/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 118 | 24 | 0 | 279 | 4.9 | 360 |
| R1 - Well 29 | 2/23/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 15 | 48 | 1350 | 142 | 0.6 | 360 |
| R1 - Well 30 | 3/3/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 73 | 48 | 2025 | 693 | 3.0 | 360 |
| R1 - Well 31 | 3/4/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 24 | 48 | 1020 | 227 | 1.0 | 360 |
| R1 - Well 32 | 3/22/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 99 | 48 | 1750 | 938 | 4.1 | 360 |
| R1 - Well 33 | 4/8/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 14 | 48 | 1380 | 133 | 0.6 | 360 |
| R1 - Well 34 | 4/14/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 11 | 48 | 1350 | 104 | 0.5 | 360 |
| R1 - Well 35 | 4/29/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 32 | 48 | 2400 | 909 | 1.3 | 360 |
| R1 - Well 36 | 5/13/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Flared | 45 | 48 | 2750 | 426 | 1.9 | 360 |
| R1 - Well 37 | 5/14/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 58 | 24 | 0 | 137 | 2.4 | 360 |
| R1 - Well 38 | 5/24/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Flared | 79 | 48 | 2450 | 748 | 3.3 | 360 |
| R1 - Well 39 | 6/2/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 23 | 24 | 0 | 54 | 1.0 | 360 |
| R1 - Well 40 | 6/29/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 109 | 48 | 950 | 1,032 | 4.5 | 360 |
| R1 - Well 41 | 7/1/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 31 | 48 | 650 | 294 | 1.3 | 360 |
| R1 - Well 42 | 7/4/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 52 | 48 | 700 | 493 | 2.2 | 360 |
| R1 - Well 43 | 7/6/2011 | Granite Wash | Tight Sand | Recompletion | H2O | No | Vented | 52 | 24 | 1550 | 123 | 2.2 | 360 |
| R1 - Well 44 | 7/11/2011 | Granite Wash | Tight Sand | Recompletion | H2O | No | Vented | 35 | 24 | 0 | 83 | 1.5 | 360 |
| R1 - Well 45 | 7/28/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 169 | 64 | 490 | 2,846 | 7.0 | 360 |
| R1 - Well 46 | 8/2/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 53 | 40 | 950 | 349 | 2.2 | 360 |
| R1 - Well 47 | 8/5/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 24 | 48 | 2100 | 277 | 1.0 | 360 |
| R1 - Well 48 | 8/13/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 3 | 48 | 1850 | 28 | 0.1 | 360 |
| R1 - Well 49 | 8/19/2011 | Granite Wash | Tight Sand | New Completion | H2O | No | Vented | 85 | 48 | 850 | 805 | 3.5 | 360 |



Table 6: Survey Data (cont.)

| Well Number | Date Well Completed | Basin | Type of Well: Tight Sand, CBM, or Shale? | New Completion or Re-Completion? | Type of Frac: H ₂ O, N ₂ , CO ₂ , or Other | Green Completed? (# of Wells) (Yes or No) | If No, Flared or Vented? | When Making Gas | | | Flowback (Mscf) | Duration (Days) | AAPG Basin |
|--------------|---------------------|-----------|--|----------------------------------|---|---|--------------------------|---------------------------|------------------------|----------------------------|-----------------|-----------------|------------|
| | | | | | | | | Flowback Duration (Hours) | MAX Choke Size (64ths) | MAX Casing Pressure (psig) | | | |
| R2 - Well 1 | 6/2/2011 | 160A | Shale | New Completion | H2O | | Flared | 49 | 48 | 1675 | 464 | 2.0 | 160A |
| R2 - Well 2 | 6/2/2011 | 160A | Shale | New Completion | H2O | | Flared | 75 | 48 | 1460 | 710 | 3.1 | 160A |
| R2 - Well 3 | 6/2/2011 | 160A | Shale | New Completion | H2O | | Flared | 97 | 48 | 1360 | 919 | 4.0 | 160A |
| R2 - Well 4 | 1/5/2011 | 345 | Shale | New Completion | H2O | | Flared | 114 | 48 | 1500 | 1,080 | 4.8 | 345 |
| R2 - Well 5 | 1/15/2011 | 345 | Shale | New Completion | H2O | | Flared | 70 | 128 | 840 | 4,715 | 2.9 | 345 |
| R2 - Well 6 | 2/12/2011 | 345 | Shale | New Completion | H2O | | Flared | 81 | 64 | 740 | 1,364 | 3.4 | 345 |
| R2 - Well 7 | 2/18/2011 | 345 | Shale | New Completion | H2O | | Flared | 64 | 64 | 520 | 1,078 | 2.7 | 345 |
| R2 - Well 8 | 3/4/2011 | 345 | Shale | New Completion | H2O | | Flared | 0 | 0 | 0 | 0 | 0.0 | 345 |
| R2 - Well 9 | 3/11/2011 | 345 | Shale | New Completion | H2O | | Flared | 138 | 48 | 480 | 1,307 | 5.8 | 345 |
| R2 - Well 10 | 3/17/2011 | 345 | Shale | New Completion | H2O | | Flared | 0 | 0 | 0 | 0 | 0.0 | 345 |
| R2 - Well 11 | 1/31/2011 | 360 | | New Completion | N2 | | Vented | 0 | 0 | 0 | 0 | 0.0 | 360 |
| R2 - Well 12 | 6/17/2011 | 360 | Tight Sand | New Completion | H2O | | Vented | 0 | 0 | 0 | 0 | 0.0 | 360 |
| R3 - Well 1 | 1/21/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 20 | 32 | 1642 | 84 | 0.8 | 160A |
| R3 - Well 2 | 1/24/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 10 | 34 | 2450 | 48 | 0.4 | 160A |
| R3 - Well 3 | 3/26/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 13 | 30 | 2275 | 48 | 0.5 | 160A |
| R3 - Well 4 | 3/26/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 25 | 32 | 2500 | 105 | 1.0 | 160A |
| R3 - Well 5 | 6/1/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 301 | 48 | 2853 | 2,851 | 12.5 | 160A |
| R3 - Well 6 | 6/1/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 198 | 48 | 2239 | 3,875 | 8.3 | 160A |
| R3 - Well 7 | 6/1/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 262 | 48 | 2097 | 2,482 | 10.9 | 160A |
| R3 - Well 8 | 6/1/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 291 | 64 | 2100 | 4,900 | 12.1 | 160A |
| R3 - Well 9 | 6/1/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 271 | 48 | 1593 | 2,567 | 11.3 | 160A |
| R3 - Well 10 | 6/1/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 172 | 48 | 2106 | 1,629 | 7.2 | 160A |
| R3 - Well 11 | 7/23/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 152 | 48 | 925 | 1,440 | 6.3 | 160A |
| R3 - Well 12 | 8/9/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 70 | 24 | 2332 | 166 | 2.9 | 160A |
| R3 - Well 13 | 8/26/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 39 | 48 | 1900 | 369 | 1.6 | 160A |
| R3 - Well 14 | 5/18/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 15 | 48 | 1581 | 142 | 0.6 | 160A |
| R3 - Well 15 | 8/3/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 38 | 48 | 268 | 360 | 1.6 | 160A |
| R3 - Well 16 | 8/27/2011 | Marcellus | Shale | New Completion | H2O | | Flared | 24 | 48 | 1266 | 227 | 1.0 | 160A |
| R4 - Well 1 | 1/4/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 980 | 404 | 1.0 | 345 |
| R4 - Well 2 | 1/7/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 920 | 1,617 | 1.0 | 345 |
| R4 - Well 3 | 1/13/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 570 | 1,617 | 1.0 | 345 |
| R4 - Well 4 | 1/17/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 491 | 1,617 | 1.0 | 345 |
| R4 - Well 5 | 1/26/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 925 | 404 | 1.0 | 345 |
| R4 - Well 6 | 1/29/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 23.94 | 64 | 950 | 403 | 1.0 | 345 |
| R4 - Well 7 | 2/1/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 1000 | 1,617 | 1.0 | 345 |
| R4 - Well 8 | 2/9/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 1000 | 404 | 1.0 | 345 |
| R4 - Well 9 | 3/8/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 1124 | 1,617 | 1.0 | 345 |
| R4 - Well 10 | 3/11/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 950 | 1,617 | 1.0 | 345 |
| R4 - Well 11 | 3/14/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 660 | 404 | 1.0 | 345 |
| R4 - Well 12 | 4/1/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 128 | 580 | 1,617 | 1.0 | 345 |
| R4 - Well 13 | 4/4/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 32 | 128 | 500 | 2,155 | 1.3 | 345 |
| R4 - Well 14 | 4/12/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 72 | 64 | 1200 | 1,212 | 3.0 | 345 |
| R4 - Well 15 | 4/18/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 1475 | 404 | 1.0 | 345 |
| R4 - Well 16 | 4/23/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 1200 | 404 | 1.0 | 345 |
| R4 - Well 17 | 4/26/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 35 | 1050 | 121 | 1.0 | 345 |
| R4 - Well 18 | 5/19/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 26 | 64 | 1075 | 438 | 1.1 | 345 |
| R4 - Well 19 | 5/22/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 23.8 | 64 | 590 | 401 | 1.0 | 345 |
| R4 - Well 20 | 5/26/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 24 | 64 | 1008 | 404 | 1.0 | 345 |
| R4 - Well 21 | 5/29/2011 | Woodford | Shale | New Completion | H2O | N | Vented | 26 | 64 | 985 | 438 | 1.1 | 345 |



Table 7: Survey Data (Green Completions GC)

| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|----------------|---------------------|---------------------|---------------------------|---------------|
| GCR1 - Well 1 | 2/7/11 | East Texas | 433 | 18.0 |
| GCR1 - Well 2 | 5/25/11 | East Texas | 400 | 16.7 |
| GCR1 - Well 3 | 1/11/11 | East Texas | 422 | 17.6 |
| GCR1 - Well 4 | 5/26/11 | East Texas | 474 | 19.8 |
| GCR1 - Well 5 | 3/18/11 | East Texas | 746 | 31.1 |
| GCR1 - Well 6 | 1/3/11 | East Texas | 634 | 26.4 |
| GCR1 - Well 7 | 1/9/11 | East Texas | 108 | 4.5 |
| GCR1 - Well 8 | 4/16/11 | East Texas | 336 | 14.0 |
| GCR1 - Well 9 | 1/9/11 | East Texas | 120 | 5.0 |
| GCR1 - Well 10 | 4/5/11 | East Texas | 276 | 11.5 |
| GCR1 - Well 11 | 3/20/11 | East Texas | 360 | 15.0 |
| GCR1 - Well 12 | 3/19/11 | East Texas | 324 | 13.5 |
| GCR1 - Well 13 | 6/8/11 | East Texas | 264 | 11.0 |
| GCR1 - Well 14 | 2/6/11 | East Texas | 288 | 12.0 |
| GCR1 - Well 15 | 8/5/11 | East Texas | 420 | 17.5 |
| GCR1 - Well 16 | 8/31/11 | East Texas | 156 | 6.5 |
| GCR1 - Well 17 | 8/6/11 | East Texas | 492 | 20.5 |
| GCR1 - Well 18 | 6/1/11 | East Texas | 288 | 12.0 |
| GCR1 - Well 19 | 4/10/11 | East Texas | 540 | 22.5 |
| GCR1 - Well 20 | 3/22/11 | East Texas | 370 | 15.4 |
| GCR1 - Well 21 | 7/1/11 | East Texas | 216 | 9.0 |
| GCR1 - Well 22 | 2/25/11 | East Texas | 490 | 20.4 |
| GCR1 - Well 23 | 2/4/11 | Eastern Green River | 96 | 4.0 |
| GCR1 - Well 24 | 2/15/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 25 | 2/15/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 26 | 2/16/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 27 | 2/17/11 | Eastern Green River | 96 | 4.0 |
| GCR1 - Well 28 | 2/25/11 | Eastern Green River | 96 | 4.0 |
| GCR1 - Well 29 | 2/25/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 30 | 6/7/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 31 | 6/8/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 32 | 6/8/11 | Eastern Green River | 48 | 2.0 |
| GCR1 - Well 33 | 6/9/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 34 | 6/22/11 | Eastern Green River | 48 | 2.0 |
| GCR1 - Well 35 | 6/22/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 36 | 6/22/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 37 | 6/23/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 38 | 6/23/11 | Eastern Green River | 72 | 3.0 |
| GCR1 - Well 39 | 7/28/11 | Eastern Green River | 120 | 5.0 |
| GCR1 - Well 40 | 7/29/11 | Eastern Green River | 96 | 4.0 |
| GCR1 - Well 41 | 1/4/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 42 | 1/10/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 43 | 1/10/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 44 | 1/10/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 45 | 1/12/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 46 | 1/13/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 47 | 1/17/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 48 | 1/18/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 49 | 1/21/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 50 | 1/21/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 51 | 1/24/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 52 | 1/24/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 53 | 1/25/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 54 | 1/26/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 55 | 1/26/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 56 | 1/26/11 | Fort Worth Basin | 24 | 1.0 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|------------------|---------------------------|---------------|
| GCR1 - Well 57 | 1/26/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 58 | 1/26/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 59 | 1/27/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 60 | 1/28/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 61 | 1/28/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 62 | 2/7/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 63 | 2/7/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 64 | 2/9/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 65 | 2/12/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 66 | 2/12/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 67 | 2/12/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 68 | 2/13/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 69 | 2/15/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 70 | 2/16/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 71 | 2/16/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 72 | 2/17/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 73 | 2/18/11 | Fort Worth Basin | 672 | 28.0 |
| GCR1 - Well 74 | 2/18/11 | Fort Worth Basin | 672 | 28.0 |
| GCR1 - Well 75 | 2/25/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 76 | 3/18/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 77 | 3/18/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 78 | 3/26/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 79 | 3/26/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 80 | 3/26/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 81 | 3/28/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 82 | 4/1/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 83 | 4/2/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 84 | 4/3/11 | Fort Worth Basin | 240 | 10.0 |
| GCR1 - Well 85 | 4/3/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 86 | 4/4/11 | Fort Worth Basin | 240 | 10.0 |
| GCR1 - Well 87 | 4/6/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 88 | 4/9/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 89 | 4/10/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 90 | 4/11/11 | Fort Worth Basin | 336 | 14.0 |
| GCR1 - Well 91 | 4/11/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 92 | 4/13/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 93 | 4/26/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 94 | 4/26/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 95 | 4/29/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 96 | 5/1/11 | Fort Worth Basin | 744 | 31.0 |
| GCR1 - Well 97 | 5/2/11 | Fort Worth Basin | 552 | 23.0 |
| GCR1 - Well 98 | 5/3/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 99 | 5/3/11 | Fort Worth Basin | 696 | 29.0 |
| GCR1 - Well 100 | 5/15/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 101 | 5/21/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 102 | 5/26/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 103 | 5/26/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 104 | 5/27/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 105 | 5/28/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 106 | 5/28/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 107 | 5/31/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 108 | 5/31/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 109 | 6/2/11 | Fort Worth Basin | 288 | 12.0 |
| GCR1 - Well 110 | 6/2/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 111 | 6/9/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 112 | 6/18/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 113 | 6/18/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 114 | 6/23/11 | Fort Worth Basin | 96 | 4.0 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|------------------|---------------------------|---------------|
| GCR1 - Well 115 | 6/23/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 116 | 6/24/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 117 | 6/25/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 118 | 6/28/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 119 | 7/11/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 120 | 7/19/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 121 | 8/1/11 | Fort Worth Basin | 240 | 10.0 |
| GCR1 - Well 122 | 8/1/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 123 | 8/1/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 124 | 8/1/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 125 | 8/1/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 126 | 8/2/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 127 | 8/9/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 128 | 8/15/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 129 | 8/17/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 130 | 8/19/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 131 | 8/19/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 132 | 8/23/11 | Fort Worth Basin | 384 | 16.0 |
| GCR1 - Well 133 | 8/23/11 | Fort Worth Basin | 360 | 15.0 |
| GCR1 - Well 134 | 8/23/11 | Fort Worth Basin | 384 | 16.0 |
| GCR1 - Well 135 | 1/12/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 136 | 1/12/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 137 | 1/13/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 138 | 1/14/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 139 | 1/17/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 140 | 1/18/11 | Fort Worth Basin | 336 | 14.0 |
| GCR1 - Well 141 | 1/18/11 | Fort Worth Basin | 336 | 14.0 |
| GCR1 - Well 142 | 1/18/11 | Fort Worth Basin | 576 | 24.0 |
| GCR1 - Well 143 | 1/20/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 144 | 1/21/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 145 | 1/25/11 | Fort Worth Basin | 408 | 17.0 |
| GCR1 - Well 146 | 1/26/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 147 | 1/26/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 148 | 1/27/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 149 | 1/27/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 150 | 2/6/11 | Fort Worth Basin | 288 | 12.0 |
| GCR1 - Well 151 | 2/8/11 | Fort Worth Basin | 600 | 25.0 |
| GCR1 - Well 152 | 2/8/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 153 | 2/9/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 154 | 2/9/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 155 | 2/12/11 | Fort Worth Basin | 240 | 10.0 |
| GCR1 - Well 156 | 2/12/11 | Fort Worth Basin | 432 | 18.0 |
| GCR1 - Well 157 | 2/14/11 | Fort Worth Basin | 360 | 15.0 |
| GCR1 - Well 158 | 2/15/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 159 | 2/16/11 | Fort Worth Basin | 312 | 13.0 |
| GCR1 - Well 160 | 2/17/11 | Fort Worth Basin | 288 | 12.0 |
| GCR1 - Well 161 | 2/19/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 162 | 2/23/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 163 | 3/12/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 164 | 3/21/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 165 | 3/22/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 166 | 3/23/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 167 | 3/23/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 168 | 3/23/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 169 | 3/24/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 170 | 3/25/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 171 | 3/26/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 172 | 3/27/11 | Fort Worth Basin | 72 | 3.0 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|------------------|---------------------------|---------------|
| GCR1 - Well 173 | 3/28/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 174 | 4/5/11 | Fort Worth Basin | 240 | 10.0 |
| GCR1 - Well 175 | 4/12/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 176 | 4/14/11 | Fort Worth Basin | 360 | 15.0 |
| GCR1 - Well 177 | 4/15/11 | Fort Worth Basin | 312 | 13.0 |
| GCR1 - Well 178 | 4/16/11 | Fort Worth Basin | 312 | 13.0 |
| GCR1 - Well 179 | 4/17/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 180 | 4/17/11 | Fort Worth Basin | 360 | 15.0 |
| GCR1 - Well 181 | 4/18/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 182 | 4/18/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 183 | 4/18/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 184 | 4/19/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 185 | 4/19/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 186 | 4/19/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 187 | 4/20/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 188 | 4/22/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 189 | 4/23/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 190 | 4/26/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 191 | 4/29/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 192 | 4/30/11 | Fort Worth Basin | 24 | 1.0 |
| GCR1 - Well 193 | 4/30/11 | Fort Worth Basin | 384 | 16.0 |
| GCR1 - Well 194 | 5/2/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 195 | 5/8/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 196 | 5/10/11 | Fort Worth Basin | 312 | 13.0 |
| GCR1 - Well 197 | 5/10/11 | Fort Worth Basin | 312 | 13.0 |
| GCR1 - Well 198 | 5/11/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 199 | 5/11/11 | Fort Worth Basin | 288 | 12.0 |
| GCR1 - Well 200 | 5/12/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 201 | 5/12/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 202 | 5/12/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 203 | 5/13/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 204 | 5/13/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 205 | 5/16/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 206 | 5/17/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 207 | 5/18/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 208 | 5/23/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 209 | 5/24/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 210 | 6/3/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 211 | 6/3/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 212 | 6/6/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 213 | 6/9/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 214 | 6/14/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 215 | 6/14/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 216 | 6/14/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 217 | 6/15/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 218 | 6/20/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 219 | 6/20/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 220 | 6/21/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 221 | 6/27/11 | Fort Worth Basin | 120 | 5.0 |
| GCR1 - Well 222 | 6/28/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 223 | 6/30/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 224 | 7/1/11 | Fort Worth Basin | 264 | 11.0 |
| GCR1 - Well 225 | 7/26/11 | Fort Worth Basin | 192 | 8.0 |
| GCR1 - Well 226 | 7/27/11 | Fort Worth Basin | 384 | 16.0 |
| GCR1 - Well 227 | 7/27/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 228 | 7/27/11 | Fort Worth Basin | 288 | 12.0 |
| GCR1 - Well 229 | 7/27/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 230 | 7/29/11 | Fort Worth Basin | 144 | 6.0 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|------------------|---------------------------|---------------|
| GCR1 - Well 231 | 8/9/11 | Fort Worth Basin | 72 | 3.0 |
| GCR1 - Well 232 | 8/9/11 | Fort Worth Basin | 168 | 7.0 |
| GCR1 - Well 233 | 8/9/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 234 | 8/10/11 | Fort Worth Basin | 312 | 13.0 |
| GCR1 - Well 235 | 8/15/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 236 | 8/18/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 237 | 8/21/11 | Fort Worth Basin | 216 | 9.0 |
| GCR1 - Well 238 | 8/22/11 | Fort Worth Basin | 48 | 2.0 |
| GCR1 - Well 239 | 8/22/11 | Fort Worth Basin | 144 | 6.0 |
| GCR1 - Well 240 | 8/25/11 | Fort Worth Basin | 96 | 4.0 |
| GCR1 - Well 241 | 1/16/11 | Groesbeck | 192 | 8.0 |
| GCR1 - Well 242 | 2/23/11 | Groesbeck | 54 | 2.3 |
| GCR1 - Well 243 | 4/19/11 | Groesbeck | 364 | 15.2 |
| GCR1 - Well 244 | 1/21/11 | Groesbeck | 72 | 3.0 |
| GCR1 - Well 245 | 7/13/11 | Groesbeck | 325 | 13.5 |
| GCR1 - Well 246 | 7/14/11 | Groesbeck | 463 | 19.3 |
| GCR1 - Well 247 | 3/18/11 | Groesbeck | 355 | 14.8 |
| GCR1 - Well 248 | 4/12/11 | North LA | 294 | 12.3 |
| GCR1 - Well 249 | 7/8/11 | North LA | 474 | 19.8 |
| GCR1 - Well 250 | 2/21/11 | South Texas | 377 | 15.7 |
| GCR1 - Well 251 | 7/21/11 | South Texas | 232 | 9.7 |
| GCR1 - Well 252 | 3/11/11 | South Texas | 3 | 0.1 |
| GCR1 - Well 253 | 4/5/11 | South Texas | 130 | 5.4 |
| GCR1 - Well 254 | 8/17/11 | South Texas | 196 | 8.2 |
| GCR1 - Well 255 | 8/9/11 | STX - Eagleford | 344 | 14.3 |
| GCR1 - Well 256 | 8/9/11 | STX - Eagleford | 330 | 13.8 |
| GCR2 - Well 8 | 2/22/2011 | 345 | 136 | 5.7 |
| GCR2 - Well 9 | 6/1/2011 | 360 | | |
| GCR2 - Well 10 | 6/20/2011 | 360 | | |
| GCR2 - Well 11 | 4/6/2011 | 360 | | |
| GCR2 - Well 12 | 8/31/2011 | 415 | | |
| GCR2 - Well 13 | 6/1/2011 | 360 | | |
| GCR2 - Well 14 | 6/9/2011 | 360 | | |
| GCR2 - Well 15 | 8/11/2011 | 415 | | |
| GCR2 - Well 16 | 8/30/2011 | 415 | | |
| GCR2 - Well 17 | 6/9/2011 | 360 | | |
| GCR2 - Well 18 | 3/31/2011 | 360 | | |
| GCR2 - Well 19 | 6/8/2011 | 360 | | |
| GCR2 - Well 20 | 1/8/2011 | 415 | | |
| GCR2 - Well 21 | 6/22/2011 | 415 | | |
| GCR2 - Well 22 | 6/7/2011 | 220 | | |
| GCR2 - Well 23 | 3/19/2011 | 360 | | |
| GCR2 - Well 24 | 5/2/2011 | 360 | | |
| GCR2 - Well 25 | 1/30/2011 | 415 | | |
| GCR2 - Well 26 | 5/28/2011 | 220 | | |
| GCR2 - Well 27 | 6/27/2011 | 415 | | |
| GCR2 - Well 28 | 3/21/2011 | 415 | | |
| GCR2 - Well 29 | 7/13/2011 | 220 | | |
| GCR2 - Well 30 | 1/29/2011 | 345 | | |
| GCR2 - Well 31 | 3/22/2011 | 360 | | |
| GCR2 - Well 32 | 6/29/2011 | 160A | | |
| GCR2 - Well 33 | 4/15/2011 | 360 | | |
| GCR2 - Well 34 | 1/3/2011 | 360 | | |
| GCR2 - Well 35 | 3/30/2011 | 345 | | |
| GCR2 - Well 36 | 3/13/2011 | 415 | | |
| GCR2 - Well 37 | 5/1/2011 | 360 | | |
| GCR2 - Well 38 | 7/5/2011 | 360 | | |
| GCR2 - Well 39 | 7/13/2011 | 220 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 40 | 7/13/2011 | 360 | | |
| GCR2 - Well 41 | 4/4/2011 | 360 | | |
| GCR2 - Well 42 | 2/12/2011 | 345 | | |
| GCR2 - Well 43 | 8/15/2011 | 360 | | |
| GCR2 - Well 44 | 1/5/2011 | 360 | | |
| GCR2 - Well 45 | 7/19/2011 | 415 | | |
| GCR2 - Well 46 | 2/9/2011 | 260 | | |
| GCR2 - Well 47 | 2/11/2011 | 345 | | |
| GCR2 - Well 48 | 3/15/2011 | 345 | | |
| GCR2 - Well 49 | 6/6/2011 | 220 | | |
| GCR2 - Well 50 | 3/28/2011 | 360 | | |
| GCR2 - Well 51 | 7/1/2011 | 220 | | |
| GCR2 - Well 52 | 5/10/2011 | 415 | | |
| GCR2 - Well 53 | 6/2/2011 | 360 | | |
| GCR2 - Well 54 | 2/24/2011 | 360 | | |
| GCR2 - Well 55 | 3/17/2011 | 360 | | |
| GCR2 - Well 56 | 1/28/2011 | 360 | | |
| GCR2 - Well 57 | 5/17/2011 | 360 | | |
| GCR2 - Well 58 | 2/26/2011 | 360 | | |
| GCR2 - Well 59 | 5/22/2011 | 420 | | |
| GCR2 - Well 60 | 8/15/2011 | 360 | | |
| GCR2 - Well 61 | 1/28/2011 | 345 | | |
| GCR2 - Well 62 | 7/11/2011 | 220 | | |
| GCR2 - Well 63 | 3/13/2011 | 345 | | |
| GCR2 - Well 64 | 2/23/2011 | 360 | | |
| GCR2 - Well 65 | 7/20/2011 | 415 | | |
| GCR2 - Well 66 | 8/29/2011 | 415 | | |
| GCR2 - Well 67 | 6/14/2011 | 230 | | |
| GCR2 - Well 68 | 6/15/2011 | 220 | | |
| GCR2 - Well 69 | 2/21/2011 | 360 | | |
| GCR2 - Well 70 | 1/8/2011 | 415 | | |
| GCR2 - Well 71 | 8/12/2011 | 415 | | |
| GCR2 - Well 72 | 2/27/2011 | 360 | | |
| GCR2 - Well 73 | 8/24/2011 | 415 | 166 | 6.9 |
| GCR2 - Well 74 | 4/7/2011 | 415 | | |
| GCR2 - Well 75 | 7/21/2011 | 415 | | |
| GCR2 - Well 76 | 7/1/2011 | 220 | | |
| GCR2 - Well 77 | 3/19/2011 | 220 | | |
| GCR2 - Well 78 | 5/16/2011 | 415 | | |
| GCR2 - Well 79 | 3/25/2011 | 415 | | |
| GCR2 - Well 80 | 3/24/2011 | 415 | | |
| GCR2 - Well 81 | 2/23/2011 | 360 | | |
| GCR2 - Well 82 | 6/20/2011 | 360 | | |
| GCR2 - Well 83 | 4/15/2011 | 220 | | |
| GCR2 - Well 84 | 5/8/2011 | 415 | | |
| GCR2 - Well 85 | 8/28/2011 | 415 | | |
| GCR2 - Well 86 | 5/2/2011 | 360 | | |
| GCR2 - Well 87 | 1/8/2011 | 360 | | |
| GCR2 - Well 88 | 3/14/2011 | 415 | | |
| GCR2 - Well 89 | 7/6/2011 | 415 | | |
| GCR2 - Well 90 | 6/29/2011 | 415 | | |
| GCR2 - Well 91 | 3/4/2011 | 415 | | |
| GCR2 - Well 92 | 3/12/2011 | 415 | | |
| GCR2 - Well 93 | 4/6/2011 | 415 | | |
| GCR2 - Well 94 | 3/10/2011 | 360 | | |
| GCR2 - Well 95 | 8/1/2011 | 415 | | |
| GCR2 - Well 96 | 4/3/2011 | 415 | | |
| GCR2 - Well 97 | 7/22/2011 | 360 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 98 | 6/29/2011 | 360 | | |
| GCR2 - Well 99 | 1/30/2011 | 415 | | |
| GCR2 - Well 100 | 5/22/2011 | 400 | | |
| GCR2 - Well 101 | 7/6/2011 | 415 | | |
| GCR2 - Well 102 | 6/6/2011 | 220 | | |
| GCR2 - Well 103 | 4/17/2011 | 415 | | |
| GCR2 - Well 104 | 4/8/2011 | 360 | | |
| GCR2 - Well 105 | 4/23/2011 | 415 | | |
| GCR2 - Well 106 | 4/23/2011 | 415 | | |
| GCR2 - Well 107 | 3/20/2011 | 415 | | |
| GCR2 - Well 108 | 6/15/2011 | 415 | | |
| GCR2 - Well 109 | 1/7/2011 | 415 | | |
| GCR2 - Well 110 | 2/1/2011 | 415 | | |
| GCR2 - Well 111 | 4/29/2011 | 360 | | |
| GCR2 - Well 112 | 4/17/2011 | 415 | | |
| GCR2 - Well 113 | 4/28/2011 | 415 | | |
| GCR2 - Well 114 | 6/26/2011 | 415 | | |
| GCR2 - Well 115 | 1/2/2011 | 415 | | |
| GCR2 - Well 116 | 4/16/2011 | 415 | | |
| GCR2 - Well 117 | 5/3/2011 | 415 | | |
| GCR2 - Well 118 | 3/6/2011 | 345 | | |
| GCR2 - Well 119 | 5/21/2011 | 350 | | |
| GCR2 - Well 120 | 2/3/2011 | 360 | | |
| GCR2 - Well 121 | 6/25/2011 | 415 | | |
| GCR2 - Well 122 | 7/11/2011 | 415 | | |
| GCR2 - Well 123 | 6/1/2011 | 415 | | |
| GCR2 - Well 124 | 8/9/2011 | 360 | | |
| GCR2 - Well 125 | 4/4/2011 | 360 | | |
| GCR2 - Well 126 | 3/27/2011 | 415 | | |
| GCR2 - Well 127 | 1/12/2011 | 415 | | |
| GCR2 - Well 128 | 7/17/2011 | 415 | | |
| GCR2 - Well 129 | 2/21/2011 | 345 | 383 | 16.0 |
| GCR2 - Well 130 | 4/20/2011 | 415 | | |
| GCR2 - Well 131 | 8/28/2011 | 415 | | |
| GCR2 - Well 132 | 7/21/2011 | 360 | | |
| GCR2 - Well 133 | 7/27/2011 | 415 | | |
| GCR2 - Well 134 | 1/12/2011 | 415 | | |
| GCR2 - Well 135 | 5/3/2011 | 415 | | |
| GCR2 - Well 136 | 5/4/2011 | 160A | | |
| GCR2 - Well 137 | 7/12/2011 | 360 | | |
| GCR2 - Well 138 | 8/26/2011 | 415 | | |
| GCR2 - Well 139 | 7/13/2011 | 415 | | |
| GCR2 - Well 140 | 2/25/2011 | 415 | | |
| GCR2 - Well 141 | 1/30/2011 | 415 | | |
| GCR2 - Well 142 | 6/26/2011 | 415 | | |
| GCR2 - Well 143 | 4/29/2011 | 415 | | |
| GCR2 - Well 144 | 3/4/2011 | 415 | | |
| GCR2 - Well 145 | 8/19/2011 | 415 | | |
| GCR2 - Well 146 | 2/25/2011 | 415 | | |
| GCR2 - Well 147 | 2/25/2011 | 415 | | |
| GCR2 - Well 148 | 4/4/2011 | 360 | | |
| GCR2 - Well 149 | 3/15/2011 | 230 | | |
| GCR2 - Well 150 | 7/20/2011 | 415 | | |
| GCR2 - Well 151 | 6/16/2011 | 360 | | |
| GCR2 - Well 152 | 2/16/2011 | 415 | | |
| GCR2 - Well 153 | 1/20/2011 | 415 | | |
| GCR2 - Well 154 | 4/15/2011 | 220 | | |
| GCR2 - Well 155 | 8/2/2011 | 415 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 156 | 5/4/2011 | 360 | | |
| GCR2 - Well 157 | 6/21/2011 | 415 | | |
| GCR2 - Well 158 | 2/21/2011 | 360 | | |
| GCR2 - Well 159 | 8/19/2011 | 415 | | |
| GCR2 - Well 160 | 2/24/2011 | 415 | | |
| GCR2 - Well 161 | 2/15/2011 | 415 | | |
| GCR2 - Well 162 | 6/7/2011 | 415 | | |
| GCR2 - Well 163 | 7/30/2011 | 415 | | |
| GCR2 - Well 164 | 2/23/2011 | 415 | | |
| GCR2 - Well 165 | 8/30/2011 | 415 | | |
| GCR2 - Well 166 | 1/27/2011 | 415 | | |
| GCR2 - Well 167 | 3/21/2011 | 415 | | |
| GCR2 - Well 168 | 4/2/2011 | 415 | | |
| GCR2 - Well 169 | 4/23/2011 | 415 | | |
| GCR2 - Well 170 | 6/12/2011 | 360 | | |
| GCR2 - Well 171 | 3/25/2011 | 415 | | |
| GCR2 - Well 172 | 4/1/2011 | 415 | | |
| GCR2 - Well 173 | 1/27/2011 | 415 | | |
| GCR2 - Well 174 | 5/12/2011 | 260 | | |
| GCR2 - Well 175 | 7/1/2011 | 415 | | |
| GCR2 - Well 176 | 6/25/2011 | 415 | | |
| GCR2 - Well 177 | 3/20/2011 | 415 | | |
| GCR2 - Well 178 | 2/16/2011 | 415 | | |
| GCR2 - Well 179 | 6/26/2011 | 415 | | |
| GCR2 - Well 180 | 4/22/2011 | 415 | | |
| GCR2 - Well 181 | 3/21/2011 | 415 | | |
| GCR2 - Well 182 | 4/30/2011 | 415 | | |
| GCR2 - Well 183 | 2/8/2011 | 415 | | |
| GCR2 - Well 184 | 5/22/2011 | 415 | | |
| GCR2 - Well 185 | 8/7/2011 | 160A | | |
| GCR2 - Well 186 | 6/25/2011 | 415 | | |
| GCR2 - Well 187 | 2/15/2011 | 415 | | |
| GCR2 - Well 188 | 3/29/2011 | 360 | | |
| GCR2 - Well 189 | 6/14/2011 | 415 | | |
| GCR2 - Well 190 | 7/28/2011 | 415 | | |
| GCR2 - Well 191 | 1/22/2011 | 415 | | |
| GCR2 - Well 192 | 4/27/2011 | 415 | | |
| GCR2 - Well 193 | 5/8/2011 | 415 | | |
| GCR2 - Well 194 | 4/3/2011 | 360 | | |
| GCR2 - Well 195 | 1/30/2011 | 415 | | |
| GCR2 - Well 196 | 3/26/2011 | 415 | | |
| GCR2 - Well 197 | 6/28/2011 | 415 | | |
| GCR2 - Well 198 | 6/27/2011 | 415 | | |
| GCR2 - Well 199 | 3/1/2011 | 415 | | |
| GCR2 - Well 200 | 3/23/2011 | 415 | | |
| GCR2 - Well 201 | 6/30/2011 | 220 | | |
| GCR2 - Well 202 | 6/28/2011 | 415 | | |
| GCR2 - Well 203 | 4/11/2011 | 360 | | |
| GCR2 - Well 204 | 1/29/2011 | 360 | | |
| GCR2 - Well 205 | 1/27/2011 | 360 | | |
| GCR2 - Well 206 | 1/22/2011 | 415 | | |
| GCR2 - Well 207 | 5/2/2011 | 415 | | |
| GCR2 - Well 208 | 7/21/2011 | 415 | | |
| GCR2 - Well 209 | 5/10/2011 | 415 | | |
| GCR2 - Well 210 | 2/16/2011 | 360 | | |
| GCR2 - Well 211 | 2/17/2011 | 415 | | |
| GCR2 - Well 212 | 4/4/2011 | 415 | | |
| GCR2 - Well 213 | 1/9/2011 | 415 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 214 | 3/31/2011 | 345 | | |
| GCR2 - Well 215 | 4/26/2011 | 415 | | |
| GCR2 - Well 216 | 4/8/2011 | 415 | | |
| GCR2 - Well 217 | 6/25/2011 | 415 | | |
| GCR2 - Well 218 | 4/13/2011 | 415 | | |
| GCR2 - Well 219 | 1/25/2011 | 260 | | |
| GCR2 - Well 220 | 2/21/2011 | 345 | | |
| GCR2 - Well 221 | 1/27/2011 | 415 | | |
| GCR2 - Well 222 | 8/21/2011 | 415 | | |
| GCR2 - Well 223 | 3/23/2011 | 415 | | |
| GCR2 - Well 224 | 6/14/2011 | 415 | | |
| GCR2 - Well 225 | 6/25/2011 | 415 | | |
| GCR2 - Well 226 | 6/27/2011 | 160A | | |
| GCR2 - Well 227 | 4/8/2011 | 415 | | |
| GCR2 - Well 228 | 7/11/2011 | 415 | | |
| GCR2 - Well 229 | 7/27/2011 | 415 | | |
| GCR2 - Well 230 | 4/15/2011 | 230 | | |
| GCR2 - Well 231 | 6/3/2011 | 415 | | |
| GCR2 - Well 232 | 3/8/2011 | 415 | | |
| GCR2 - Well 233 | 8/21/2011 | 415 | | |
| GCR2 - Well 234 | 1/9/2011 | 415 | | |
| GCR2 - Well 235 | 4/22/2011 | 415 | | |
| GCR2 - Well 236 | 6/6/2011 | 415 | | |
| GCR2 - Well 237 | 3/21/2011 | 415 | | |
| GCR2 - Well 238 | 1/21/2011 | 260 | | |
| GCR2 - Well 239 | 4/18/2011 | 415 | | |
| GCR2 - Well 240 | 1/27/2011 | 400 | | |
| GCR2 - Well 241 | 1/26/2011 | 415 | | |
| GCR2 - Well 242 | 8/5/2011 | 415 | | |
| GCR2 - Well 243 | 4/22/2011 | 415 | | |
| GCR2 - Well 244 | 2/16/2011 | 415 | | |
| GCR2 - Well 245 | 8/19/2011 | 415 | | |
| GCR2 - Well 246 | 1/4/2011 | 360 | | |
| GCR2 - Well 247 | 6/16/2011 | 415 | | |
| GCR2 - Well 248 | 4/28/2011 | 415 | | |
| GCR2 - Well 249 | 4/8/2011 | 415 | | |
| GCR2 - Well 250 | 1/27/2011 | 415 | | |
| GCR2 - Well 251 | 4/28/2011 | 400 | | |
| GCR2 - Well 252 | 3/5/2011 | 415 | | |
| GCR2 - Well 253 | 6/22/2011 | 415 | | |
| GCR2 - Well 254 | 2/18/2011 | 415 | | |
| GCR2 - Well 255 | 6/29/2011 | 415 | | |
| GCR2 - Well 256 | 3/26/2011 | 415 | | |
| GCR2 - Well 257 | 8/24/2011 | 415 | | |
| GCR2 - Well 258 | 6/13/2011 | 415 | | |
| GCR2 - Well 259 | 7/10/2011 | 415 | | |
| GCR2 - Well 260 | 5/7/2011 | 160A | | |
| GCR2 - Well 261 | 4/16/2011 | 415 | | |
| GCR2 - Well 262 | 2/26/2011 | 160A | | |
| GCR2 - Well 263 | 3/6/2011 | 415 | | |
| GCR2 - Well 264 | 5/6/2011 | 415 | | |
| GCR2 - Well 265 | 6/17/2011 | 415 | | |
| GCR2 - Well 266 | 1/6/2011 | 415 | | |
| GCR2 - Well 267 | 5/23/2011 | 360 | | |
| GCR2 - Well 268 | 2/21/2011 | 415 | | |
| GCR2 - Well 269 | 2/13/2011 | 415 | | |
| GCR2 - Well 270 | 7/13/2011 | 415 | | |
| GCR2 - Well 271 | 5/4/2011 | 400 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 272 | 8/16/2011 | 160A | | |
| GCR2 - Well 273 | 6/7/2011 | 415 | | |
| GCR2 - Well 274 | 5/10/2011 | 415 | 244 | 10.2 |
| GCR2 - Well 275 | 3/14/2011 | 360 | | |
| GCR2 - Well 276 | 2/11/2011 | 360 | | |
| GCR2 - Well 277 | 3/1/2011 | 415 | | |
| GCR2 - Well 278 | 3/15/2011 | 415 | | |
| GCR2 - Well 279 | 8/29/2011 | 415 | | |
| GCR2 - Well 280 | 6/19/2011 | 415 | | |
| GCR2 - Well 281 | 6/16/2011 | 230 | | |
| GCR2 - Well 282 | 7/11/2011 | 415 | | |
| GCR2 - Well 283 | 2/19/2011 | 415 | | |
| GCR2 - Well 284 | 6/24/2011 | 360 | | |
| GCR2 - Well 285 | 5/13/2011 | 415 | | |
| GCR2 - Well 286 | 6/17/2011 | 415 | | |
| GCR2 - Well 287 | 8/9/2011 | 160A | | |
| GCR2 - Well 288 | 8/23/2011 | 415 | | |
| GCR2 - Well 289 | 7/23/2011 | 415 | | |
| GCR2 - Well 290 | 3/8/2011 | 230 | | |
| GCR2 - Well 291 | 7/10/2011 | 415 | | |
| GCR2 - Well 292 | 1/26/2011 | 360 | | |
| GCR2 - Well 293 | 2/22/2011 | 415 | | |
| GCR2 - Well 294 | 8/18/2011 | 360 | | |
| GCR2 - Well 295 | 8/26/2011 | 230 | | |
| GCR2 - Well 296 | 5/14/2011 | 160A | | |
| GCR2 - Well 297 | 4/15/2011 | 415 | | |
| GCR2 - Well 298 | 4/29/2011 | 400 | | |
| GCR2 - Well 299 | 4/4/2011 | 415 | | |
| GCR2 - Well 300 | 8/10/2011 | 220 | | |
| GCR2 - Well 301 | 6/30/2011 | 220 | | |
| GCR2 - Well 302 | 4/18/2011 | 415 | | |
| GCR2 - Well 303 | 4/28/2011 | 415 | | |
| GCR2 - Well 304 | 8/17/2011 | 415 | | |
| GCR2 - Well 305 | 2/20/2011 | 415 | | |
| GCR2 - Well 306 | 3/11/2011 | 360 | | |
| GCR2 - Well 307 | 3/14/2011 | 230 | | |
| GCR2 - Well 308 | 8/29/2011 | 415 | | |
| GCR2 - Well 309 | 3/23/2011 | 415 | | |
| GCR2 - Well 310 | 5/17/2011 | 415 | | |
| GCR2 - Well 311 | 7/15/2011 | 415 | | |
| GCR2 - Well 312 | 8/29/2011 | 415 | | |
| GCR2 - Well 313 | 5/25/2011 | 415 | | |
| GCR2 - Well 314 | 6/13/2011 | 415 | | |
| GCR2 - Well 315 | 3/23/2011 | 415 | | |
| GCR2 - Well 316 | 5/23/2011 | 400 | | |
| GCR2 - Well 317 | 6/12/2011 | 230 | | |
| GCR2 - Well 318 | 5/3/2011 | 220 | | |
| GCR2 - Well 319 | 8/11/2011 | 360 | | |
| GCR2 - Well 320 | 8/18/2011 | 415 | | |
| GCR2 - Well 321 | 4/13/2011 | 415 | | |
| GCR2 - Well 322 | 5/9/2011 | 230 | | |
| GCR2 - Well 323 | 2/26/2011 | 415 | | |
| GCR2 - Well 324 | 4/8/2011 | 230 | | |
| GCR2 - Well 325 | 8/15/2011 | 160A | | |
| GCR2 - Well 326 | 3/31/2011 | 230 | | |
| GCR2 - Well 327 | 1/4/2011 | 360 | | |
| GCR2 - Well 328 | 7/9/2011 | 415 | | |
| GCR2 - Well 329 | 1/28/2011 | 360 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 330 | 5/1/2011 | 415 | | |
| GCR2 - Well 331 | 6/15/2011 | 220 | | |
| GCR2 - Well 332 | 4/22/2011 | 230 | | |
| GCR2 - Well 333 | 8/31/2011 | 415 | | |
| GCR2 - Well 334 | 6/20/2011 | 415 | | |
| GCR2 - Well 335 | 8/15/2011 | 415 | | |
| GCR2 - Well 336 | 2/17/2011 | 230 | | |
| GCR2 - Well 337 | 1/11/2011 | 415 | | |
| GCR2 - Well 338 | 1/28/2011 | 415 | | |
| GCR2 - Well 339 | 6/21/2011 | 230 | | |
| GCR2 - Well 340 | 6/20/2011 | 415 | | |
| GCR2 - Well 341 | 2/22/2011 | 415 | | |
| GCR2 - Well 342 | 3/2/2011 | 415 | | |
| GCR2 - Well 343 | 7/16/2011 | 415 | | |
| GCR2 - Well 344 | 6/30/2011 | 230 | | |
| GCR2 - Well 345 | 6/7/2011 | 360 | | |
| GCR2 - Well 346 | 2/24/2011 | 360 | | |
| GCR2 - Well 347 | 7/29/2011 | 360 | | |
| GCR2 - Well 348 | 3/21/2011 | 415 | | |
| GCR2 - Well 349 | 2/1/2011 | 260 | | |
| GCR2 - Well 350 | 5/14/2011 | 360 | | |
| GCR2 - Well 351 | 5/13/2011 | 230 | | |
| GCR2 - Well 352 | 5/17/2011 | 360 | | |
| GCR2 - Well 353 | 3/8/2011 | 415 | | |
| GCR2 - Well 354 | 4/18/2011 | 230 | 114 | |
| GCR2 - Well 355 | 6/14/2011 | 230 | | |
| GCR2 - Well 356 | 2/20/2011 | 415 | | |
| GCR2 - Well 357 | 5/20/2011 | 230 | | |
| GCR2 - Well 358 | 7/28/2011 | 360 | | |
| GCR2 - Well 359 | 2/17/2011 | 230 | | |
| GCR2 - Well 360 | 8/8/2011 | 160A | | |
| GCR2 - Well 361 | 5/10/2011 | 160A | | |
| GCR2 - Well 362 | 3/27/2011 | 415 | | |
| GCR2 - Well 363 | 6/22/2011 | 415 | | |
| GCR2 - Well 364 | 3/11/2011 | 415 | | |
| GCR2 - Well 365 | 3/4/2011 | 230 | | |
| GCR2 - Well 366 | 2/23/2011 | 230 | | |
| GCR2 - Well 367 | 4/8/2011 | 360 | | |
| GCR2 - Well 368 | 2/13/2011 | 220 | | |
| GCR2 - Well 369 | 5/4/2011 | 400 | | |
| GCR2 - Well 370 | 8/5/2011 | 415 | | |
| GCR2 - Well 371 | 5/24/2011 | 415 | | |
| GCR2 - Well 372 | 4/4/2011 | 230 | | |
| GCR2 - Well 373 | 8/25/2011 | 415 | | |
| GCR2 - Well 374 | 5/24/2011 | 415 | | |
| GCR2 - Well 375 | 7/17/2011 | 415 | | |
| GCR2 - Well 376 | 6/22/2011 | 415 | | |
| GCR2 - Well 377 | 7/15/2011 | 415 | | |
| GCR2 - Well 378 | 6/7/2011 | 415 | | |
| GCR2 - Well 379 | 3/23/2011 | 230 | | |
| GCR2 - Well 380 | 8/25/2011 | 415 | | |
| GCR2 - Well 381 | 3/2/2011 | 230 | | |
| GCR2 - Well 382 | 5/2/2011 | 415 | | |
| GCR2 - Well 383 | 5/13/2011 | 415 | | |
| GCR2 - Well 384 | 8/22/2011 | 360 | | |
| GCR2 - Well 385 | 7/22/2011 | 160A | | |
| GCR2 - Well 386 | 2/9/2011 | 230 | | |
| GCR2 - Well 387 | 4/27/2011 | 360 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 388 | 5/27/2011 | 360 | | |
| GCR2 - Well 389 | 7/11/2011 | 220 | | |
| GCR2 - Well 390 | 1/30/2011 | 415 | | |
| GCR2 - Well 391 | 4/15/2011 | 160A | | |
| GCR2 - Well 392 | 3/17/2011 | 230 | | |
| GCR2 - Well 393 | 2/24/2011 | 230 | | |
| GCR2 - Well 394 | 3/10/2011 | 230 | | |
| GCR2 - Well 395 | 7/18/2011 | 230 | | |
| GCR2 - Well 396 | 1/17/2011 | 360 | | |
| GCR2 - Well 397 | 1/24/2011 | 230 | | |
| GCR2 - Well 398 | 3/10/2011 | 415 | | |
| GCR2 - Well 399 | 3/1/2011 | 230 | | |
| GCR2 - Well 400 | 7/25/2011 | 230 | | |
| GCR2 - Well 401 | 1/10/2011 | 230 | | |
| GCR2 - Well 402 | 6/23/2011 | 230 | | |
| GCR2 - Well 403 | 8/12/2011 | 360 | | |
| GCR2 - Well 404 | 1/15/2011 | 400 | | |
| GCR2 - Well 405 | 6/3/2011 | 415 | | |
| GCR2 - Well 406 | 1/27/2011 | 415 | | |
| GCR2 - Well 407 | 7/5/2011 | 230 | | |
| GCR2 - Well 408 | 7/25/2011 | 230 | | |
| GCR2 - Well 409 | 5/31/2011 | 230 | | |
| GCR2 - Well 410 | 7/1/2011 | 360 | | |
| GCR2 - Well 411 | 6/7/2011 | 415 | | |
| GCR2 - Well 412 | 4/26/2011 | 160A | 186 | |
| GCR2 - Well 413 | 3/26/2011 | 415 | | |
| GCR2 - Well 414 | 7/15/2011 | 415 | | |
| GCR2 - Well 415 | 6/23/2011 | 230 | | |
| GCR2 - Well 416 | 5/26/2011 | 160A | | |
| GCR2 - Well 417 | 8/1/2011 | 230 | | |
| GCR2 - Well 418 | 1/10/2011 | 230 | | |
| GCR2 - Well 419 | 8/20/2011 | 230 | | |
| GCR2 - Well 420 | 3/11/2011 | 230 | | |
| GCR2 - Well 421 | 1/31/2011 | 360 | | |
| GCR2 - Well 422 | 7/13/2011 | 415 | | |
| GCR2 - Well 423 | 7/22/2011 | 230 | | |
| GCR2 - Well 424 | 1/25/2011 | 260 | | |
| GCR2 - Well 425 | 7/10/2011 | 415 | | |
| GCR2 - Well 426 | 3/1/2011 | 415 | | |
| GCR2 - Well 427 | 6/10/2011 | 230 | | |
| GCR2 - Well 428 | 3/8/2011 | 415 | | |
| GCR2 - Well 429 | 7/25/2011 | 230 | | |
| GCR2 - Well 430 | 2/13/2011 | 415 | | |
| GCR2 - Well 431 | 3/2/2011 | 230 | | |
| GCR2 - Well 432 | 4/26/2011 | 230 | | |
| GCR2 - Well 433 | 4/21/2011 | 230 | | |
| GCR2 - Well 434 | 6/27/2011 | 230 | | |
| GCR2 - Well 435 | 7/15/2011 | 415 | | |
| GCR2 - Well 436 | 3/1/2011 | 415 | | |
| GCR2 - Well 437 | 6/29/2011 | 415 | | |
| GCR2 - Well 438 | 5/31/2011 | 230 | | |
| GCR2 - Well 439 | 3/9/2011 | 230 | | |
| GCR2 - Well 440 | 5/9/2011 | 230 | | |
| GCR2 - Well 441 | 3/23/2011 | 230 | | |
| GCR2 - Well 442 | 3/9/2011 | 230 | | |
| GCR2 - Well 443 | 6/14/2011 | 415 | | |
| GCR2 - Well 444 | 2/18/2011 | 230 | | |
| GCR2 - Well 445 | 1/21/2011 | 230 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 446 | 3/27/2011 | 415 | | |
| GCR2 - Well 447 | 6/4/2011 | 415 | | |
| GCR2 - Well 448 | 3/13/2011 | 415 | | |
| GCR2 - Well 449 | 8/6/2011 | 230 | | |
| GCR2 - Well 450 | 4/1/2011 | 415 | | |
| GCR2 - Well 451 | 8/8/2011 | 160A | | |
| GCR2 - Well 452 | 7/15/2011 | 230 | | |
| GCR2 - Well 453 | 7/22/2011 | 160A | | |
| GCR2 - Well 454 | 1/7/2011 | 360 | | |
| GCR2 - Well 455 | 4/11/2011 | 230 | | |
| GCR2 - Well 456 | 3/31/2011 | 360 | | |
| GCR2 - Well 457 | 5/17/2011 | 230 | | |
| GCR2 - Well 458 | 2/23/2011 | 230 | | |
| GCR2 - Well 459 | 5/25/2011 | 230 | | |
| GCR2 - Well 460 | 7/5/2011 | 230 | | |
| GCR2 - Well 461 | 7/21/2011 | 230 | | |
| GCR2 - Well 462 | 8/25/2011 | 230 | | |
| GCR2 - Well 463 | 3/22/2011 | 230 | | |
| GCR2 - Well 464 | 6/10/2011 | 230 | | |
| GCR2 - Well 465 | 4/12/2011 | 230 | | |
| GCR2 - Well 466 | 6/10/2011 | 415 | | |
| GCR2 - Well 467 | 2/28/2011 | 230 | | |
| GCR2 - Well 468 | 5/18/2011 | 230 | | |
| GCR2 - Well 469 | 8/18/2011 | 230 | | |
| GCR2 - Well 470 | 7/21/2011 | 160A | | |
| GCR2 - Well 471 | 4/20/2011 | 160A | | |
| GCR2 - Well 472 | 1/7/2011 | 230 | | |
| GCR2 - Well 473 | 7/20/2011 | 160A | | |
| GCR2 - Well 474 | 4/14/2011 | 230 | | |
| GCR2 - Well 475 | 6/23/2011 | 220 | | |
| GCR2 - Well 476 | 4/30/2011 | 230 | | |
| GCR2 - Well 477 | 6/29/2011 | 230 | | |
| GCR2 - Well 478 | 5/25/2011 | 360 | | |
| GCR2 - Well 479 | 1/19/2011 | 230 | | |
| GCR2 - Well 480 | 8/29/2011 | 230 | | |
| GCR2 - Well 481 | 1/7/2011 | 230 | | |
| GCR2 - Well 482 | 4/13/2011 | 230 | | |
| GCR2 - Well 483 | 3/10/2011 | 230 | | |
| GCR2 - Well 484 | 8/2/2011 | 230 | | |
| GCR2 - Well 485 | 1/22/2011 | 230 | | |
| GCR2 - Well 486 | 6/6/2011 | 230 | | |
| GCR2 - Well 487 | 2/8/2011 | 230 | | |
| GCR2 - Well 488 | 6/25/2011 | 160A | | |
| GCR2 - Well 489 | 7/15/2011 | 230 | | |
| GCR2 - Well 490 | 1/17/2011 | 230 | | |
| GCR2 - Well 491 | 2/25/2011 | 230 | | |
| GCR2 - Well 492 | 4/16/2011 | 230 | | |
| GCR2 - Well 493 | 8/10/2011 | 230 | | |
| GCR2 - Well 494 | 5/24/2011 | 160A | 178 | |
| GCR2 - Well 495 | 7/28/2011 | 415 | | |
| GCR2 - Well 496 | 2/27/2011 | 260 | | |
| GCR2 - Well 497 | 3/12/2011 | 230 | | |
| GCR2 - Well 498 | 8/12/2011 | 230 | | |
| GCR2 - Well 499 | 5/28/2011 | 230 | | |
| GCR2 - Well 500 | 6/21/2011 | 230 | | |
| GCR2 - Well 501 | 4/8/2011 | 230 | | |
| GCR2 - Well 502 | 1/7/2011 | 230 | | |
| GCR2 - Well 503 | 8/15/2011 | 230 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 504 | 6/6/2011 | 230 | | |
| GCR2 - Well 505 | 3/18/2011 | 230 | | |
| GCR2 - Well 506 | 2/23/2011 | 415 | | |
| GCR2 - Well 507 | 3/1/2011 | 415 | | |
| GCR2 - Well 508 | 1/3/2011 | 230 | | |
| GCR2 - Well 509 | 4/27/2011 | 230 | | |
| GCR2 - Well 510 | 7/2/2011 | 160A | | |
| GCR2 - Well 511 | 7/28/2011 | 415 | | |
| GCR2 - Well 512 | 1/12/2011 | 230 | | |
| GCR2 - Well 513 | 7/15/2011 | 230 | | |
| GCR2 - Well 514 | 3/17/2011 | 230 | | |
| GCR2 - Well 515 | 7/27/2011 | 230 | | |
| GCR2 - Well 516 | 3/15/2011 | 230 | | |
| GCR2 - Well 517 | 3/2/2011 | 415 | | |
| GCR2 - Well 518 | 1/8/2011 | 230 | | |
| GCR2 - Well 519 | 7/6/2011 | 230 | | |
| GCR2 - Well 520 | 6/25/2011 | 230 | | |
| GCR2 - Well 521 | 7/22/2011 | 160A | | |
| GCR2 - Well 522 | 7/21/2011 | 160A | 139 | |
| GCR2 - Well 523 | 6/24/2011 | 230 | | |
| GCR2 - Well 524 | 8/9/2011 | 230 | | |
| GCR2 - Well 525 | 5/5/2011 | 230 | | |
| GCR2 - Well 526 | 1/21/2011 | 230 | | |
| GCR2 - Well 527 | 8/16/2011 | 230 | | |
| GCR2 - Well 528 | 8/3/2011 | 230 | | |
| GCR2 - Well 529 | 4/13/2011 | 230 | | |
| GCR2 - Well 530 | 7/29/2011 | 230 | | |
| GCR2 - Well 531 | 7/28/2011 | 230 | | |
| GCR2 - Well 532 | 4/9/2011 | 230 | | |
| GCR2 - Well 533 | 3/18/2011 | 260 | | |
| GCR2 - Well 534 | 6/13/2011 | 260 | | |
| GCR2 - Well 535 | 1/8/2011 | 230 | | |
| GCR2 - Well 536 | 1/31/2011 | 230 | | |
| GCR2 - Well 537 | 3/23/2011 | 230 | | |
| GCR2 - Well 538 | 5/19/2011 | 230 | | |
| GCR2 - Well 539 | 4/4/2011 | 230 | | |
| GCR2 - Well 540 | 7/14/2011 | 415 | | |
| GCR2 - Well 541 | 8/1/2011 | 230 | | |
| GCR2 - Well 542 | 1/27/2011 | 230 | | |
| GCR2 - Well 543 | 6/17/2011 | 260 | | |
| GCR2 - Well 544 | 5/31/2011 | 230 | | |
| GCR2 - Well 545 | 6/29/2011 | 230 | | |
| GCR2 - Well 546 | 8/29/2011 | 260 | | |
| GCR2 - Well 547 | 5/14/2011 | 230 | | |
| GCR2 - Well 548 | 8/27/2011 | 230 | | |
| GCR2 - Well 549 | 6/9/2011 | 230 | | |
| GCR2 - Well 550 | 6/24/2011 | 230 | | |
| GCR2 - Well 551 | 3/4/2011 | 230 | | |
| GCR2 - Well 552 | 3/2/2011 | 415 | | |
| GCR2 - Well 553 | 8/31/2011 | 160A | | |
| GCR2 - Well 554 | 3/26/2011 | 415 | | |
| GCR2 - Well 555 | 6/1/2011 | 230 | | |
| GCR2 - Well 556 | 8/25/2011 | 415 | | |
| GCR2 - Well 557 | 8/12/2011 | 230 | | |
| GCR2 - Well 558 | 8/8/2011 | 160A | | |
| GCR2 - Well 559 | 3/26/2011 | 415 | | |
| GCR2 - Well 560 | 8/10/2011 | 230 | | |
| GCR2 - Well 561 | 8/8/2011 | 160A | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|-------|---------------------------|---------------|
| GCR2 - Well 562 | 8/12/2011 | 230 | | |
| GCR2 - Well 563 | 2/26/2011 | 230 | | |
| GCR2 - Well 564 | 8/8/2011 | 160A | | |
| GCR2 - Well 565 | 1/21/2011 | 230 | | |
| GCR2 - Well 566 | 7/5/2011 | 230 | | |
| GCR2 - Well 567 | 5/17/2011 | 230 | | |
| GCR2 - Well 568 | 4/30/2011 | 230 | | |
| GCR2 - Well 569 | 2/25/2011 | 230 | | |
| GCR2 - Well 570 | 2/9/2011 | 230 | | |
| GCR2 - Well 571 | 7/12/2011 | 230 | | |
| GCR2 - Well 572 | 7/1/2011 | 230 | 139 | 5.8 |
| GCR2 - Well 573 | 8/15/2011 | 230 | | |
| GCR2 - Well 574 | 1/12/2011 | 230 | | |
| GCR2 - Well 575 | 8/4/2011 | 230 | | |
| GCR2 - Well 576 | 7/15/2011 | 230 | | |
| GCR2 - Well 577 | 8/13/2011 | 230 | | |
| GCR2 - Well 578 | 8/29/2011 | 230 | | |
| GCR2 - Well 579 | 7/6/2011 | 230 | | |
| GCR2 - Well 580 | 8/29/2011 | 230 | | |
| GCR2 - Well 581 | 8/18/2011 | 230 | | |
| GCR2 - Well 582 | 7/19/2011 | 230 | | |
| GCR2 - Well 583 | 8/24/2011 | 230 | | |
| GCR2 - Well 584 | 7/11/2011 | 230 | | |
| GCR2 - Well 585 | 7/22/2011 | 230 | | |
| GCR2 - Well 586 | 1/18/2011 | 230 | | |
| GCR2 - Well 587 | 8/10/2011 | 230 | | |
| GCR2 - Well 588 | 8/30/2011 | 230 | | |
| GCR2 - Well 589 | 2/24/2011 | 230 | | |
| GCR2 - Well 590 | 8/18/2011 | 230 | | |
| GCR2 - Well 591 | 6/20/2011 | 160A | | |
| GCR2 - Well 592 | 6/10/2011 | 230 | | |
| GCR2 - Well 593 | 8/9/2011 | 160A | | |
| GCR2 - Well 594 | 8/10/2011 | 230 | | |
| GCR2 - Well 595 | 1/7/2011 | 360 | | |
| GCR2 - Well 596 | 3/30/2011 | 220 | | |
| GCR2 - Well 597 | 3/19/2011 | 230 | | |
| GCR2 - Well 598 | 4/23/2011 | 230 | | |
| GCR2 - Well 599 | 2/22/2011 | 230 | | |
| GCR2 - Well 600 | 2/18/2011 | 230 | | |
| GCR2 - Well 601 | 5/3/2011 | 230 | | |
| GCR2 - Well 602 | 3/19/2011 | 230 | | |
| GCR2 - Well 603 | 5/31/2011 | 230 | | |
| GCR2 - Well 604 | 8/8/2011 | 160A | | |
| GCR2 - Well 605 | 6/2/2011 | 230 | | |
| GCR2 - Well 606 | 5/13/2011 | 230 | | |
| GCR2 - Well 607 | 5/10/2011 | 230 | | |
| GCR2 - Well 608 | 4/6/2011 | 160A | | |
| GCR2 - Well 609 | 6/20/2011 | 230 | | |
| GCR2 - Well 610 | 8/14/2011 | 230 | | |
| GCR2 - Well 611 | 8/12/2011 | 230 | | |
| GCR2 - Well 612 | 7/27/2011 | 230 | | |
| GCR2 - Well 613 | 4/4/2011 | 230 | | |
| GCR2 - Well 614 | 8/26/2011 | 230 | | |
| GCR2 - Well 615 | 7/14/2011 | 230 | | |
| GCR2 - Well 616 | 2/22/2011 | 230 | | |
| GCR2 - Well 617 | 3/4/2011 | 160A | | |
| GCR2 - Well 618 | 4/23/2011 | 230 | | |
| GCR2 - Well 619 | 6/28/2011 | 230 | | |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|-----------------|---------------------|------------------------------|---------------------------|---------------|
| GCR2 - Well 620 | 7/30/2011 | 230 | | |
| GCR2 - Well 621 | 7/1/2011 | 160A | | |
| GCR2 - Well 622 | 3/4/2011 | 160A | | |
| GCR2 - Well 623 | 6/20/2011 | 160A | | |
| GCR2 - Well 624 | 6/22/2011 | 160A | | |
| GCR2 - Well 625 | 3/2/2011 | 415 | | |
| GCR2 - Well 626 | 6/11/2011 | 160A | | |
| GCR2 - Well 627 | 6/20/2011 | 160A | | |
| GCR2 - Well 628 | 2/7/2011 | 160A | 795 | 33.1 |
| GCR2 - Well 629 | 4/6/2011 | 160A | | |
| GCR2 - Well 630 | 6/21/2011 | 160A | | |
| GCR2 - Well 631 | 2/11/2011 | 160A | | |
| GCR2 - Well 632 | 6/22/2011 | 160A | | |
| GCR2 - Well 633 | 8/9/2011 | 160A | | |
| GCR2 - Well 634 | 2/7/2011 | 160A | | |
| GCR2 - Well 635 | 2/22/2011 | 160A | | |
| GCR2 - Well 636 | 4/10/2011 | 160A | | |
| GCR2 - Well 637 | 2/27/2011 | 160A | | |
| GCR2 - Well 638 | 5/1/2011 | 160A | | |
| GCR2 - Well 639 | 2/7/2011 | 160A | | |
| GCR2 - Well 640 | 3/2/2011 | 360 | | |
| GCR2 - Well 641 | 2/11/2011 | 160A | | |
| GCR2 - Well 642 | 2/27/2011 | 160A | | |
| GCR2 - Well 643 | 8/17/2011 | 160A | | |
| GCR2 - Well 644 | 4/10/2011 | 160A | | |
| GCR2 - Well 645 | 2/20/2011 | 160A | | |
| GCR2 - Well 646 | 6/11/2011 | 160A | | |
| GCR2 - Well 647 | 2/20/2011 | 160A | | |
| GCR2 - Well 648 | 1/14/2011 | 160A | | |
| GCR2 - Well 649 | 6/30/2011 | 160A | | |
| GCR2 - Well 650 | 3/20/2011 | 345 | | |
| GCR2 - Well 651 | 3/21/2011 | 345 | | |
| GCR3 - Well 1 | 3/17/2011 | Green River Basin - Pinedale | 63 | 2.6 |
| GCR3 - Well 2 | 3/16/2011 | Green River Basin - Pinedale | 111 | 4.6 |
| GCR3 - Well 3 | 3/22/2011 | Green River Basin - Pinedale | 63 | 2.6 |
| GCR3 - Well 4 | 3/21/2011 | Green River Basin - Pinedale | 63 | 2.6 |
| GCR3 - Well 5 | 3/26/2011 | Green River Basin - Pinedale | 89 | 3.7 |
| GCR3 - Well 6 | 3/27/2011 | Green River Basin - Pinedale | 89 | 3.7 |
| GCR3 - Well 7 | 4/7/2011 | Green River Basin - Pinedale | 46 | 1.9 |
| GCR3 - Well 8 | 4/2/2011 | Green River Basin - Pinedale | 55 | 2.3 |
| GCR3 - Well 9 | 4/6/2011 | Green River Basin - Pinedale | 72 | 3.0 |
| GCR3 - Well 10 | 4/1/2011 | Green River Basin - Pinedale | 65 | 2.7 |
| GCR3 - Well 11 | 4/11/2011 | Green River Basin - Pinedale | 109 | 4.5 |
| GCR3 - Well 12 | 4/12/2011 | Green River Basin - Pinedale | 111 | 4.6 |
| GCR3 - Well 13 | 4/16/2011 | Green River Basin - Pinedale | 108 | 4.5 |
| GCR3 - Well 14 | 4/17/2011 | Green River Basin - Pinedale | 111 | 4.6 |
| GCR3 - Well 15 | 4/22/2011 | Green River Basin - Pinedale | 113 | 4.7 |
| GCR3 - Well 16 | 4/21/2011 | Green River Basin - Pinedale | 86 | 3.6 |
| GCR3 - Well 17 | 4/26/2011 | Green River Basin - Pinedale | 132 | 5.5 |
| GCR3 - Well 18 | 5/1/2011 | Green River Basin - Pinedale | 89 | 3.7 |
| GCR3 - Well 19 | 4/27/2011 | Green River Basin - Pinedale | 87 | 3.6 |
| GCR3 - Well 20 | 5/2/2011 | Green River Basin - Pinedale | 86 | 3.6 |
| GCR3 - Well 21 | 5/6/2011 | Green River Basin - Pinedale | 87 | 3.6 |
| GCR3 - Well 22 | 5/7/2011 | Green River Basin - Pinedale | 92 | 3.8 |
| GCR3 - Well 23 | 5/11/2011 | Green River Basin - Pinedale | 89 | 3.7 |
| GCR3 - Well 24 | 5/12/2011 | Green River Basin - Pinedale | 67 | 2.8 |
| GCR3 - Well 25 | 5/16/2011 | Green River Basin - Pinedale | 81 | 3.4 |
| GCR3 - Well 26 | 5/17/2011 | Green River Basin - Pinedale | 94 | 3.9 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|----------------|---------------------|--------------------------------|---------------------------|---------------|
| GCR3 - Well 27 | 5/21/2011 | Green River Basin - Pinedale | 74 | 3.1 |
| GCR3 - Well 28 | 5/22/2011 | Green River Basin - Pinedale | 88 | 3.7 |
| GCR3 - Well 29 | 5/27/2011 | Green River Basin - Pinedale | 81 | 3.4 |
| GCR3 - Well 30 | 5/26/2011 | Green River Basin - Pinedale | 109 | 4.5 |
| GCR3 - Well 31 | 5/31/2011 | Green River Basin - Pinedale | 101 | 4.2 |
| GCR3 - Well 32 | 5/31/2011 | Green River Basin - Pinedale | 64 | 2.7 |
| GCR3 - Well 33 | 6/6/2011 | Green River Basin - Pinedale | 101 | 4.2 |
| GCR3 - Well 34 | 6/5/2011 | Green River Basin - Pinedale | 110 | 4.6 |
| GCR3 - Well 35 | 6/10/2011 | Green River Basin - Pinedale | 111 | 4.6 |
| GCR3 - Well 36 | 6/16/2011 | Green River Basin - Pinedale | 88 | 3.7 |
| GCR3 - Well 37 | 6/11/2011 | Green River Basin - Pinedale | 85 | 3.5 |
| GCR3 - Well 38 | 6/17/2011 | Green River Basin - Pinedale | 68 | 2.8 |
| GCR3 - Well 39 | 6/21/2011 | Green River Basin - Pinedale | 132 | 5.5 |
| GCR3 - Well 40 | 6/26/2011 | Green River Basin - Pinedale | 153 | 6.4 |
| GCR3 - Well 41 | 6/22/2011 | Green River Basin - Pinedale | 102 | 4.3 |
| GCR3 - Well 42 | 6/27/2011 | Green River Basin - Pinedale | 135 | 5.6 |
| GCR3 - Well 43 | 7/1/2011 | Green River Basin - Pinedale | 112 | 4.7 |
| GCR3 - Well 44 | 7/5/2011 | Green River Basin - Pinedale | 60 | 2.5 |
| GCR3 - Well 45 | 7/10/2011 | Green River Basin - Pinedale | 96 | 4.0 |
| GCR3 - Well 46 | 7/6/2011 | Green River Basin - Pinedale | 66 | 2.8 |
| GCR3 - Well 47 | 7/11/2011 | Green River Basin - Pinedale | 72 | 3.0 |
| GCR3 - Well 48 | 7/16/2011 | Green River Basin - Pinedale | 65 | 2.7 |
| GCR3 - Well 49 | 7/15/2011 | Green River Basin - Pinedale | 87 | 3.6 |
| GCR3 - Well 50 | 7/21/2011 | Green River Basin - Pinedale | 92 | 3.8 |
| GCR3 - Well 51 | 7/20/2011 | Green River Basin - Pinedale | 88 | 3.7 |
| GCR3 - Well 52 | 7/25/2011 | Green River Basin - Pinedale | 96 | 4.0 |
| GCR3 - Well 53 | 7/26/2011 | Green River Basin - Pinedale | 90 | 3.8 |
| GCR3 - Well 54 | 7/30/2011 | Green River Basin - Pinedale | 89 | 3.7 |
| GCR3 - Well 55 | 7/31/2011 | Green River Basin - Pinedale | 86 | 3.6 |
| GCR3 - Well 56 | 8/7/2011 | Green River Basin - Pinedale | 90 | 3.8 |
| GCR3 - Well 57 | 8/6/2011 | Green River Basin - Pinedale | 108 | 4.5 |
| GCR3 - Well 58 | 8/11/2011 | Green River Basin - Pinedale | 129 | 5.4 |
| GCR3 - Well 59 | 8/12/2011 | Green River Basin - Pinedale | 118 | 4.9 |
| GCR3 - Well 60 | 8/16/2011 | Green River Basin - Pinedale | 113 | 4.7 |
| GCR3 - Well 61 | 8/15/2011 | Green River Basin - Pinedale | 122 | 5.1 |
| GCR3 - Well 62 | 8/20/2011 | Green River Basin - Pinedale | 111 | 4.6 |
| GCR3 - Well 63 | 8/21/2011 | Green River Basin - Pinedale | 90 | 3.8 |
| GCR3 - Well 64 | 8/24/2011 | Green River Basin - Pinedale | 111 | 4.6 |
| GCR3 - Well 65 | 8/29/2011 | Green River Basin - Pinedale | 90 | 3.8 |
| GCR3 - Well 66 | 8/25/2011 | Green River Basin - Pinedale | 89 | 3.7 |
| GCR3 - Well 67 | 8/30/2011 | Green River Basin - Pinedale | 88 | 3.7 |
| GCR3 - Well 68 | 1/6/2011 | TX-LA Salt Basin - Haynesville | 113 | 4.7 |
| GCR3 - Well 69 | 1/14/2011 | TX-LA Salt Basin - Haynesville | 118 | 4.9 |
| GCR3 - Well 70 | 1/28/2011 | TX-LA Salt Basin - Haynesville | 100 | 4.2 |
| GCR3 - Well 71 | 1/27/2011 | TX-LA Salt Basin - Haynesville | 115 | 4.8 |
| GCR3 - Well 72 | 2/5/2011 | TX-LA Salt Basin - Haynesville | 78 | 3.3 |
| GCR3 - Well 73 | 2/7/2011 | TX-LA Salt Basin - Haynesville | 77 | 3.2 |
| GCR3 - Well 74 | 2/15/2011 | TX-LA Salt Basin - Haynesville | 150 | 6.3 |
| GCR3 - Well 75 | 2/14/2011 | TX-LA Salt Basin - Haynesville | 149 | 6.2 |
| GCR3 - Well 76 | 3/2/2011 | TX-LA Salt Basin - Haynesville | 123 | 5.1 |
| GCR3 - Well 77 | 3/9/2011 | TX-LA Salt Basin - Haynesville | 103 | 4.3 |
| GCR3 - Well 78 | 3/10/2011 | TX-LA Salt Basin - Haynesville | 103 | 4.3 |
| GCR3 - Well 79 | 4/9/2011 | TX-LA Salt Basin - Haynesville | 114 | 4.8 |
| GCR3 - Well 80 | 4/18/2011 | TX-LA Salt Basin - Haynesville | 141 | 5.9 |
| GCR3 - Well 81 | 4/19/2011 | TX-LA Salt Basin - Haynesville | 138 | 5.8 |
| GCR3 - Well 82 | 4/20/2011 | TX-LA Salt Basin - Haynesville | 142 | 5.9 |
| GCR3 - Well 83 | 4/23/2011 | TX-LA Salt Basin - Haynesville | 172 | 7.2 |
| GCR3 - Well 84 | 5/1/2011 | TX-LA Salt Basin - Haynesville | 116 | 4.8 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|----------------|---------------------|--------------------------------|---------------------------|---------------|
| GCR3 - Well 85 | 5/2/2011 | TX-LA Salt Basin - Haynesville | 115 | 4.8 |
| GCR3 - Well 86 | 5/14/2011 | TX-LA Salt Basin - Haynesville | 159 | 6.6 |
| GCR3 - Well 87 | 5/15/2011 | TX-LA Salt Basin - Haynesville | 153 | 6.4 |
| GCR3 - Well 88 | 6/1/2011 | TX-LA Salt Basin - Haynesville | 111 | 4.6 |
| GCR3 - Well 89 | 6/9/2011 | TX-LA Salt Basin - Haynesville | 117 | 4.9 |
| GCR3 - Well 90 | 6/7/2011 | TX-LA Salt Basin - Haynesville | 118 | 4.9 |
| GCR3 - Well 91 | 6/30/2011 | TX-LA Salt Basin - Haynesville | 106 | 4.4 |
| GCR3 - Well 92 | 7/1/2011 | TX-LA Salt Basin - Haynesville | 108 | 4.5 |
| GCR3 - Well 93 | 7/29/2011 | TX-LA Salt Basin - Haynesville | 120 | 5.0 |
| GCR3 - Well 94 | 7/28/2011 | TX-LA Salt Basin - Haynesville | 120 | 5.0 |
| GCR3 - Well 95 | 8/21/2011 | TX-LA Salt Basin - Haynesville | 120 | 5.0 |
| GCR3 - Well 96 | 8/22/2011 | TX-LA Salt Basin - Haynesville | 115 | 4.8 |
| GCR3 - Well 97 | 8/30/2011 | TX-LA Salt Basin - Haynesville | 136 | 5.7 |
| GCR3 - Well 98 | 8/29/2011 | TX-LA Salt Basin - Haynesville | 138 | 5.8 |
| GCR4 - Well 1 | 1/11/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 2 | 02/20/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 3 | 1/18/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 4 | 03/26/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 5 | 2/9/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 6 | 04/11/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 7 | 2/16/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 8 | 3/16/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 9 | 03/08/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 10 | 4/1/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 11 | 07/05/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 12 | 7/12/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 13 | 04/27/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 14 | 8/2/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 15 | 07/19/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 16 | 6/20/2011 | Anadarko | 10 | 0.4 |
| GCR4 - Well 17 | 08/09/11 | Anadarko | 10 | 0.4 |
| GCR4 - Well 18 | 8/16/2011 | Anadarko | 10 | 0.4 |
| GCR5 - Well 1 | 1/1/2011 | Haynesville | 6 | 0.3 |
| GCR5 - Well 2 | 1/4/2011 | Haynesville | 10 | 0.4 |
| GCR5 - Well 3 | 1/12/2011 | Haynesville | 15 | 0.6 |
| GCR5 - Well 4 | 1/13/2011 | Haynesville | 15 | 0.6 |
| GCR5 - Well 5 | 1/14/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 6 | 1/15/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 7 | 1/28/2011 | Haynesville | 4 | 0.2 |
| GCR5 - Well 8 | 1/29/2011 | Haynesville | 4 | 0.2 |
| GCR5 - Well 9 | 2/8/2011 | Haynesville | 14 | 0.6 |
| GCR5 - Well 10 | 2/19/2011 | Haynesville | 5 | 0.2 |
| GCR5 - Well 11 | 2/20/2011 | Haynesville | 14 | 0.6 |
| GCR5 - Well 12 | 2/21/2011 | Haynesville | 9 | 0.4 |
| GCR5 - Well 13 | 3/2/2011 | Haynesville | 16 | 0.7 |
| GCR5 - Well 14 | 3/2/2011 | Haynesville | 12 | 0.5 |
| GCR5 - Well 15 | 3/3/2011 | Haynesville | 12 | 0.5 |
| GCR5 - Well 16 | 3/5/2011 | Haynesville | 12 | 0.5 |
| GCR5 - Well 17 | 3/5/2011 | Haynesville | 12 | 0.5 |
| GCR5 - Well 18 | 3/22/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 19 | 3/24/2011 | Haynesville | 19 | 0.8 |
| GCR5 - Well 20 | 3/24/2011 | Haynesville | 16 | 0.7 |
| GCR5 - Well 21 | 3/29/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 22 | 4/4/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 23 | 4/12/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 24 | 4/14/2011 | Haynesville | 15 | 0.6 |
| GCR5 - Well 25 | 4/14/2011 | Haynesville | 14 | 0.6 |
| GCR5 - Well 26 | 4/18/2011 | Haynesville | 15 | 0.6 |



| Well Number | Date Well Completed | Basin | Flowback Duration (Hours) | Duration Days |
|----------------|---------------------|-------------|---------------------------|---------------|
| GCR5 - Well 27 | 4/26/2011 | Haynesville | 22 | 0.9 |
| GCR5 - Well 28 | 4/25/2011 | Haynesville | 14 | 0.6 |
| GCR5 - Well 29 | 5/4/2011 | Haynesville | 10 | 0.4 |
| GCR5 - Well 30 | 5/6/2011 | Haynesville | 8 | 0.3 |
| GCR5 - Well 31 | 5/12/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 32 | 5/20/2011 | Haynesville | 10 | 0.4 |
| GCR5 - Well 33 | 6/1/2011 | Haynesville | 7 | 0.3 |
| GCR5 - Well 34 | 6/5/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 35 | 6/13/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 36 | 6/17/2011 | Haynesville | 3 | 0.1 |
| GCR5 - Well 37 | 6/24/2011 | Haynesville | 5 | 0.2 |
| GCR5 - Well 38 | 7/4/2011 | Haynesville | 15 | 0.6 |
| GCR5 - Well 39 | 7/10/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 40 | 7/14/2011 | Haynesville | 14 | 0.6 |
| GCR5 - Well 41 | 7/23/2011 | Haynesville | 13 | 0.5 |
| GCR5 - Well 42 | 7/23/2011 | Haynesville | 17 | 0.7 |
| GCR5 - Well 43 | 8/4/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 44 | 8/13/2011 | Haynesville | 12 | 0.5 |
| GCR5 - Well 45 | 8/13/2011 | Haynesville | 12 | 0.5 |
| GCR5 - Well 46 | 9/28/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 47 | 8/31/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 48 | 8/31/2011 | Haynesville | 11 | 0.5 |
| GCR5 - Well 49 | 9/15/2011 | Haynesville | | 0.0 |
| GCR5 - Well 50 | 10/6/2011 | Haynesville | 8 | 0.3 |
| GCR5 - Well 51 | 10/14/2011 | Haynesville | 8 | 0.3 |
| GCR5 - Well 52 | 10/21/2011 | Haynesville | 7 | 0.3 |
| GCR5 - Well 53 | 11/3/2011 | Haynesville | 3 | 0.1 |