ATTACHMENT B

URS SHALE GAS EMISSIONS ANALYSIS

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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").

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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).

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

Where:

FR = Average flow rate in cubic feet per hour, under sonic flow conditions.
A = Cross sectional area of orifice (m^2).
T_u = Upstream temperature (degrees Kelvin).
187.08 = Constant with units of $m^2/(sec^2 * K)$.
1.27*105 = Conversion from m^3/second to ft^3/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.

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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.

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Thank you for the opportunity to provide this technical support.

Kind Regards,

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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)

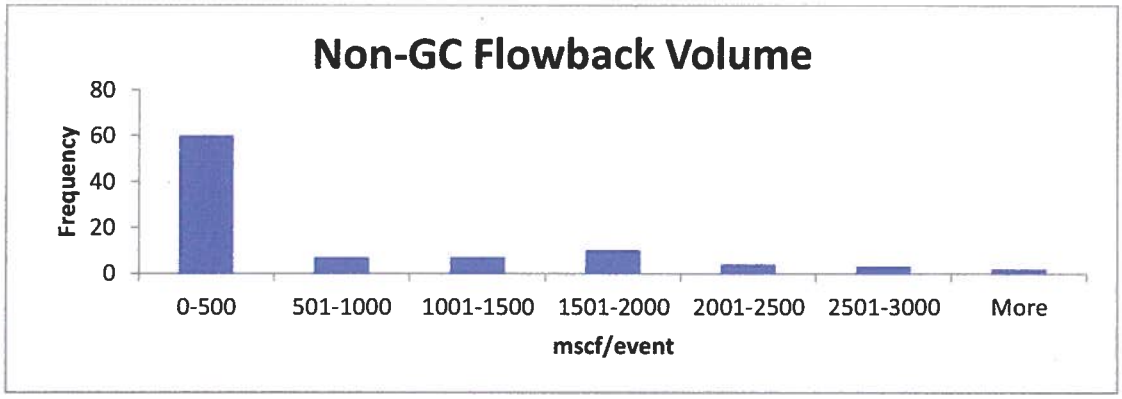

Figure 3: Distribution of Casing Pressures (Non-Green Completions only)

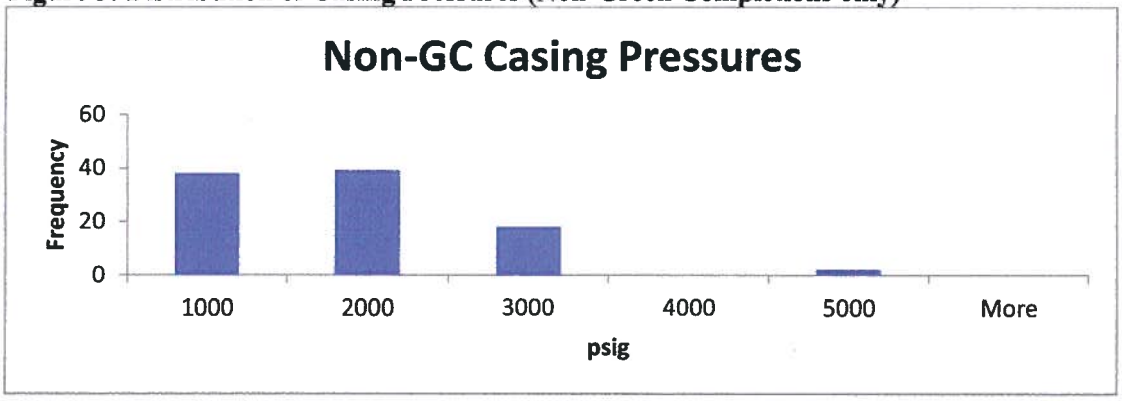

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Figure 4: AAPG Basins Represented in Survey Sample (Non-GC Only)

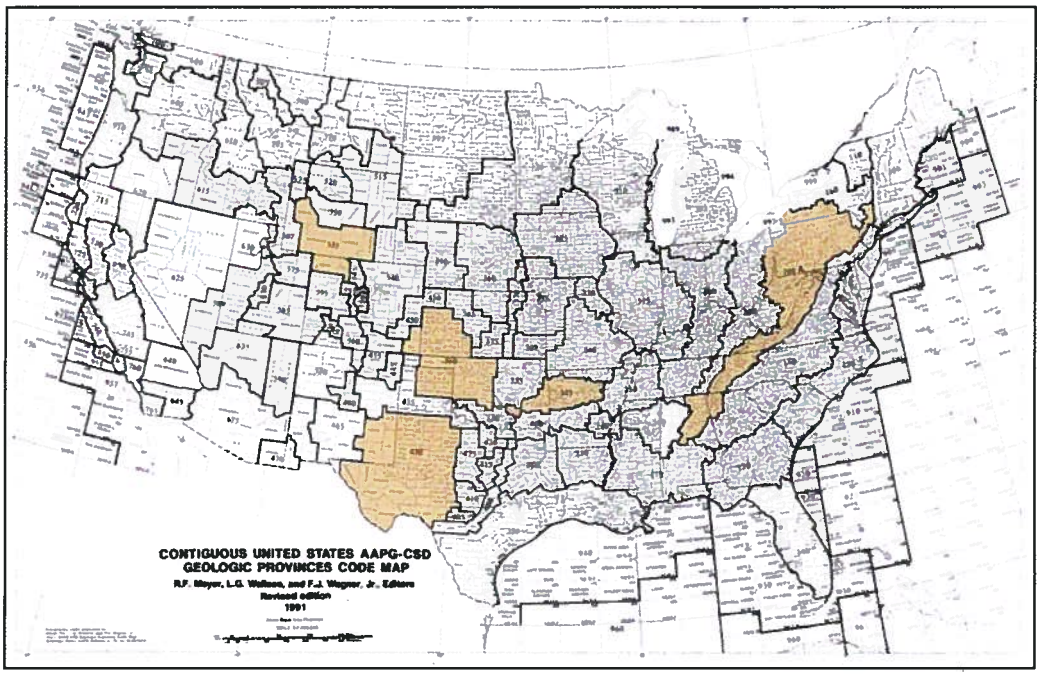
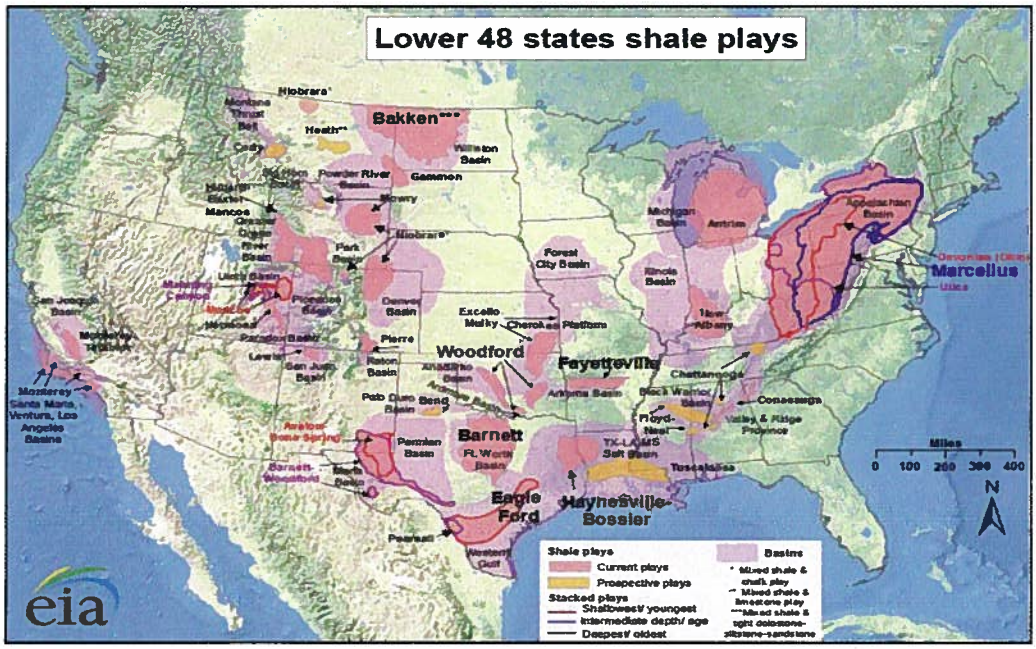


Figure 5: Location of Major Shale Plays in Continental US



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

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

								When Making Gas					
Well Number	Date Well Completed	Basin	Type of Well: Tight Sand, CBM, or Shale?	New Completion or Re-Completion?	Type of Frac: H_2O, N_2, CO_2, or Other	Green Completed? (If Stop Here) (Yes or No)	If No, Flared or Vented?	Flowback Duration (Hours)	MAX Choke Size (64ths)	MAX Casing Pressure (psig)	Flowback (Mscf)	Duration (Days)	AAPG Basin
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	10.7	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	H20	No	Flared	59	32	2900	248	2.5	360
R1 - Well 24	5/18/2011	MidCon - Cana	Shale	New Completion	H20	No	Flared	184	20	2400	303	7.7	360
R1 - Well 25	5/27/2011	MidCon - Cana	Shale	New Completion	H20	No	Flared	36	20	4500	59	1.5	360
R1 - Well 26	6/14/2011	MidCon - Cana	Shale	New Completion	H20	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	691	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	303	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	227	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

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Table 6: Survey Data (cont.)

								When Making Gas					
Well Number	Date Well Completed	Basin	Type of Well: Tight Sand, CBM, or Shale?	New Completion or Re-Completion?	Type of Frac: N_2O, N_2, CO_2, or Other	Green Completed? (If Stop Here) (Yes or No)	If No, Flared or Vented?	Flowback Duration (Hours)	MAX Choke Size (64ths)	MAX Casing Pressure (psig)	Flowback (Mscf)	Duration (Days)	AAPG Basin
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	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	345
R2- Well 11	1/31/2011	360		New Completion	N2		Vented	0	0	0		0.0	360
R2 - Well 12	6/17/2011	360	Tight Sand	New Completion	H2O		Vented	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	1591	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

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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

URS

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

URS

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

URS

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

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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		

URS

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

URS

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

URS

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

URS

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