



February 23, 2009

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Re: Water Well Sampling Report - McPherson A Pad Response

Antero Resources retained Cordilleran (a subdivision of Olsson Associates) to collect water samples from selected water wells in the vicinity of the McPherson A Pad in Garfield County, Colorado. Cordilleran has sampled the selected wells twice prior to this event. The baseline sampling was conducted in August, 2005 and the second round of sampling was conducted in March, 2006. The current sampling event was conducted February 4th and 5th, 2009.

The February 2009 sampling event included the extended analyte list that Antero uses for Baseline Water Well Sampling in the area. This list includes several metals (As, Ba, Cd, Cr, Pb & Ag) and an additional anion (Br) that were not analyzed for in the first two sampling events.

The current and previous analytical results were entered into a spreadsheet for comparison. Over all, there was no significant difference in the results from the three events. The laboratory results for the three sampling events indicates that Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE) and Dissolved Methane were not detected in any of the samples.

The laboratory results for total metals parameters and wet chemistry with anion parameters for the current sampling event appear to be within expected ranges for the area and do not exceed any EPA Maximum Contaminant Levels (MCLs). The reported sulfate concentrations exceeded established secondary drinking water standards in all but one of the current samples tested. However, this is not unusual for the area and the analytical results are comparable to the two previous sampling results. The EPA has established secondary drinking water standards for some parameters, and while these are not enforceable guidelines, the EPA has recommended that water systems adopt them.

The laboratory results for two of the current samples indicate iron at concentrations above the secondary drinking water standard. The detection of iron in water samples from this area is not unusual and the results are comparable to the previous samples collected for these wells.

Total Dissolved Solids (TDS) results for all of the samples collected were found to be above EPA secondary drinking water standards. Elevated TDS results are not unusual for the area and in fact, elevated TDS has been reported in almost all of the baseline samples Cordilleran has collected to date for Antero in the area surrounding the McPherson A pad.

During the February 2009 sampling event, selenium was not detected in any of the samples above the EPA MCL of 0.05 mg/L. Whereas during previous sampling events, five of the wells sampled have had concentrations of total selenium that have exceeded the MCL. Selenium has been detected in groundwater samples throughout the area and the concentrations found in these wells are representative of those found in surrounding areas.

The six additional metals that were reported during the current sampling event (arsenic, barium, cadmium, chromium, lead and silver) and the additional anion (bromide) do not have corresponding data from the first two sampling events for these wells; however, the results were compared to those of other baseline water well samples collected by Cordilleran in the surrounding area and they appear to be representative of the local groundwater quality.

The analytical results for the samples collected during the February 2009 sampling event were compared to the results from two previous sampling events, and to analytical results of samples collected by Cordilleran from water wells in the surrounding area. The current results are comparable to the groundwater quality in the area and are not significantly different from the two previous sampling events for these wells.

Sincerely,
Cordilleran, a Division of Olsson Associates



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McPherson A Pad Response
Groundwater Laboratory Analytical Summary
Data Comparison

Data Comparison

INORGANIC ANALYSIS

[illegible]

полюс, расположенный в 300 миль от центра планеты.

N/A = Not Analyzed

Antero Resources - Water Quality Report

McPherson A Pad Response

Groundwater Laboratory Analytical Summary

Data Comparison

ORGANIC ANALYSIS

OWNER NAME	Sample ID	Sample Source	Date Sampled	Time Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (total) (ug/L)	Methyl Tertiary Butyl Ether (MTBE) (ug/L)	Methanol (ppm)	Iron Related (CFU/ml)	Sulfate Reducing Bacteria (CFU/ml)	Slime Forming Bacteria (CFU/ml)
Dennis Davidson	DD-W1	Well	8/25/2005	1010	<0.50	<0.50	<0.50	<1.5	<1.0	<0.010	9,000	absent	12,500
			3/29/2006	0854	<0.50	<0.50	<0.50	<1.5	<1.0	<0.010	2,300	absent	350,000
			2/5/2009	1205	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	25	absent	66,500
Donald Hings (Western Slope Aggregate)	DH-W1	Well	8/23/2005	1128	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	700,000	66,500
			3/28/2006	1317	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	absent	66,500
			2/5/2009	1335	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	2,300	absent	500
Howard and Leslie Kancian	HL-K-W1	Well	8/23/2005	1332	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	5,000	500
			3/29/2006	1126	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	2,300	absent	66,500
			2/4/2009	1247	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	500	absent	500
Jeff Payne	JP-W1	Well	8/25/2005	0930	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	25	1,300	500
			3/29/2006	1146	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	25	absent	66,500
			2/5/2009	1023	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	25	absent	500
Kenneth Ard	KA-W1	Well	8/25/2005	1107	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	700,000	350,000
			3/29/2006	0929	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	absent	350,000
			2/5/2009	1117	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	2,300	absent	66,500
Kimberly Barta	KB-W1	Well	8/23/2005	1050	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	18,000	12,500
			3/28/2006	1246	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	absent	absent	66,500
			2/4/2009	1147	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	absent	absent	12,500
Kurt Grimm	KG-W1	Well	8/25/2005	0841	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	absent	12,500
			3/29/2006	1042	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	2,300	absent	350,000
			2/5/2009	0932	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	25	absent	500
Mike Grimm	MG-W1	Well	8/25/2005	0815	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	absent	12,500
			3/29/2006	1011	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	absent	350,000
			2/5/2009	0856	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	500	absent	12,500
Pat and Tom Shuster	PTS-W1	Well	8/23/2005	0950	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	3,300	5,000	66,500
			3/28/2006	1044	<0.50	<5.0	<0.50	<1.5	<1.0	<0.010	9,000	15,000	66,500
			2/4/2009	1326	<1.0	<5.0	<1.0	<3.0	<1.0	<0.010	absent	Present	12,500

EPA Drinking Water Standards	5	1,000	680	10,000	N/A	N/A		
EPA National Secondary Drinking Water Standard	5	1,000	680	10,000	N/A	N/A		
0.053	Indicates value above Standard							

Qualifier on lab data - see comments:

- H- Re-Analyzed: The indicated analytical results were generated from a re-injection of the same sample extract or aliquot.
- I- Associated batch QC was outside the established quality control range for precision.
- J- The sample matrix interfered with the ability to make any accurate determination; spike value is high.
- K- Re-analyzed: The indicated analytical results were generated from a re-extraction or preparation of the sample.
- L- Re-analyzed: The indicated analytical results were generated from a re-extraction or preparation of the sample.
- P1- The RPD value is not applicable for sample concentrations less than 5 times the reporting limit.
- Q- Sample held beyond accepted holding time.
- V- Lab note: Additional QC info: the sample concentration is too high to evaluate accurate spike recoveries.

ug/l - micrograms per liter
ppm - parts per million
mg/L - milligrams per liter
NA - Not Analyzed