

**UPPER CROW CREEK
DESIGNATED GROUNDWATER BASIN STUDY
WELD COUNTY COLORADO**

Terracon Project No. 25087038
August 22, 2008

Prepared for:

**COLORADO OIL AND GAS CONSERVATION COMMISSION
1120 Lincoln Street
Denver, Colorado 80203-2136**

Prepared by:

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Terracon

Terracon

Consulting Engineers & Scientists

August 22, 2008

Mr. John Axelson
Colorado Oil and Gas Conservation Commission
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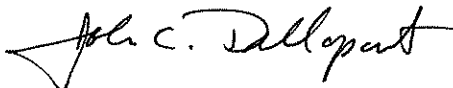
**Re: Final Report: Upper Crow Creek Designated Groundwater Basin Study
Weld County, Colorado
P.O. # OE PHA 0900000047
Terracon Project No. 25087038**

Dear Mr. Axelson:

Please find enclosed two copies of Terracon's revised Upper Crow Creek Designated Groundwater Basin Study in Weld County, Colorado.

If you have questions or require additional information, please do not hesitate to contact us at (303) 423-3300.

Sincerely,
Terracon Consultants, Inc.



John C. Dellaport, P.E., P.G.
Senior Environmental Engineer



Russell Pickering, M.S.
Environmental Department Manager

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**UPPER CROW CREEK DESIGNATED GROUNDWATER BASIN STUDY
WELD COUNTY
AUGUST 22, 2008
PROJECT NO. 25087038**

1.0 INTRODUCTION

In June 2008, Terracon Consultants, Inc. (Terracon) completed a groundwater study of the High Plains Aquifer within the Upper Crow Creek Designated Groundwater Basin (study area) on behalf of the Colorado Oil and Gas Conservation Commission (COGCC). A total of 14 Townships & Ranges, in whole or in part, cover the study area which is depicted on Figures 1A and 1B. The purpose of the study was to provide COGCC a more comprehensive database of analytical results from groundwater samples in the study area and to help determine whether impacts from oil and gas operations have already occurred.

COGCC requested that a minimum of 20 water wells be selected with a minimum of one water well per each Township & Range. Additional wells were to be selected in Townships & Ranges that have higher concentrations of oil and gas wells. Water samples were to be analyzed for 29 inorganic and organic constituents that include indicators of general water geochemistry and indicators of potential oil and gas production impacts. Terracon's objective was to identify 25 domestic wells in the study area, contact the owners for access, sample the wells, and prepare a water quality summary report.

2.0 FIELD ACTIVITIES

2.1 Well Selection

Terracon used the Colorado Division of Water Resources (DWR) online database of registered domestic, irrigation and stock wells to prepare a preliminary list of 25 candidate domestic wells for sampling. A secondary and tertiary well were also identified for each primary well in the event that the primary well could not be sampled. On May 15, 2008 a COGCC representative met with Terracon and discussed the overall project objectives and approved the preliminary well sampling locations. The DWR database provided well permit numbers, owner name, owner address, well location information and, where available, total well depth and depth to static water level. Terracon obtained telephone numbers of the well owners by reviewing copies of the well permits at the State Engineer's Office in Denver, Colorado and by using online telephone directories. Well owners that granted approval to have their wells sampled were sent access agreement letters that were signed and returned to Terracon. An example of the access agreement letter used for this study is included in Appendix A. Owners will be provided a copy of the analytical report for their well water at the conclusion of this study.

2.2 Sample Locations

A finalized list of twenty-four domestic wells and one municipal well (Town of Grover) was compiled. Each Township & Range in the study area contained a minimum of one proposed sampling well, with the exception of Township 12 North (T12N), Range 63 West (R63W) and T10N, R60W. These Townships & Ranges are partly contained in the study area and contain relatively few wells. One well owner was unavailable during the sampling event and this well was not sampled. Twenty-three domestic wells and one municipal well were sampled.

2.3 Well Sampling

From June 2, 2008 through June 9, 2008, Terracon sampled the wells, interviewed the owners, surveyed the well heads, and photographed the sampling points and well heads. The locations of sampled wells and permitted oil and gas wells are shown on Figures 1A and 1B. A summary of sampled well information including permit number, well location (Township, Range, and Section), well depth and water level is included in Table 1.

Prior to sampling, well owners were asked specific questions regarding their water system from a standardized questionnaire (see field forms in Appendix B). The objective was to collect the water sample upstream of any holding tanks, pressure tanks, water softeners, in-line filters or other treatment systems that may affect the integrity of the water sample. Seven wells were sampled upstream of the pressure tank and treatment system. Fifteen wells were sampled upstream of the treatment system but downstream from the pressure tank. Two wells were sampled downstream from an in-line filter. Three water systems had holding tanks and the water samples were collected upstream from the tanks. The majority of samples were collected from an outside spigot or an in-ground vault.

Wells were purged to remove stagnant water from the well and distribution system and allow a representative water sample to be collected. During purging, Terracon monitored the water for the field indicator parameters pH, specific electrical conductance (EC), dissolved oxygen (DO) and temperature (T). These parameters were measured using a calibrated YSI 556 meter. Water clarity, color and odor were also noted and recorded on the field form during purging. When the indicator parameters stabilized, the water sample was collected. Typically, wells were purged for 15 to 20 minutes, and 15 gallons to 20 gallons of water were removed. After purging, water samples were collected and analyzed for 29 inorganic and organic parameters as listed below:

- Total metals – arsenic, barium, cadmium, calcium, chromium, iron, lead, magnesium, manganese, potassium, sodium and selenium.
- Organics – benzene, ethylbenzene, toluene, xylenes (total) and methane
- Inorganics – bromide, chloride, fluoride, nitrate-nitrogen, nitrite-nitrogen, nitrate/nitrite – nitrogen and sulfate

- Other – carbonate, bicarbonate, pH, specific conductance and total dissolved solids

Water samples were collected in laboratory-supplied, pre-cleaned bottles and labeled with sample identification (well permit number), date, time and analysis requested. The samples were cooled to approximately 4°C with ice and shipped in custody-sealed coolers using Terracon's chain-of-custody procedure to Environmental Science Corporation (ESC) in Mt. Juliet, Tennessee. Laboratory analysis reports are included in Appendix C.

Sample container type, size and preservatives used are listed on the field forms. Unfiltered samples for total metals analysis (arsenic, lead, barium, calcium, chromium, iron, magnesium, manganese, potassium and sodium) were placed in a field-preserved 500 milliliter (ml) high density polyethylene (HDPE) bottles and were analyzed using methods 200.7 and 200.8.

In addition to total metals analyses, these samples were analyzed for Resource Conservation and Recovery Act dissolved metals (mercury, arsenic, barium, cadmium, chromium, lead, selenium and silver) and analytical results are presented in Appendix D. The samples were placed in unpreserved 500 ml HDPE bottles and sent under chain-of-custody to ESC. The analytical laboratory filtered, preserved and analyzed the samples using methods 7470A and 6010B. Total metals and dissolved metals concentrations were compared for variance and the results are summarized on Table D1 (Appendix D).

Methane samples were collected using the method specified in the COGCC Scope of Work for the Upper Crow Creek Designated Groundwater Basin Study. Methane sampling was conducted by filling two volatile organic acid (VOA) vials from a sampling tube submerged in a 5-gallon bucket. This method minimizes the loss of methane due to volatilization.

A duplicate water sample ("Duplicate") was collected from well 42068 (Sample 42068) and analyzed by the same laboratory for the same constituents as sample 42068 to evaluate laboratory and field precision. A relative percent difference (RPD) was calculated to determine if the sample was within the project precision requirements. Results of the calculation are discussed in Section 3.2.4.

2.4 Well Head Surveying

Terracon used a Trimble GeoXH Handheld Receiver (GeoXH) with an external antenna to collect and record the position of the water wells. The GeoXH is a Differential Global Positioning System (DGPS) that meets the minimum standards of COGCC Rule 215. After postprocessing, data collected with the GeoXH and antenna have an accuracy to within 20 centimeters of the actual location. Position coordinates (latitude, longitude and elevation above mean sea level [msl]) were recorded for each well head and reported to five decimal place precision. Survey offsets were used where wells were located in vaults or near buildings that caused an interruption of signals from satellites. Positional offsets are described on the field forms. Well head position coordinates are listed on the field forms (Appendix B).

Upon completing the DGPS surveys, Terracon discovered that it had incorrect well permit numbers for four sampled wells (Sample Nos. 2038, 25784, 43057 and 137661). Corrected well permit numbers are indicated on Table 1 and on the field forms. Two sampled wells (Sample Nos. 137661 and 16032) were determined to be slightly outside the study area (Figures 1A and 1B).

2.5 Photographs

Terracon collected a digital photograph of each well and sampling point and annotated the photographs with sample identification and site view. Photographs are included on the back of the sampling forms.

3.0 RESULTS

3.1 Water System Data

Water system data was obtained from the SEO well permits, DWR online database and from discussions with well owners. Of the 24 wells sampled, well depths ranged from 33 feet to 463 feet, with an average well depth of 205 feet. As depicted on the well depth histogram (Graph 1), approximately 50 percent of the wells sampled had depths ranging from 200 to 300 feet. Static water level depths ranged from 7 to 240 feet, with an average static water level of 76 feet. A histogram of static water levels is included as Graph 2. The majority of wells were equipped with submersible pumps with the exception of two wells equipped with surface-mounted jet pumps.

3.2 Water Quality Data

3.2.1 Metals

Water samples were analyzed for total arsenic, barium, cadmium, calcium, chromium, iron, lead, magnesium, manganese, potassium, sodium and selenium and laboratory results were compared to the Colorado Groundwater Standards (CGS) (The Basic Standards for Ground Water, Regulation 41, 5 CCR 1002-41, effective May 31, 2008). None of the samples contained metal concentrations above their respective CGS, with the following exceptions. One Sample 271304 contained arsenic (0.014 milligrams per liter [mg/l]) above the arsenic CGS (0.01 mg/l). Fourteen of the samples contained arsenic above the method detection limit. Arsenic concentrations ranged from 0.001 to 0.014 mg/l. A histogram depicting arsenic concentrations is included as Graph 3. Sample 42068 (municipal well) contained iron (0.71 mg/l) above the iron CGS (0.3 mg/l). Samples 180142 and 146454 contained manganese (0.23 mg/l and 0.082 mg/l, respectively) above the CGS for manganese (0.05 mg/l). Iron and manganese standards are considered secondary drinking water parameters (Table 2 of Regulation 41).

None of the samples contained cadmium or chromium above method detection limits. One sample (180142) contained a detectable concentration of lead (0.0013 mg/l) which is below the CGS for lead (0.05 mg/l). Unregulated concentrations of barium, calcium, lead, magnesium, potassium, sodium and selenium were found in some of the samples.

Calcium, magnesium, sodium and potassium are major cations that contribute to the "hardness" of the water. The concentrations of these metals were plotted on stiff diagrams (Figures 2A and 2B) which are discussed in Section 4.0.

Terracon compared the total metals and dissolved metals concentrations to evaluate the magnitude of variance between the two metals concentrations. As indicated on Table D1 (Appendix D), there was a small variance in total versus dissolved concentrations for barium, ranging from no change to 0.052 mg/l. For arsenic and selenium, dissolved metal concentrations were reported higher than their respective total metal concentrations. Per a discussion with ESC Laboratories this was caused by a higher detection limit for the dissolved metal method (6010B, 0.020 mg/l) than the total metal method (200.8, 0.001 mg/l). According to the laboratory, the reported dissolved metal concentrations were susceptible to matrix interference from other constituents in the water sample because the arsenic and selenium dissolved concentrations were detected at or just above the detection limit. As a result, the reported dissolved metal concentrations is slightly higher than the total metal concentrations for arsenic and selenium. No variance comparisons were able to be conducted on the remaining metals because either the total or dissolved metal concentrations were below the detection limit.

3.2.2 Organics

Water samples were analyzed for benzene, toluene, ethylbenzene, xylenes and dissolved methane. These are petroleum hydrocarbons typically found in petroleum products such as oil and natural gas and may be indicators of groundwater impacts. None of the samples analyzed contained detectable concentrations of these constituents.

3.2.3 Inorganics

Water samples were analyzed for the major anions which include bromide, chloride, fluoride and sulfate and the nitrogen compounds which include nitrate (as nitrogen), nitrite (as nitrogen) and nitrate/nitrite (as nitrogen). None of the samples contained chloride, fluoride, nitrogen compounds or sulfate above their respective CGS with the exception of sample 146454 which contained sulfate (640 mg/l) above the CGS of 250 mg/l. Twenty-two of the samples contained sulfate concentrations below 100 mg/l and two samples contained sulfate concentrations between 100 and 200 mg/l. A histogram depicting relative sulfate concentrations is included as Graph 4. The sulfate standard is considered a secondary drinking water parameter (Table 2 of Regulation 41).

Chloride, fluoride and sulfate are major anions and the concentrations of these metals were plotted on stiff diagrams (Figures 2A and 2B) which are discussed in Section 4.0.

3.2.4 Quality Assurance/Quality Control

The RPD for the duplicate of sample 42068 was calculated for each constituent. The highest RPD calculated was 21 percent for TDS (Sample 42068 = 260 mg/l, Duplicate Sample = 320 mg/l). Terracon defines an acceptable RPD at 25 percent or less. Therefore, this sample is within project precision requirements. The RPD is calculated as follows:

$$\text{RPD (\%)} = ((S - R) / 0.5 \times (S + R)) \times 100$$

Where: S = Sample Result
D = Duplicate Result

4.0 WATER GEOCHEMISTRY

The ionic composition of ground-water samples can be represented by the stiff diagram. Stiff diagrams are used to compare the ionic composition of water samples between different locations, depths, or aquifers. The stiff diagram is a polygon created from three horizontal axes extended on both sides of a vertical axis. Cations are plotted on the left side of the axis and anions are plotted on the right side, both in milliequivalents per liter (meq/L). A greater distance from the vertical axis represents a larger ionic concentration. The diagram size is a relative indication of the dissolved solids concentration. Stiff diagrams showing relative calcium, magnesium, sodium and potassium, fluoride, chloride, and sulfate concentrations were produced for the water samples and are presented on Figures 2A and 2B.

In the northwest part of the study area near Hereford and northwest of Grover, the predominant cations in the water samples were calcium and magnesium. Concentrations of sulfate, fluoride and chloride anions were relatively low. Progressing to the south, the predominant cations in the water samples were sodium and potassium. This was evident in the Grover area where eight water samples had sodium and potassium cation dominated water geochemistry. In the southern half of the study area, the predominant cations were sodium and potassium.

Water samples were analyzed for carbonate, bicarbonate, pH, specific conductance and total dissolved solids (TDS). None of the samples contained carbonate ion above the method detection limit. The water chemistry is more bicarbonate as this anion was detected in all of the samples, ranging from 150 to 300 mg/l. The pH of the water samples was slightly basic, ranging from a minimum of 7.5 to a maximum of 8.7 and an average of 8.1. Specific conductance ranged from 310 to 1,800 micromhos per centimeter.

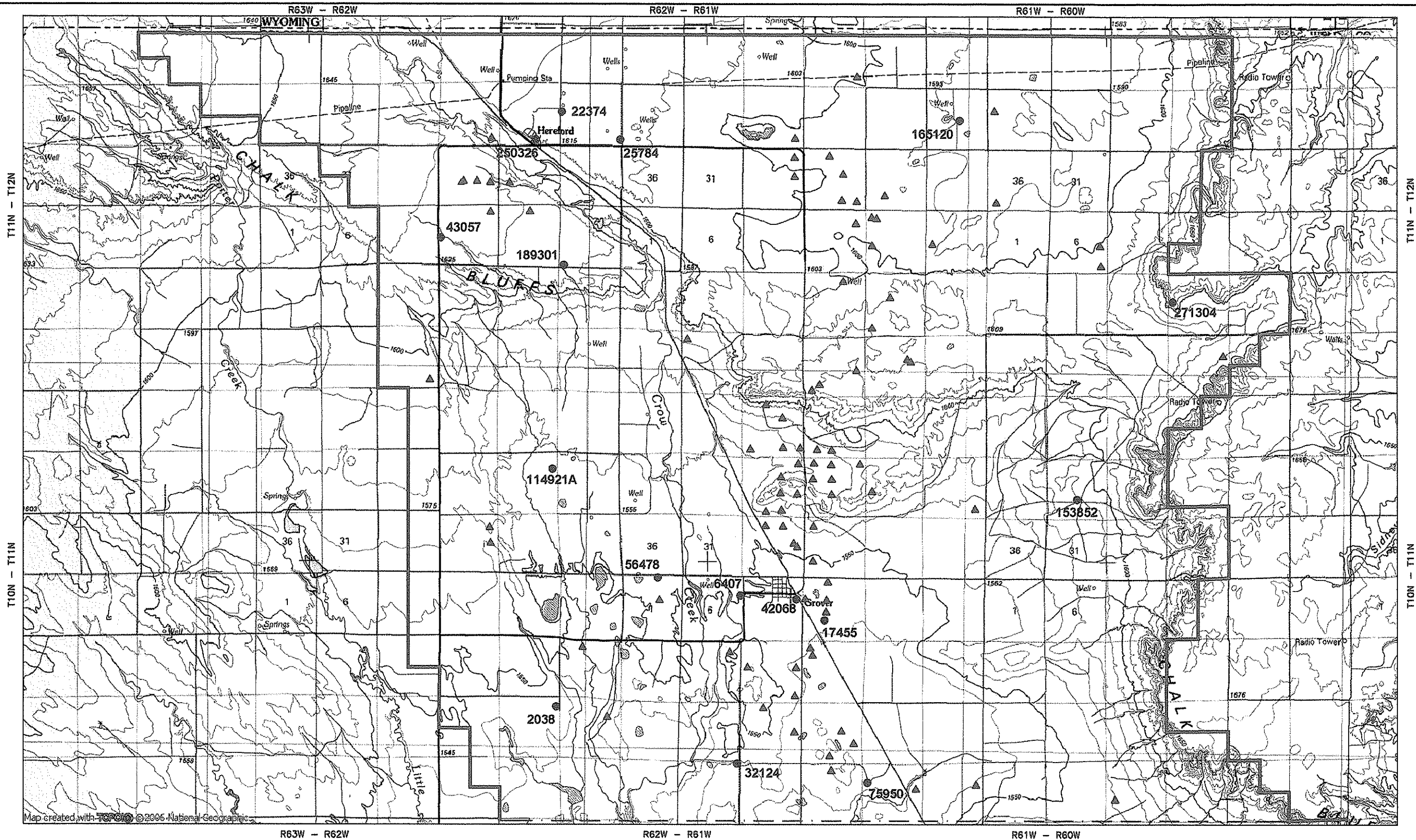
TDS are reported as a concentration value in mg/l and are calculated by summing all major ions; TDS concentrations often are used to compare water quality between different groups of water samples. TDS ranged from a minimum of 230 mg/l to a maximum of 1,200 mg/l. The maximum concentration was detected in sample 146454. The average TDS of the samples was 376 mg/l. As depicted on Figures 3A and 3B, TDS concentrations are fairly consistent across the study

area with the exception of the 1,200 mg/l concentration in the southern study area. A histogram depicting TDS concentrations is included as Graph 5.

5.0 CONCLUSIONS

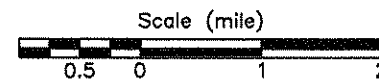
Terracon sampled twenty-three domestic wells and one municipal well in the Upper Crow Creek Designated Groundwater Basin. The conclusions from this study are presented below:

- Iron exceeded the secondary drinking water standard (0.3mg/l) in one sample.
- Manganese exceeded the secondary drinking water standard (0.05 mg/l) in two samples.
- Sulfate exceeded the secondary drinking water standard (250 mg/l) in one sample.
- Arsenic exceeded the drinking water standard (0.01 mg/l) in one sample.
- No benzene, ethylbenzene, toluene, xylenes or dissolved methane concentrations were detected in any of the samples.
- Lead was detected in one sample at a concentration below the CGS (0.05 mg/l).
- The average TDS concentrations was 376 mg/l. One sample had a TDS concentration of 1,200 mg/l.

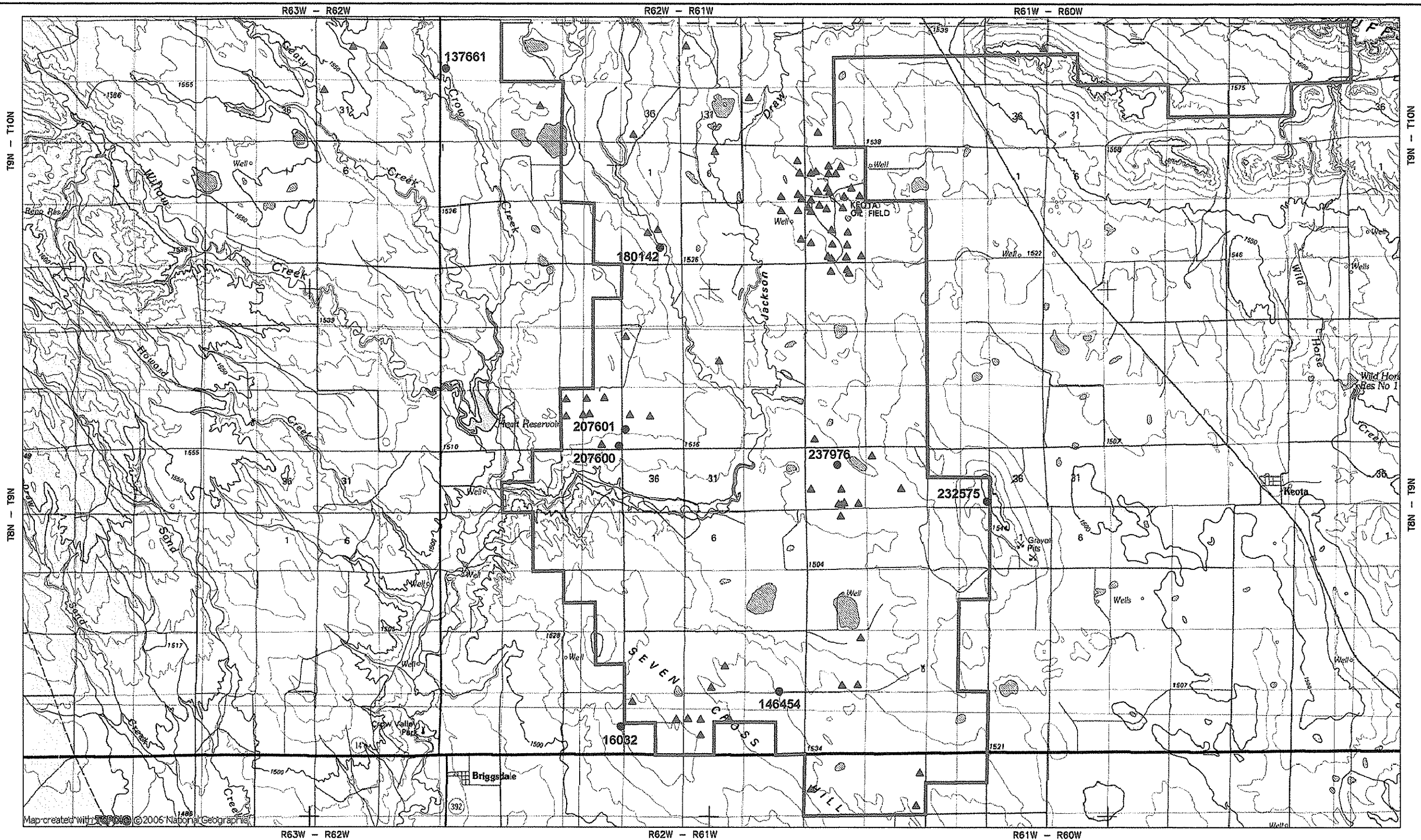


LEGEND AND NOTES

- — Study Area Boundary
- # — Sampled Well Location and Sample I.D.
- ▲ — COGCC-Permitted Oil/Gas Well Location
- - - - North/South Study Area Diagram Match Line

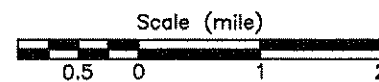


SAMPLE LOCATIONS - NORTH STUDY AREA UPPER CROW CREEK DESIGNATED GROUNDWATER BASIN STUDY WELD COUNTY, COLORADO		
Prepared for: Colorado Oil and Gas Conservation Commission		
Project Mngr: JCD	 10825 West I-70 Frontage Road North Wheat Ridge, Colorado 80033	Project No. 25087038
Designed By:		Scale: 1:100,000
Checked By: RP		Date: 07-31-08
Approved By: RP		Drawn By: MLL
File Name: 25087038 Fig 1.dwg		Figure No. 1A

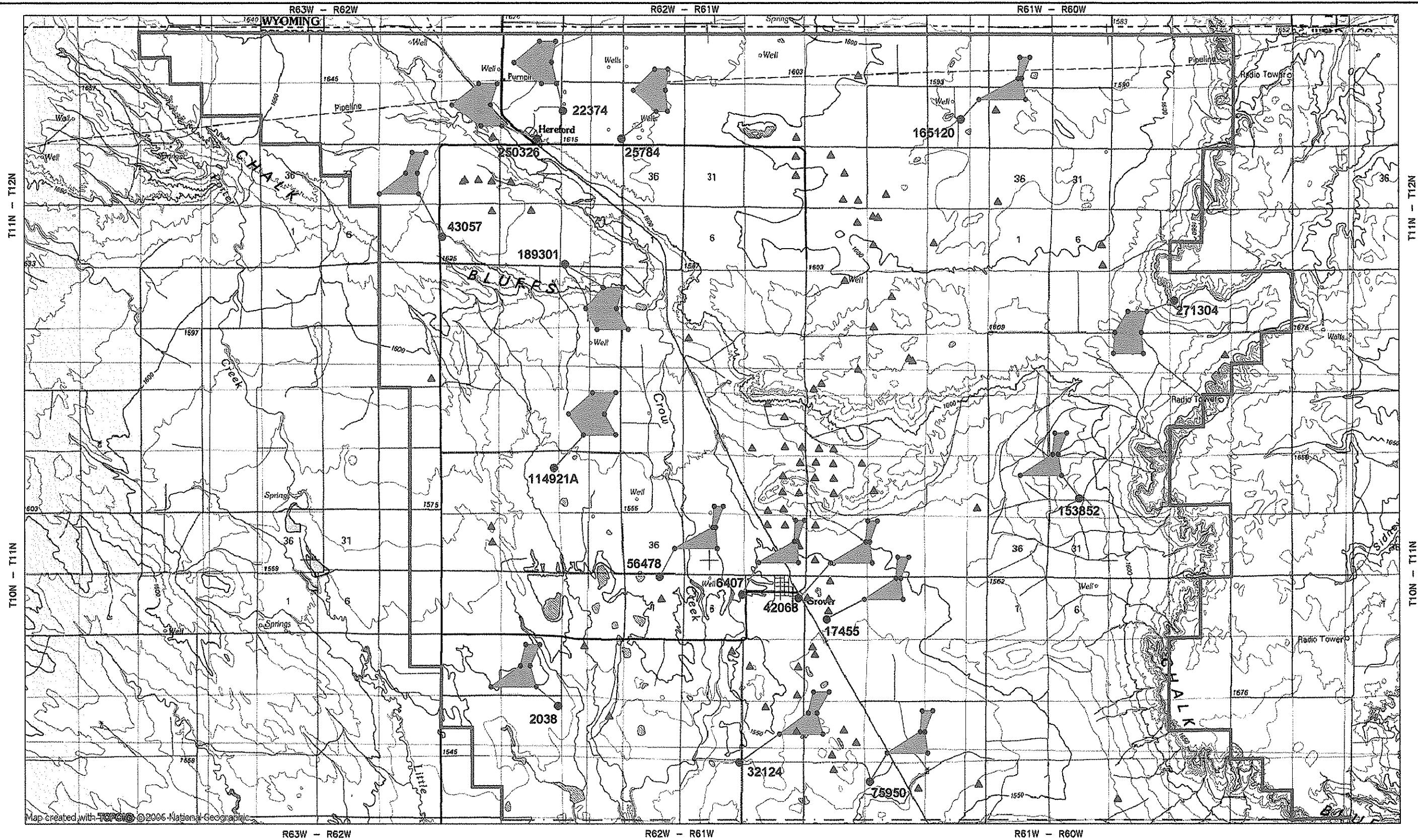


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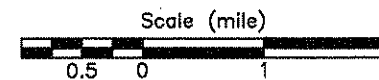
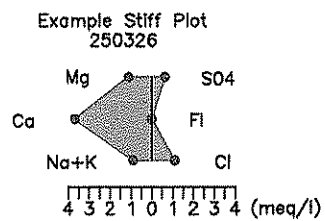


SAMPLE LOCATIONS - SOUTH STUDY AREA		
UPPER CROW CREEK DESIGNATED GROUNDWATER BASIN STUDY		
WELD COUNTY, COLORADO		
Prepared for: Colorado Oil and Gas Conservation Commission		
Project Mngr: JCD	Terracon 10625 West I-70 Frontage Road North Wheat Ridge, Colorado 80033	Project No. 25087038
Designed By:		Scale: 1:100,000
Checked By: RP		Date: 07-31-08
Approved By: RP		Drawn By: MLL
File Name: 25087038 Fig 1.dwg		Figure No. 1B

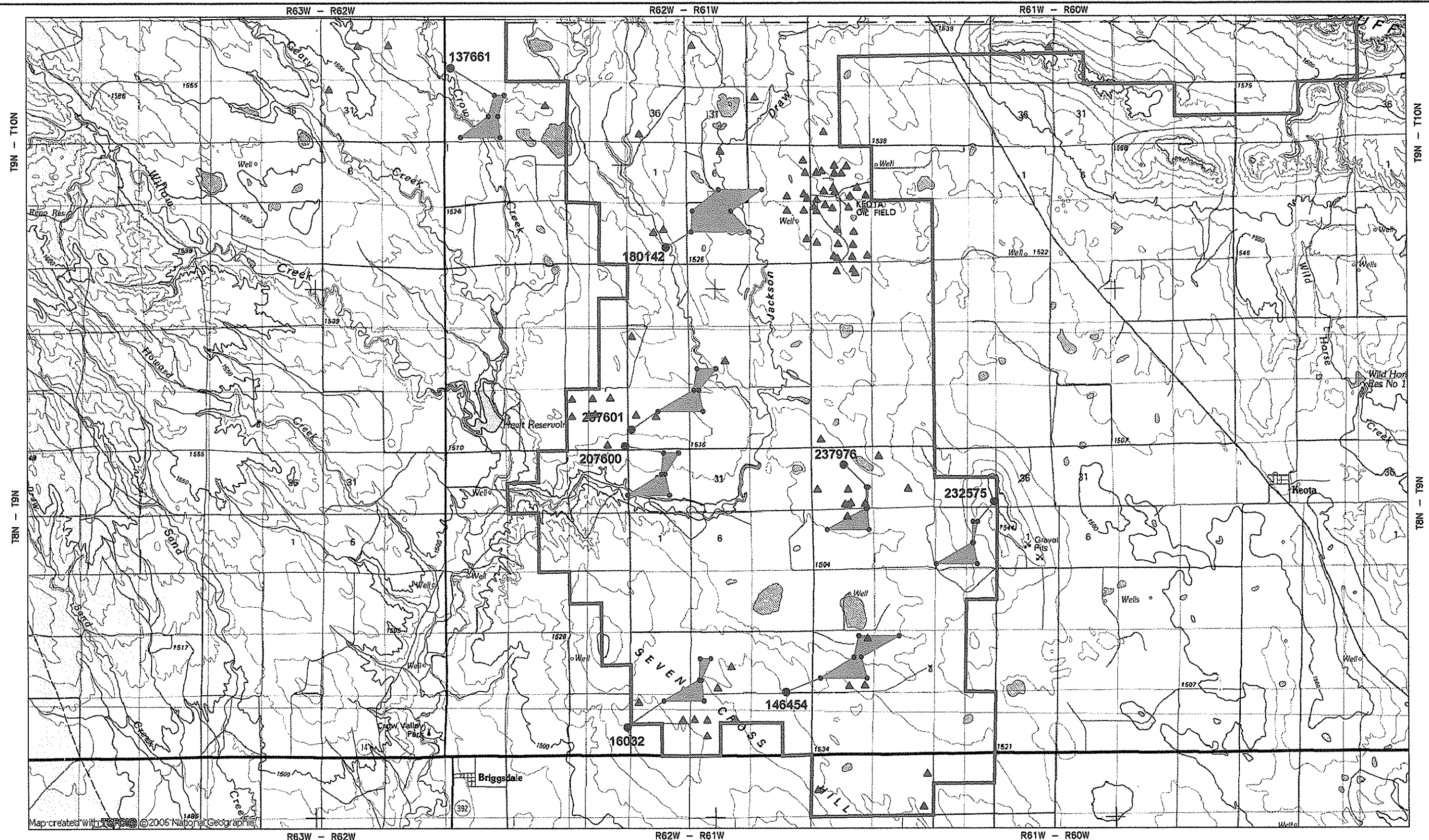


LEGEND AND NOTES

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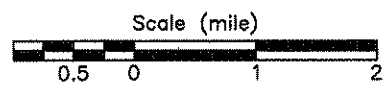
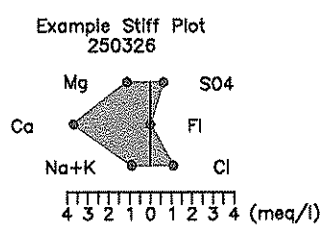


CATION-ANION STIFF DIAGRAMS - NORTH STUDY AREA		
UPPER CROW CREEK DESIGNATED GROUNDWATER BASIN STUDY		
WELD COUNTY, COLORADO		
Prepared for: Colorado Oil and Gas Conservation Commission		
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Checked By: RP		Date: 07-31-08
Approved By: RP		Drawn By: MLL
File Name: 25087038 Fig 2.dwg		Figure No. 2A

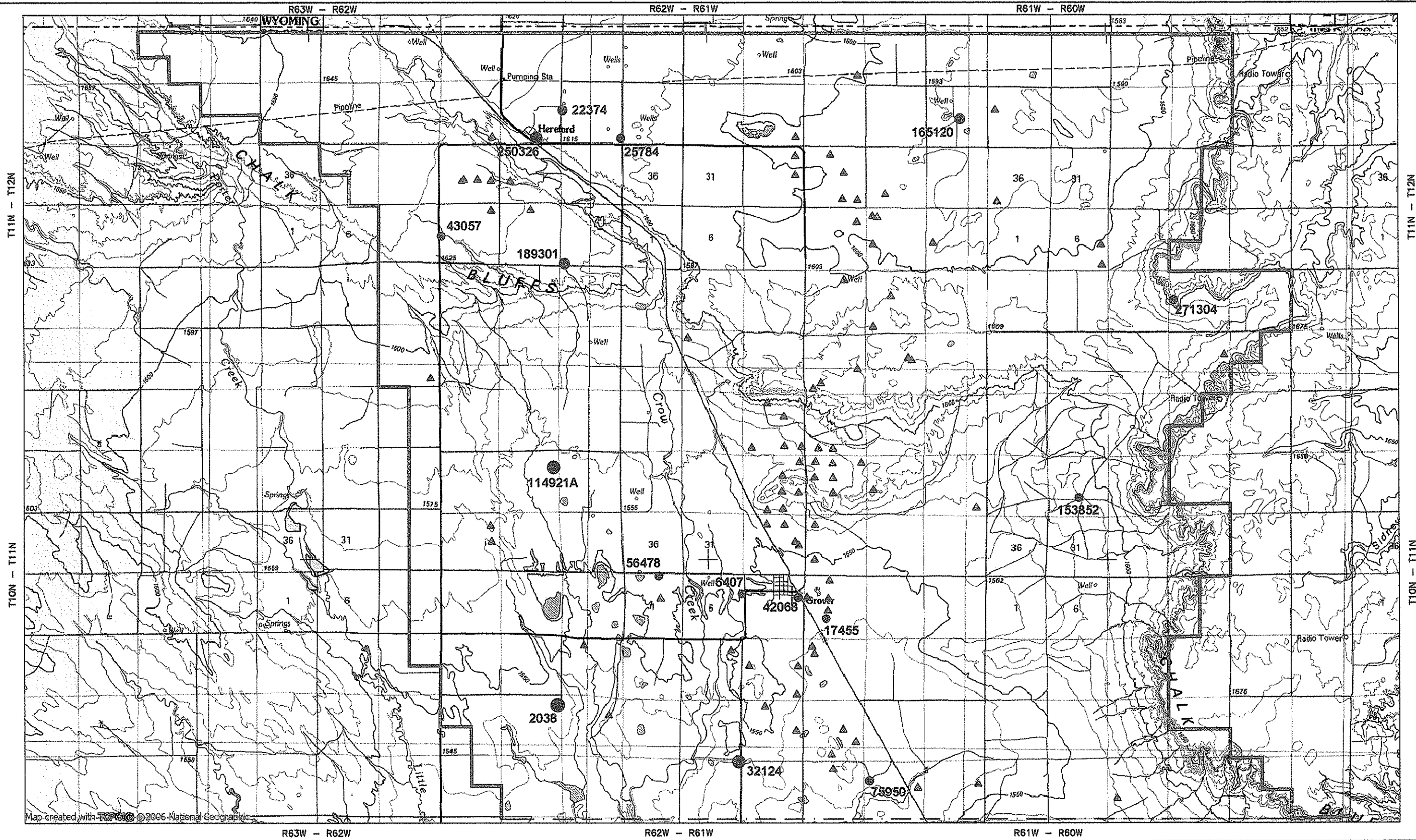


LEGEND AND NOTES

- Study Area Boundary
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Prepared for: Colorado Oil and Gas Conservation Commission		
Project Mngr: JCD	 10625 West I-70 Frontage Road North Wheat Ridge, Colorado 80033	Project No. 25087038
Designed By:		Scale: 1:100,000
Checked By: RP		Date: 07-31-08
Approved By: RP		Drawn By: MLL
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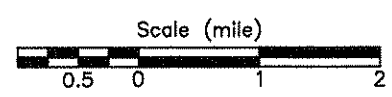


LEGEND AND NOTES

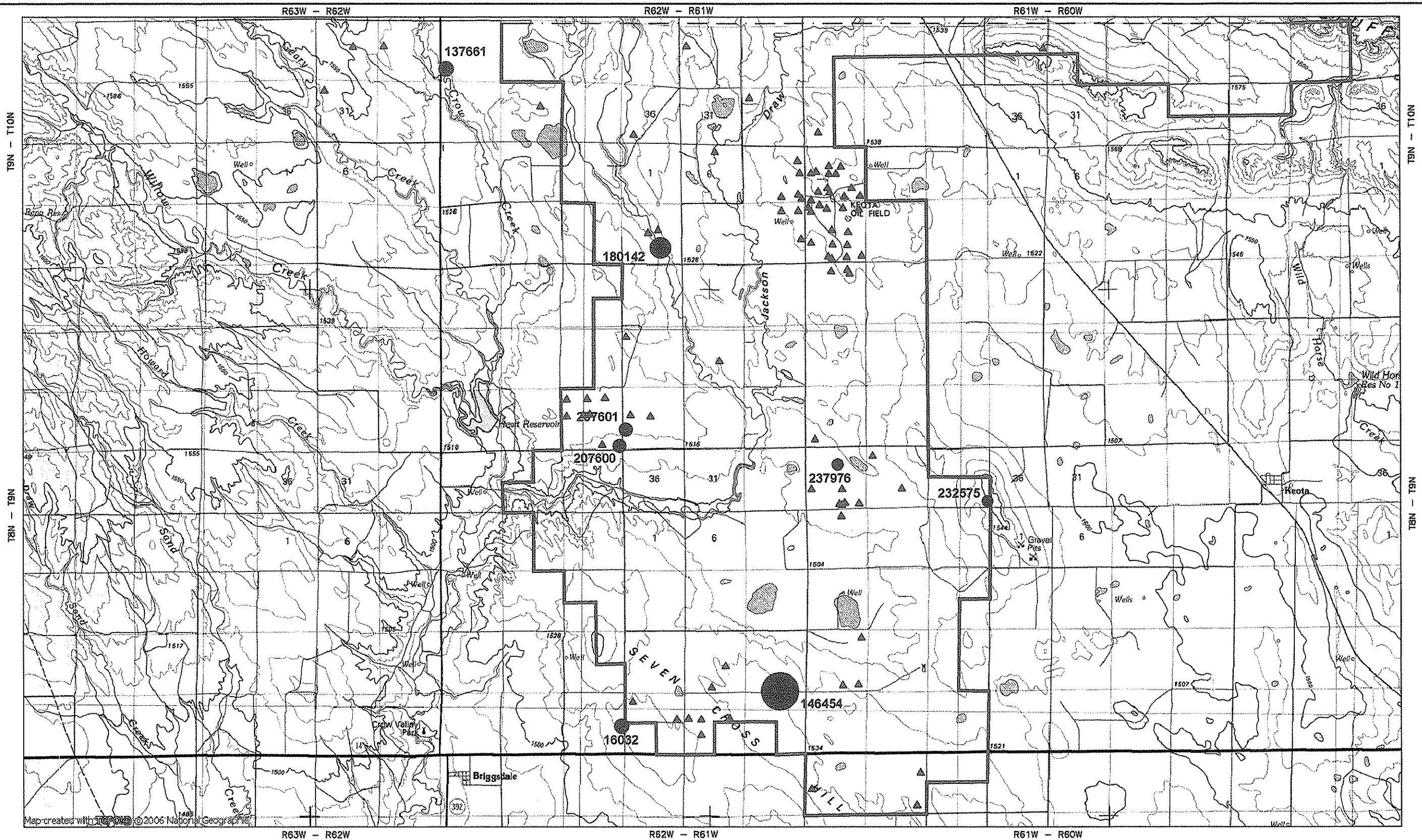
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Total Dissolved Solids Concentration Key

- 200 mg/l
- 400 mg/l
- 600 mg/l
- 800 mg/l
- 1,000 mg/l
- 1,200 mg/l



TOTAL DISSOLVED SOLIDS DISTRIBUTION - NORTH STUDY AREA		
UPPER CROW CREEK DESIGNATED GROUNDWATER BASIN STUDY		
WELD COUNTY, COLORADO		
Prepared for: Colorado Oil and Gas Conservation Commission		
Project Mngr: JCD	Terracon 10625 West I-70 Frontage Road North Wheat Ridge, Colorado 80033	Project No. 25087038
Designed By:		Scale: 1:100,000
Checked By: RP		Date: 07-31-08
Approved By: RP		Drawn By: MLL
File Name: 25087038 Fig 3.dwg		Figure No. 3A

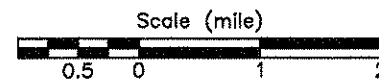


LEGEND AND NOTES

- Study Area Boundary
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- ▲ — COGCC-Permitted Oil/Gas Well Location
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- 200 mg/l
- 400 mg/l
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WELD COUNTY, COLORADO		
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Checked By: RP		Date: 07-31-08
Approved By: RP		Drawn By: MLL
File Name: 25087038 Fig 3.dwg		Figure No. 3B

TABLE 1
Summary of Well Information

Permit No.	Sample No.	Township	Range	Section	Well Depth (ft)	Water Level (ft)
250326	250326	T12N	R62W	27	115	37
165120	165120	T12N	R61W	26	350	32
32124	32124	T10N	R61W	19	110	63
271304	271304	T11N	R60W	9	200	80
236026	2038	T10N	R62W	15	unk.	20
56478 F	56478	T10N	R62W	1	230	unk.
237976	237976	T9N	R61W	33	450	143
146454	146454	T8N	R61W	17	380	225
13184 F	25784	T12N	R62W	26	135	48
75950	75950	T10N	R61W	22	110	40
22374 A	22374	T12N	R62W	26	155	40
114921 A	114921A	T11N	R62W	27	40	unk.
189301	189301	T11N	R62W	26	140	90
6407 R	6407	T10N	R61W	6	33	10
17455 F	17455	T10N	R61W	4	170	20
207601	207601	T9N	R62W	25	195	110
207600	207600	T9N	R62W	26	155	62
42068 F	42068	T10N	R61W	5	210	unk.
unk.	43057	T11N	R62W	4	unk.	36
232575	232575	T9N	R61W	35	463	7
16032	16032	T8N	R62W	23	380	240
180142	180142	T9N	R62W	12	unk.	unk.
153852	153852	T11N	R60W	30	unk.	150
153171	137661	T10N	R62W	28	75	unk.

1) Well depth and static water level information obtained from discussions with well owners and well permit records

TABLE 2
 Summary of Constituents in Groundwater and Comparison to Groundwater Standards
 Upper Crow Creek Designated Groundwater Basin Study
 Weld County, Colorado
 Terracon Project No. 25087038

Type	Method	Parameter	Units	Detection Limit	Sample I.D. Date Sampled	250326	22374	43057	189301	25784	165120	271304	32124	2038	137661	42068	
Total Metals	200.8	Arsenic	mg/l	0.0010	0.01	0.0039	0.0039	0.0010	0.0071	0.0046	0.0031	0.014	0.0010	0.0014	BDL	BDL	
	200.7	Barium	mg/l	0.0050	2.0	0.24	0.20	0.039	0.18	0.17	0.019	0.027	0.032	0.043	0.045	0.026	
	200.7	Cadmium	mg/l	0.0050	0.005	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Calcium	mg/l	0.50	NR	73	53	17	43	45	6.2	24	20	18	22	7	
	200.7	Chromium	mg/l	0.010	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Iron	mg/l	0.10	0.3 (*)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.8	Lead	mg/l	0.0010	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Magnesium	mg/l	0.10	NR	13	10	4.6	11	8.6	1.7	7.2	4.6	4.7	4.4	2.2	
	200.7	Manganese	mg/l	0.010	0.05 (*)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Potassium	mg/l	0.50	NR	6.5	6.3	4.4	4.6	5.6	3.5	6.4	5.1	5.8	5.3	2.8	
200.7	Sodium	mg/l	0.50	NR	16	12	61	28	11	90	26	98	82	97	84		
8020	Selenium	mg/l	0.0010	0.05	0.0023	0.0012	0.0041	0.0064	0.0030	0.0018	0.0026	0.0071	0.0180	0.0051	BDL		
Organics	8021B	Benzene	µg/l	0.50	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
		Ethylbenzene	µg/l	0.50	700	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Toluene	µg/l	5.0	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Xylenes (total)	µg/l	1.5	1,400	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Methane (dissolved)	µg/l	0.01	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Inorganics	9056	Bromide	mg/l	1.0	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
		Chloride	mg/l	1.0	250 (*)	40	14	4	31	6.6	13	5.2	26	21	10	8.4	
		Fluoride	mg/l	0.10	4.0	0.66	0.80	0.43	0.49	0.72	0.44	0.98	0.19	0.28	0.56	0.36	
		Nitrate - Nitrogen	mg/l	0.10	10	3.2	4.2	0.58	4.8	3.6	BDL	BDL	2.2	0.26	0.52	0.11	BDL
		Nitrite - Nitrogen	mg/l	0.10	1.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Other	310.2	Nitrate/Nitrite as Nitrogen	mg/l	0.10	NR	3.3	4.9	0.60	4.7	4.3	BDL	2.7	0.38	0.66	0.16	BDL	
		Sulfate	mg/l	5.0	250 (*)	32	17	31	23	11	39	16	70	44	36	26	
		Carbonate	mg/l	10	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Bicarbonate	mg/l	10	NR	200	170	180	170	180	200	150	210	200	300	190	
		pH	su			8	8	8	8	8	8	8	8	8	8	7.9	8.5
Notes	9050A	Specific Conductance	µmhos/cm		NR	570	420	390	470	370	470	310	600	510	580	430	
	2540C	Total Dissolved Solids	mg/l	10	NR	370	300	240	330	260	310	260	390	430	470	260	

1. "µg/l" indicates micrograms per liter; "BDL" - Below Detection Limit
 "mg/l" indicates milligrams per liter; "NR" - Not Regulated
 2. Shaded cells exceed the groundwater standard.
 3. Duplicate of Well 42068 (Grover Municipal Well)
 4. - Human Health Standard from Table 1 of the The Basic Standards for Ground Water, dated May 31, 2008. - Indicates a Table 2 Drinking Water Standard.

TABLE 2
 Summary of Constituents in Groundwater and Comparison to Groundwater Standards
 Upper Crow Creek Designated Groundwater Basin Study
 Weld County, Colorado
 Terracon Project No. 25987038

Type	Method	Parameter	Units	Detection Limit	Sample I.D. Date Sampled	Colorado Groundwater Standard (4)	DUPLICATE (3)	75950	180142	114921A	207601	207600	16032	6407	17455	153852		
Total Metals	200.8	Arsenic	mg/l	0.0010	0.01	0.0048	0.0030	0.0029	0.0042	0.0042	BDL	BDL	BDL	BDL	BDL	BDL		
	200.7	Barium	mg/l	0.0050	2.0	0.026	0.039	0.084	0.15	0.15	0.052	0.037	0.033	0.028	0.037	0.038		
	200.7	Cadmium	mg/l	0.0050	0.005	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Calcium	mg/l	0.50	NR	7.5	8.7	90	67	67	14	10	6.6	5.3	8.2	10		
	200.7	Chromium	mg/l	0.010	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Iron	mg/l	0.10	0.3 (*)	0.88	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.8	Lead	mg/l	0.0010	0.05	BDL	BDL	0.0013	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
	200.7	Magnesium	mg/l	0.10	NR	2.2	2.8	17	13	13	2.9	2.1	1.4	1.4	3.0	3.7		
	200.7	Manganese	mg/l	0.010	0.05 (*)	BDL	BDL	0.023	BDL	BDL	0.012	BDL	0.019	0.011	BDL	BDL	BDL	
	200.7	Potassium	mg/l	0.50	NR	2.7	3.6	12	11	11	3.7	3.3	2.3	2.8	2.9	3.7		
200.7	Sodium	mg/l	0.50	NR	80	80	100	38	38	130	120	160	82	77	80			
6020	Selenium	mg/l	0.0010	0.05	0.0044	0.0048	0.0034	0.0012	0.0012	BDL	0.0030	BDL	BDL	BDL	BDL	BDL		
Organics	8021B	Benzene	µg/l	0.50	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
		Ethylbenzene	µg/l	0.50	700	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Toluene	µg/l	5.0	1,000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Xylenes (total)	µg/l	1.5	1,400	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Methane (dissolved)	µg/l	0.01	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Bromide	mg/l	1.0	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Chloride	mg/l	1.0	250 (*)	8.9	9.4	78	39	39	39	21	23	20	4.2	8.8	12	
		Fluoride	mg/l	0.10	4.0	0.36	0.33	0.79	0.99	0.99	0.99	0.28	0.35	0.74	0.42	0.48	0.56	
		Nitrate - Nitrogen	mg/l	0.10	10	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Nitrite - Nitrogen	mg/l	0.10	1.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Inorganics	353.2	Nitrate/Nitrite as Nitrogen	mg/l	0.10	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
		Sulfate	mg/l	5.0	250 (*)	36	37	180	54	54	120	92	91	33	39	41		
		Carbonate	mg/l	10	NR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		Bicarbonate	mg/l	10	NR	200	190	280	230	230	210	210	210	180	170	170	180	
		pH	su		8.5 - 8.5 (*)	8.5	8.5	7.5	7.5	7.5	8.4	8.3	8.6	8.5	8.3	8.3	8.3	
		Specific Conductance	µmhos/cm		NR	440	430	1,100	650	650	710	650	770	400	420	420	430	
		Total Dissolved Solids	mg/l	10	NR	320	260	660	400	400	420	390	460	230	240	240	240	

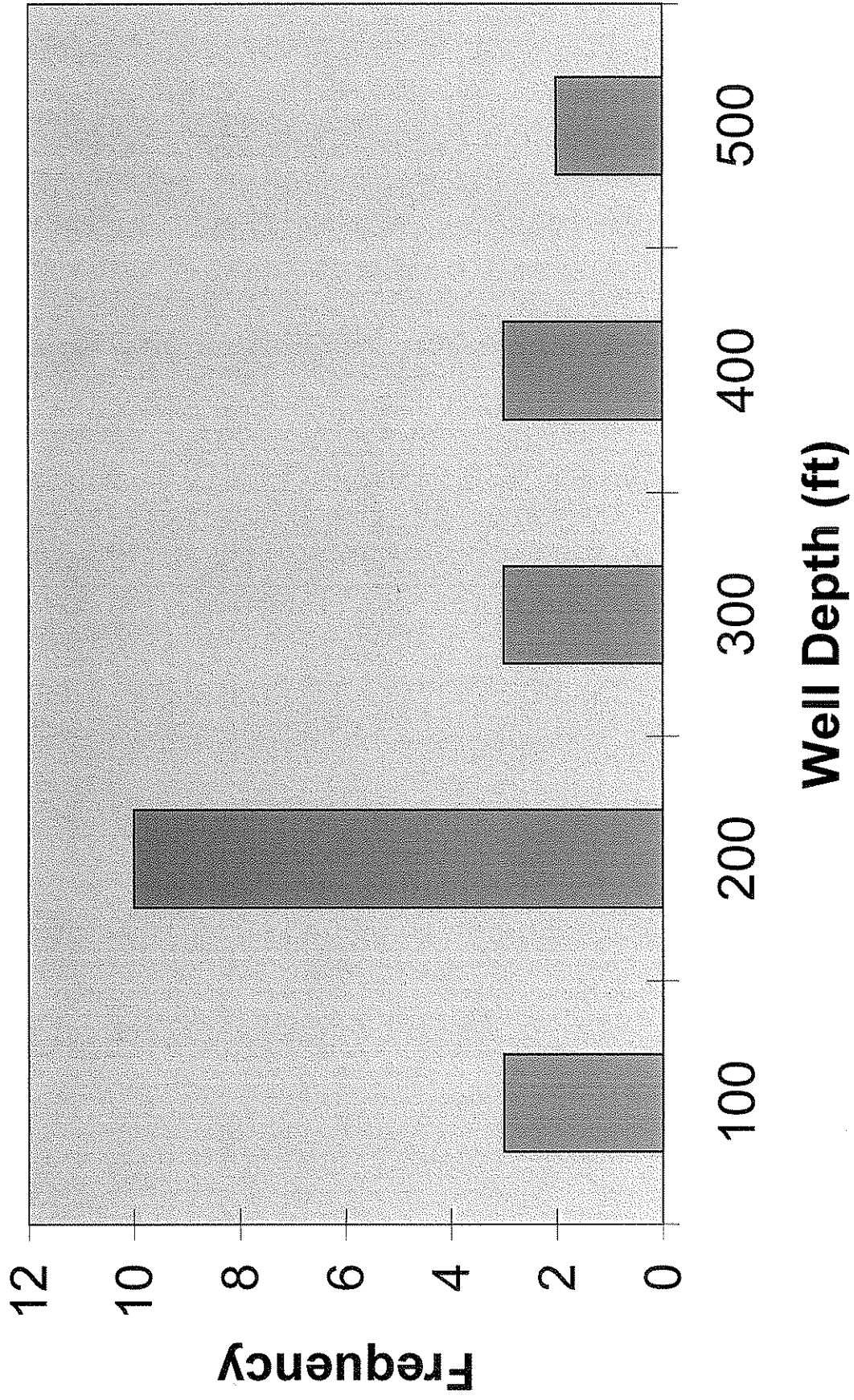
Notes
 1. "µg/l" indicates micrograms per liter; "BDL" = Below Detection Limit
 2. "mg/l" indicates milligrams per liter; "NR" = Not Regulated
 3. Shaded cells exceed the groundwater standard.
 4. Duplicate of Well 42068 (Grover Municipal Well)
 5. - Human Health Standard from Table 1 of the The Basic Standards for Ground Water,

TABLE 2
 Summary of Constituents in Groundwater and Comparison to Groundwater Standards
 Upper Crow Creek Designated Groundwater Basin Study
 Weld County, Colorado
 Terracon Project No. 25687038

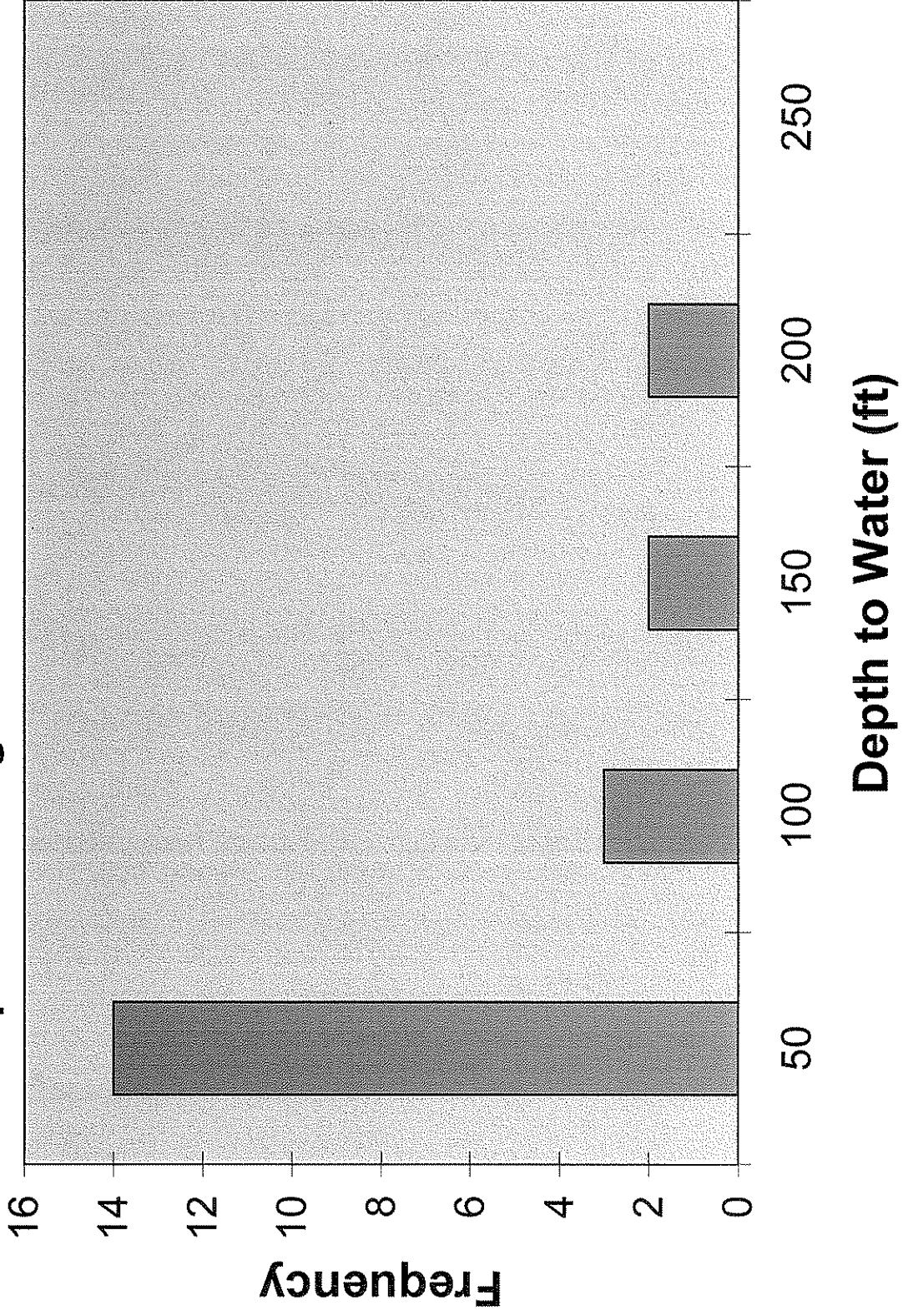
Type	Method	Parameter	Units	Detection Limit	Sample I.D. Date Sampled	146464	56478	232575	237976		
Total Metals	200.8	Arsenic	mg/l	0.0010	0.01	BDL	BDL	BDL	BDL		
	200.7	Barium	mg/l	0.0050	2.0	0.0068	0.034	0.017	0.019		
	200.7	Cadmium	mg/l	0.0050	0.005	BDL	BDL	BDL	BDL		
	200.7	Calcium	mg/l	0.50	NR	52	5.7	2.9	3.1		
	200.7	Chromium	mg/l	0.010	0.1	BDL	BDL	BDL	BDL		
	200.7	Iron	mg/l	0.10	0.3 (*)	BDL	BDL	BDL	0.21		
	200.8	Lead	mg/l	0.0010	0.05	BDL	BDL	BDL	BDL		
	200.7	Magnesium	mg/l	0.10	NR	11	1.3	0.56	0.59		
	200.7	Manganese	mg/l	0.010	0.05 (*)	0.082	0.016	BDL	0.010		
	200.7	Potassium	mg/l	0.50	NR	6.8	2.1	1.8	1.5		
Organics	200.7	Sodium	mg/l	0.50	NR	330	88	140	150		
	6020	Selenium	mg/l	0.0010	0.05	0.0013	BDL	BDL	BDL		
	8021B		Benzene	µg/l	0.50	5.0	BDL	BDL	BDL	BDL	
			Ethylbenzene	µg/l	0.50	700	BDL	BDL	BDL	BDL	
			Toluene	µg/l	5.0	1,000	BDL	BDL	BDL	BDL	
			Xylenes (total)	µg/l	1.5	1,400	BDL	BDL	BDL	BDL	
	Inorganics	RSK 17	Methane (dissolved)	µg/l	0.01	NR	BDL	BDL	BDL	BDL	
		9056		Bromide	mg/l	1.0	NR	BDL	BDL	BDL	BDL
				Chloride	mg/l	1.0	250 (*)	71	5	22	12
				Fluoride	mg/l	0.10	4.0	0.1	0.23	0.38	0.52
			Nitrate - Nitrogen	mg/l	0.10	10	0.29	BDL	BDL	BDL	
353.2			Nitrite - Nitrogen	mg/l	0.10	1.0	BDL	BDL	BDL	BDL	
			Nitrate/Nitrite as Nitrogen	mg/l	0.10	NR	0.27	BDL	BDL	BDL	
			Sulfate	mg/l	5.0	250 (*)	640	35	36	11	
			Carbonate	mg/l	10	NR	BDL	BDL	BDL	BDL	
Other		9040C	Bicarbonate	mg/l	10	NR	230	280	230	250	
		pH	su		6.5 - 8.5 (*)	7.7	8.5	8.6	8.7		
	9050A	Specific Conductance	µmhos/cm		NR	1,800	410	610	610		
	2540C	Total Dissolved Solids	mg/l	10	NR	1,200	250	350	360		

Notes
 1. "µg/l" indicates micrograms per liter, "BDL" - Below Detection Limit
 2. "mg/l" indicates milligrams per liter, "NR" - Not Regulated
 3. Shaded cells exceed the groundwater standard.
 4. - Human Health Standard from Table 1 of the Basic Standards for Ground Water.

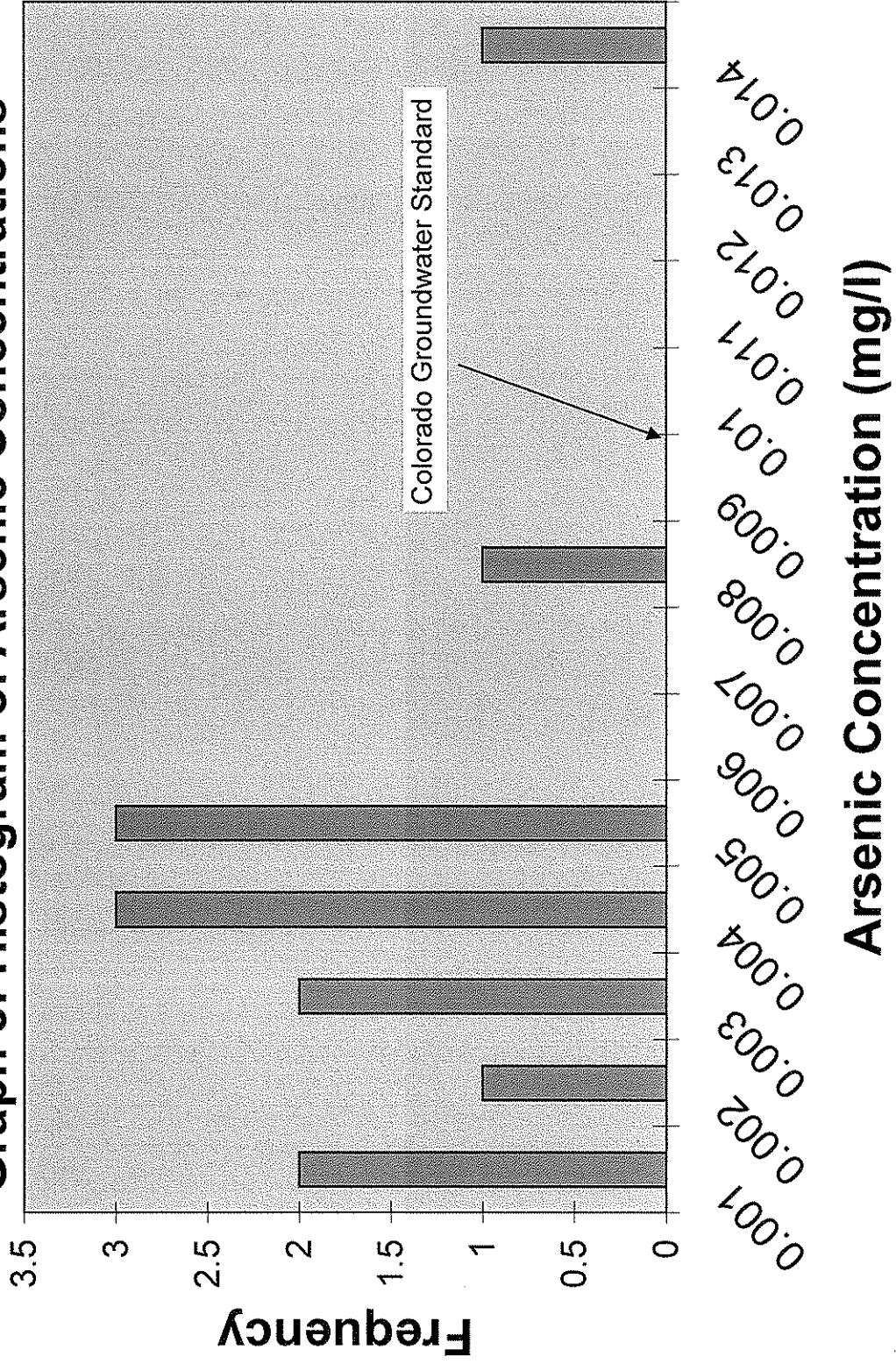
Graph 1: Histogram of Well Depths



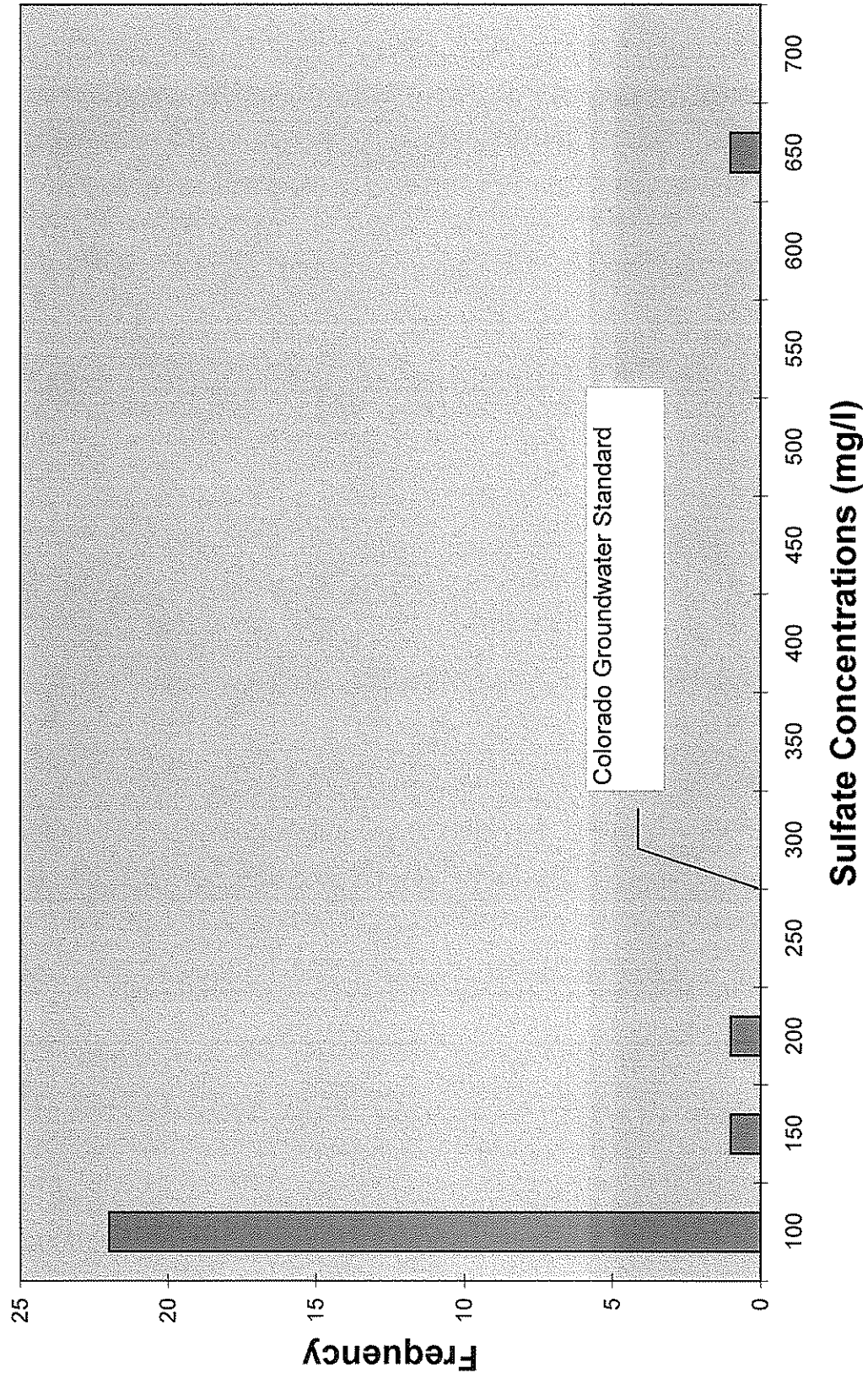
Graph 2: Histogram of Static Water Levels



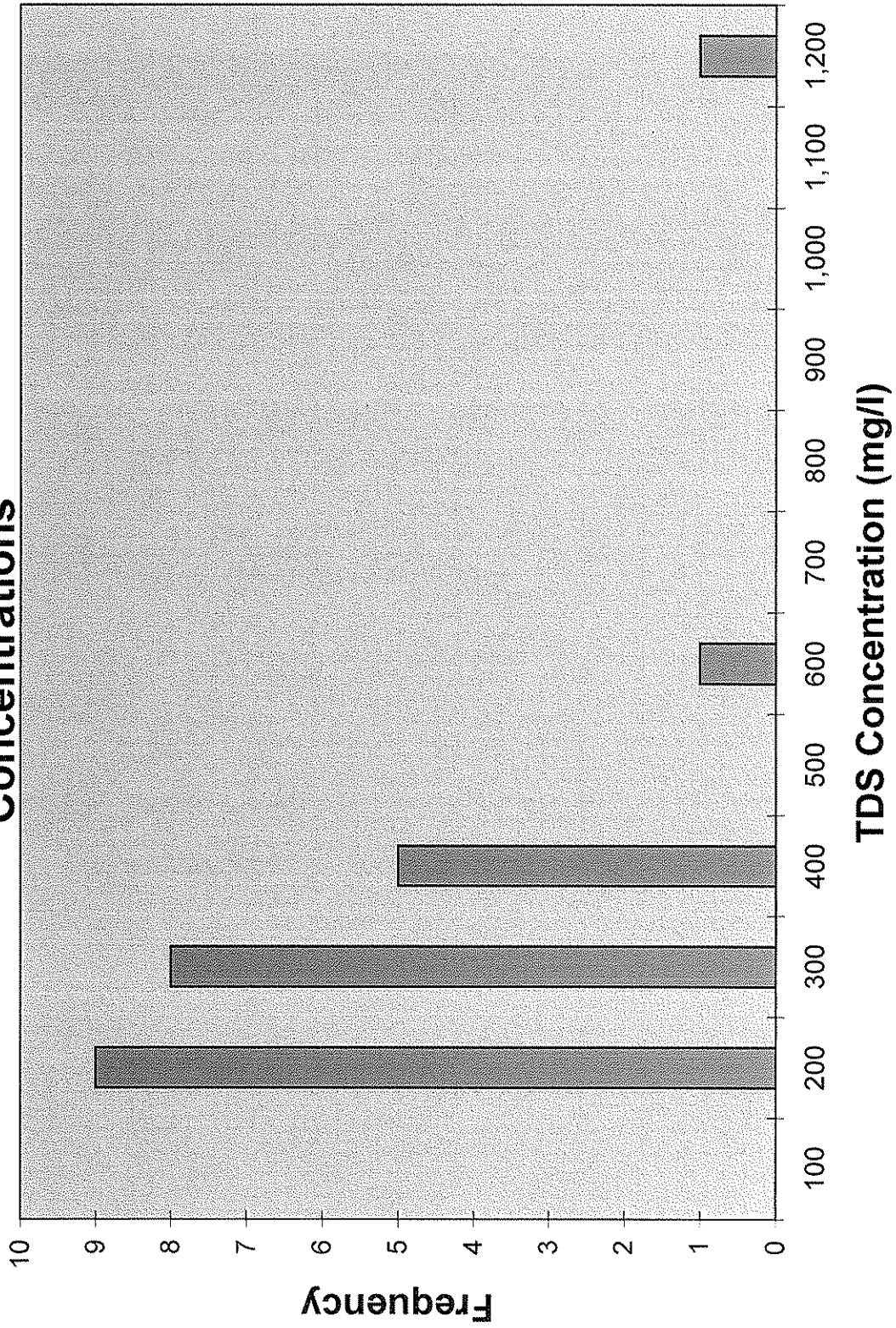
Graph 3: Histogram of Arsenic Concentrations



Graph 4: Histogram of Sulfate Concentrations



Graph 5: Histogram of Total Dissolved Solids Concentrations



APPENDIX A
ACCESS AGREEMENT LETTER

May 20, 2008

Landowner
Property Address

**Subject: Landowner Permission Letter
Colorado Oil and Gas Conservation Commission (COGCC)
Upper Crow Creek Designated Groundwater Basin Study
Weld County, Colorado**

Dear Landowner:

On behalf of the Colorado Oil and Gas Conservation Commission (COGCC), Terracon Consultants, Inc. (Terracon) would like to thank you for participating in the Upper Crow Creek Designated Groundwater Basin. Terracon is contracted by the COGCC to conduct this groundwater sampling program at various locations throughout Weld County this spring.

As previously discussed, the domestic water well sampling is being done at the request of the COGCC to assist in establishing a baseline for groundwater quality in the region, and the water quality results will be placed in the COGCC database. Our sampling team will require approximately one to two hours at your property to collect the necessary samples. The laboratory analyses of water samples will include the following parameters:

- ◆ major anions (chloride, sulfate, carbonate, bicarbonate, nitrate, and nitrite)
- ◆ major cations (sodium, calcium, magnesium, potassium, and iron)
- ◆ dissolved metals (arsenic, barium, cadmium, chromium, lead, selenium, and manganese)
- ◆ halides (fluoride and bromide)
- ◆ pH
- ◆ specific conductivity
- ◆ total dissolved solids
- ◆ benzene, toluene, ethylbenzene, and xylenes
- ◆ dissolved methane

COGCC is conducting this sampling program and providing copies of the analytical results to you as a courtesy and at no cost to you. You should receive the results within approximately two months of the sampling event.

Please accept this Landowner Permission Letter as our formal request to gain access to your property for the purpose of collecting a water sample from your existing water well. The sample should be able to be collected from an outdoor spigot or tap, and Terracon personnel will not need to enter your home. Terracon is tentatively scheduled to conduct the testing between May 29 and June 3, 2008. We will contact you prior to _____ to set up a specific time to conduct the testing. Sampling will generally occur between the hours 7:00 am and 7:00 pm.

Landowner
May 20, 2008
Page 2 of 3

Please sign and date the attached access agreement and return to Terracon in the enclosed stamped envelope as soon as possible. By signing, you are authorizing Terracon, on behalf of the COGCC, to gain access to your property for purposes of collecting a water sample as part of the Upper Crow Creek Designated Groundwater Basin Study. Should you have a preferred date and/or time, please indicate same on the Access Permission Agreement and we will attempt to accommodate your preference.

If you have questions regarding this letter or project progress in general, please call John Axelson of the COGCC at (303) 637-7178. Your participation and cooperation in this important program is greatly appreciated.

Sincerely,
Terracon Consultants, Inc.

John C. Dellaport, P.E., P.G.
Senior Environmental Engineer

Russell Pickering, MS
Environmental Department Manager

**ACCESS PERMISSION AGREEMENT FOR DOMESTIC WATER WELL SAMPLING
Colorado Oil and Gas Conservation Commission
Upper Crow Creek Designated Groundwater Basin Study**

Landowner authorizes Terracon, on behalf of the COGCC, to gain access to the listed property for purposes of collecting a water sample from your well as part of the Upper Crow Creek Designated Groundwater Basin Study during May and June 2008.

Landowner

Name:

Address:

Signature:

Date:

Preferred Date/Time for Sampling:

STATE OF COLORADO

Oil and Gas Conservation Commission
Brighton, CO
Phone: (303) 637-7178
Cell: (303) 677-9864
Fax: (303) 637-7179
E-mail: john.axelson@state.co.us
www.oil-gas.state.co.us



John E. Axelson, P.G.
Environmental Protection Specialist
Northeast Region

APPENDIX B
FIELD SAMPLING FORMS WITH PHOTOGRAPHS



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 250326
Owner: Harvey Keiper
Address: 39631 Roosevelt
Hereford 80732
Location: T 12N, R 62W, S 27
Date: 6-2-08
Weather: Sunny 68°

Well Owner Survey

Is there a holding tank for the well? Yes X No _____
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes X No _____
Sampling point upstream of pressure tank and treatment system? Yes X No _____

Location of well: 60 ft West of House
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: Steel, 6 ft
Depth to Static Water Table (fluctuations): 34'-37' Pump at 85'
Description of area around well: Lawn
Location and description of sample point: Spicket on corner of House
Pump start time: 8:35 am

Time	Volume Purged (gal.)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
8:50	3	7.52	.435	4.58		13.27	clear	no odor or sediment
9:00	8	7.45	.431	4.46		13.10	clear	" "
9:10	12	7.46	.437	4.60		13.48	clear	

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 250326 Collection Time: 9:20 Number of Containers: 11

Analyte	# of Containers	Container Size	Container Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 58' 29.49138" N Longitude: 109° 18' 14.73303" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 250326

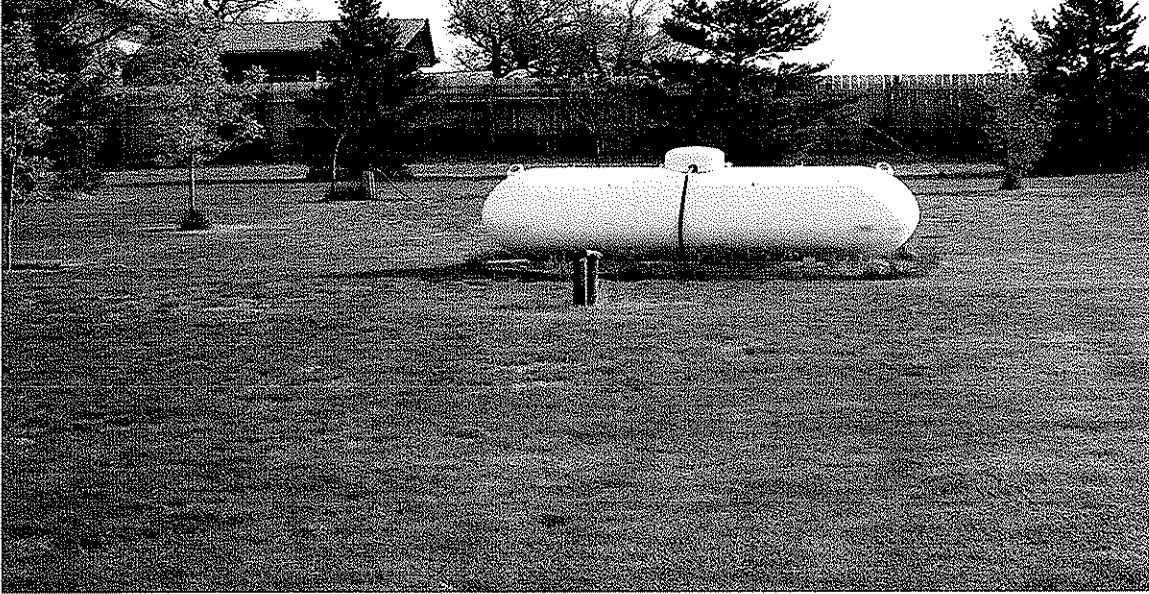


Photo 1A: Well head looking north.

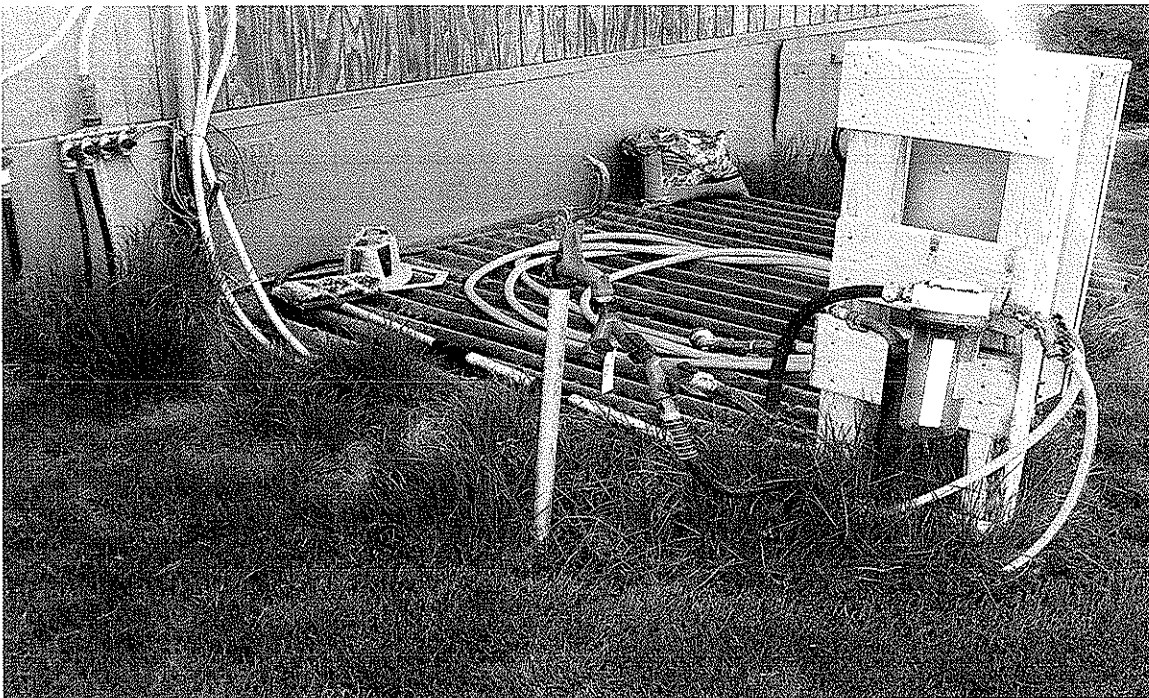


Photo 1B: Sample spigot south of house.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 22374
Owner: Melvin Hoke

Well Owner Survey

Is there a holding tank for the well? Yes X No _____
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes X No _____

Address: P.O. Box 11
Herford, CO 80732
Location: T12 N, R62 W, S26
Date: 6-2-08
Weather: Sunny 70°

Location of well: North of House
Type of pump (jet, submersible, suction): Jet pump
Casing material and diameter: 6" steel
Depth to Static Water Table (fluctuations): 40'
Description of area around well: Grass
Location and description of sample point: Spicket in lawn ≈ 20' from well
Pump start time: 11:15

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other *
11:25	5	7.43	.319	5.37		13.05	clear	no odor + sediment
11:35	5	7.50	.315	6.26		12.41	clear	" "
11:45	5	7.52	.318	6.26		12.87	clear	" "

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 22374 Collection Time: 12:00 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 58' 59.02767" N Longitude: 104° 17' 45.50603" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 22374



Photo 2A: Well head looking west.



Photo 2B: Sample spigot east of well.



Terracon

Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: UNKNOWN JCD 43057 8.22.08
Owner: Corey Loyd
Address: 65424 CR 77
Herford, CO 80732
Location: T12 N, R. 61 W, S 32
Date: 6-2-08
Weather: Sunny 75°

Well Owner Survey

Is there a holding tank for the well? Yes No
Do you have a water softener/treatment system? Yes No
Do you have an in-line filter? Yes No
Sampling point upstream of pressure tank and treatment system? Yes No

Location of well: East of House in lawn
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" Steel
Depth to Static Water Table (fluctuations): ≈ 36'
Description of area around well: In middle of lawn
Location and description of sample point: Spicket in middle of lawn ≈ 15' from well
Pump start time: 12:20

Time	Volume Purged (gal.)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other *
12:30	5	8.04	317	2.56		15.59	clear	none
12:40	4	7.99	311	3.18		15.10	clear	none
12:50	4	7.97	311	3.39		14.97	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 43057 Collection Time: 1:00 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4° C
BTEX	2	40 ml	vial	8021	HCl 4° C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4° C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4° C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4° C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4° C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4° C
pH	1	125 ml	HDPE	150.1	4° C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4° C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 57' 05.16082" N Longitude: 104° 20' 03.23490" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 43057



Photo 3A: Well head and sample spigot east of house.



Photo 3B: Well head looking south.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 189301
Owner: Kevin Elder

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes X No _____
Sampling point upstream of pressure tank and treatment system? Yes X No _____

Address: 4005 WCR 132
Hartford, CO 80732
Location: T11 N, R62 W, S26
Date: 6-2-08
Weather: Sunny 75°

Location of well: East end of property in field
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 2" steel coming out of concrete floor
Depth to Static Water Table (fluctuations): 90'
Description of area around well: well in concrete vault underground
Location and description of sample point: spicket in lawn
Pump start time: 1:25

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (mS/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
1:30	4	7.79	374	6.76		15.20	clear	none
1:40	3	7.76	365	6.72		14.17	clear	none
1:50	4	7.74	361	7.10		14.13	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 189301 Collection Time: 1:55 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 56' 41.92649" N Longitude: 104° 17' 44.25281" W

Comments: Call to find out what pump they use

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 189301



Photo 4A: Well head in vault.

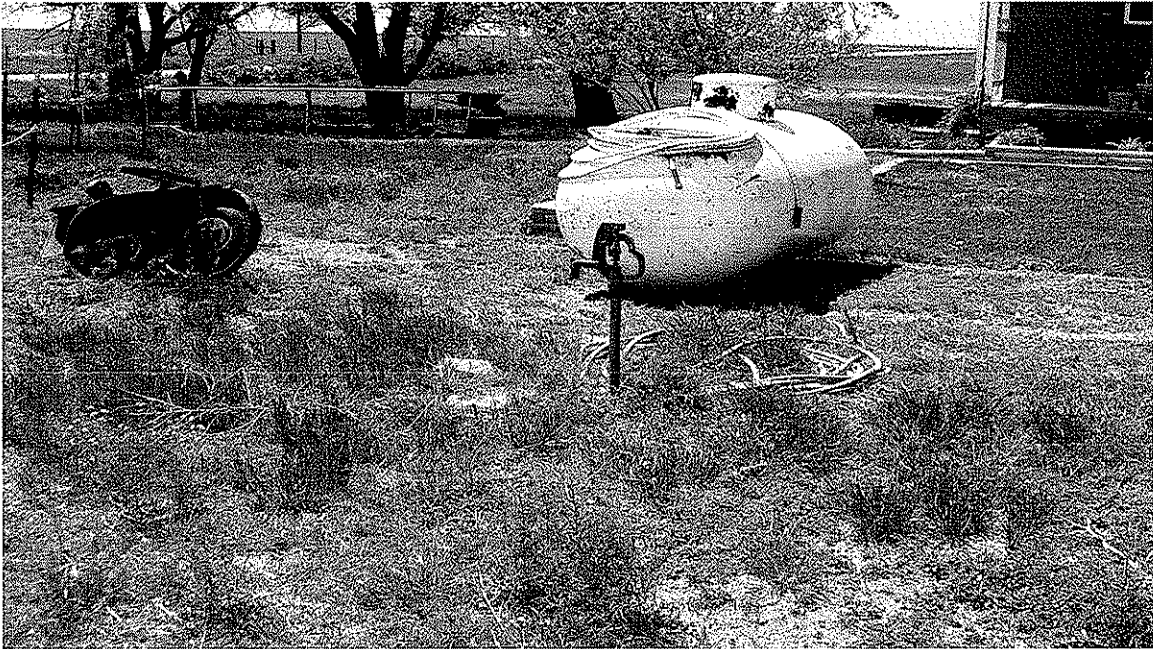


Photo 4B: Sample spigot looking south-west.



Terracon

Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

13184 F Jen
Permit No: 25787 8.22.08
Owner: Scott Tietmeyer
Address: 67125 CR 83
Herfo Grover, CO 80729
Location: T12 N, R60 W, S31
Date: 6-3-08
Weather: Sunny 70°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: ≈ 60' Northeast of house in front lawn
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): 48'
Description of area around well: Well is in vault with pressure tank
Location and description of sample point: Spicket by south corner of house
Pump start time: 8:10

Time	Volume Purged (gals)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
8:20	2	7.92 7.92	.272	5.60		12.64	clear	none
8:30	5	7.55	.275	5.43		12.54	clear	none
8:40	4	7.63	.273	5.64		12.47	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 25787 Collection Time: 8:50 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 58' 29.79082" N Longitude: 104° 16' 39.07373" W

Comments: GPS placed outside of vault, would not get signal other wise, took picture ≈ 2' west

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 25784

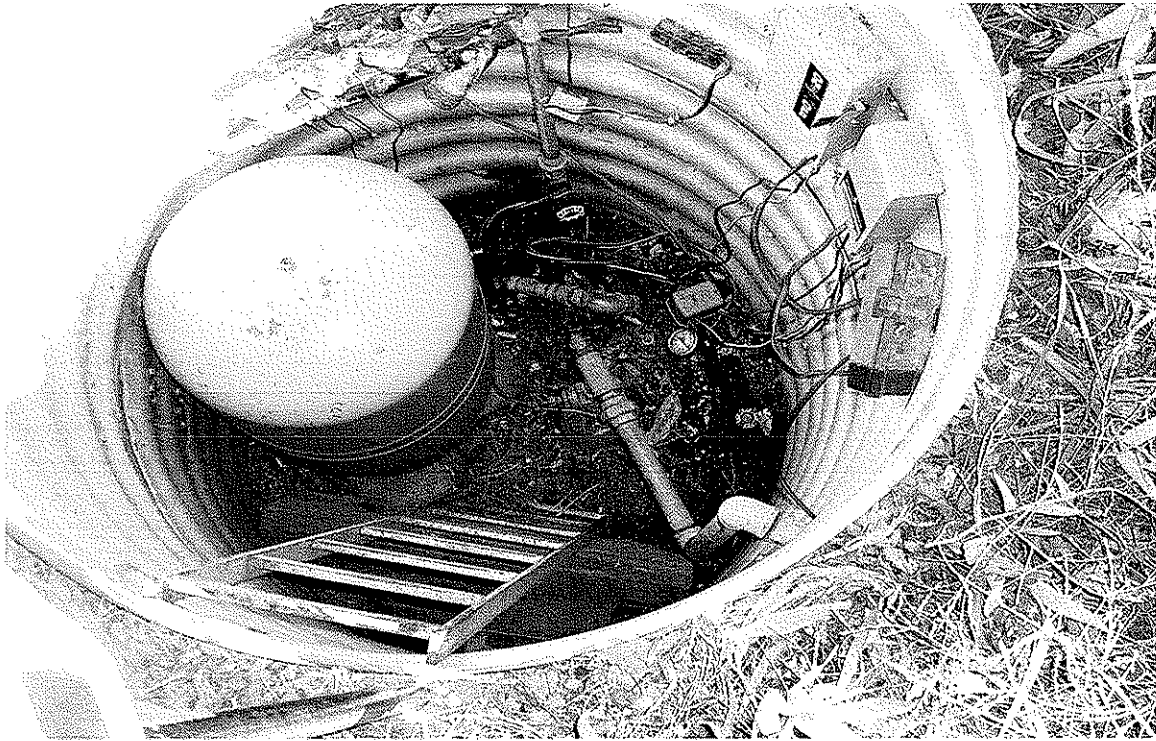


Photo 5A: Well head in vault.

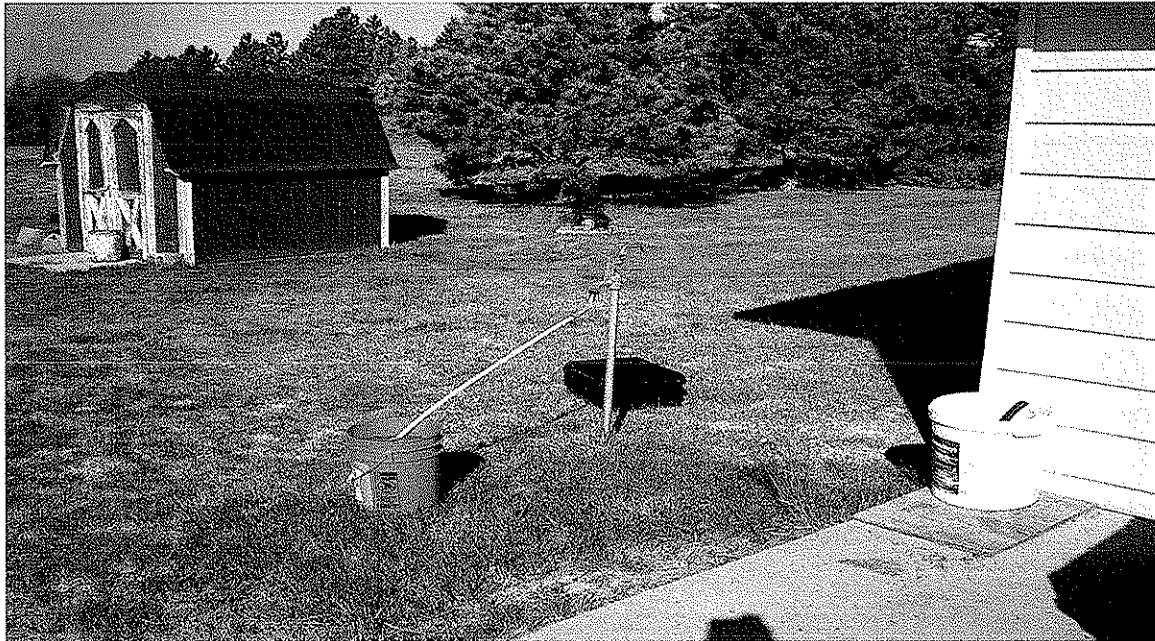


Photo 5B: Sample spigot looking south.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 165120
Owner: Dennis Zytak

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Address: 46499 CR 136
Grover, CO 80729
Location: T12 N, R61 W, S 26
Date: 6-3-08
Weather: Sunny 75°

Location of well: Southeast of house ~ 150'
Type of pump (jet, submersible, suction): submersible
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): 32'
Description of area around well: Small field next to old horse barn
Location and description of sample point: Spicket ~ 30' from house Southeast
Pump start time: 9:40

Time	Volume Purged (gal.)	PH (SI Units)	Spec Cond (µs/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
9:55	4	8.06	.369	2.09		15.51	clear	none
10:06	4	8.30	.358	1.01		13.88	clear	none
10:13	3	8.35	.365	1.03		14.68	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 165120 Collection Time: 10:20 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 58' 46.59434" N Longitude: 104° 10' 16.88866" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 165120

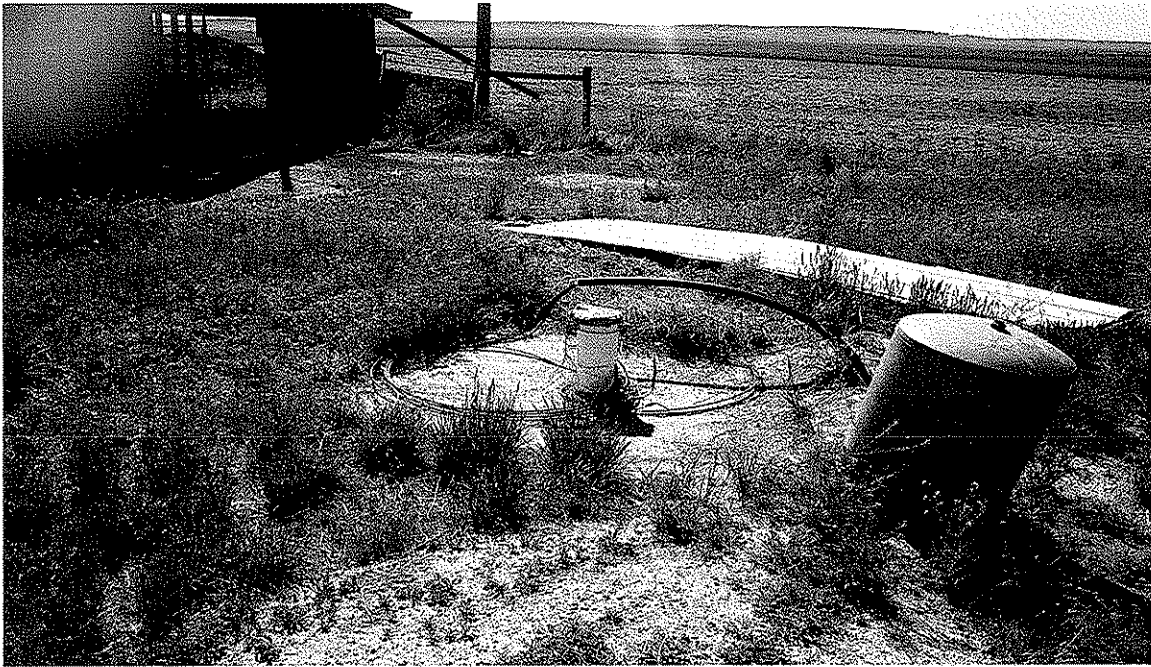


Photo 6A: Well head looking south-east.

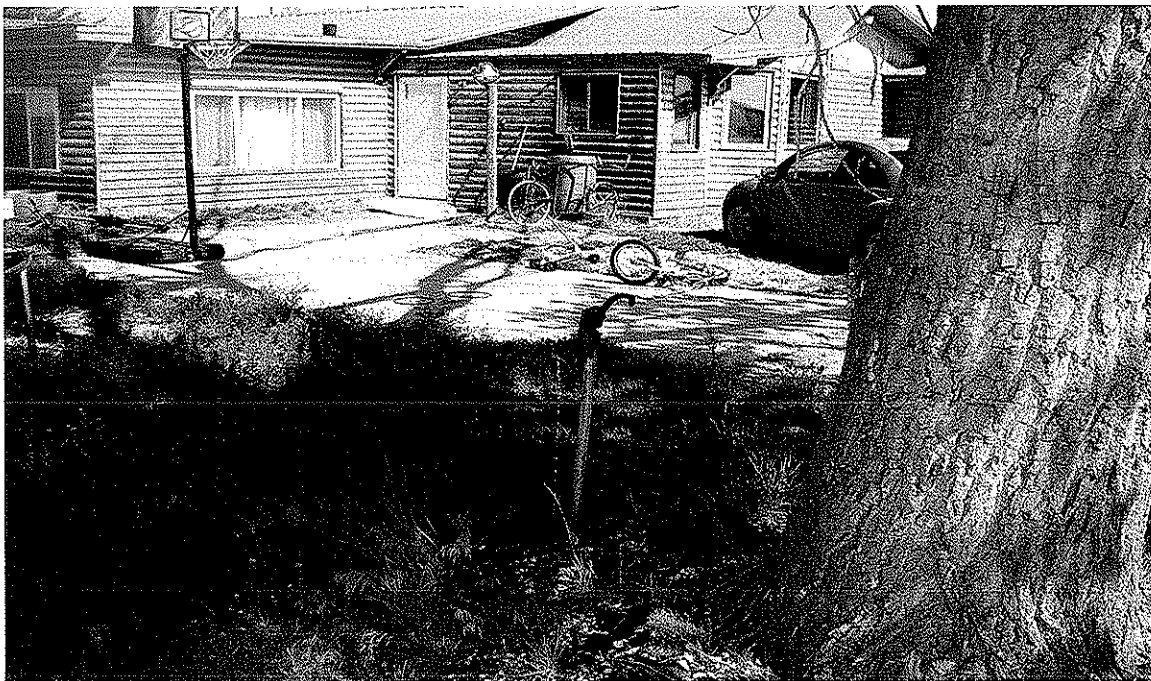


Photo 6B: Sample spigot looking north-west.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 271304
Owner: Ernest Stryker
Address: 50015 CR 130
Grover, CO 80729
Location: T 11 N, R 60 W, S 9
Date: 6-3-08
Weather: Sunny 78°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes X No _____

Location of well: 2200 ft south of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" steel
Depth to Static Water Table (fluctuations): ~80' four years ago
Description of area around well: Storage Trailer other misc. things
Location and description of sample point: Spicket 3' north of well
Pump start time: 11:20

Time	Volume Purged (gal.)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
11:30	4	7.99	.249	5.19		15.80	clear	none
11:35	3	8.05	.245	5.68		15.04	clear	none
11:41	4	8.06	.247	5.90		15.62	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 271204 Collection Time: 11:50 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 56' 13.30674" N Longitude: 104° 06' 15.99316" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 271304



Photo 7A: Well head and sample spigot looking west.



Photo 7B: Close up of well head and sample spigot.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 32124

Owner: David Basher

Address: 56971 CR 87
Grover, CO 80729

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X

Do you have a water softener/treatment system? Yes _____ No X

Do you have an in-line filter? Yes _____ No X

Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location: T10N, R61W, S19

Date: 6-3-08

Weather: cloudy 75°

Location of well: Field North of house x 150'

Type of pump (jet, submersible, suction): Submersible

Casing material and diameter: 6" steel

Depth to Static Water Table (fluctuations): 63'

Description of area around well: Next to vault with pressure tank in North field

Location and description of sample point: Spicket ≈ 8' Southeast of well

Pump start time: 12:45

Time	Volume Purged (gal.)	pH (SI Units)	Spec Cond (µmS/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
1:00	6	7.95	1484	2.34		15.97	clear	none
1:10	4	7.94	1490	2.30		16.22	clear	none
1:15	3	7.92	1486	2.28		15.86	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 32124

Collection Time: _____

Number of Containers: _____

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4° C
BTEX	2	40 ml	vial	8021	HCl 4° C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4° C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4° C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4° C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4° C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4° C
pH	1	125 ml	HDPE	150.1	4° C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4° C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 49' 37.17074" N

Longitude: 104° 14' 26.59875" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 32124



Photo 8A: Well head.

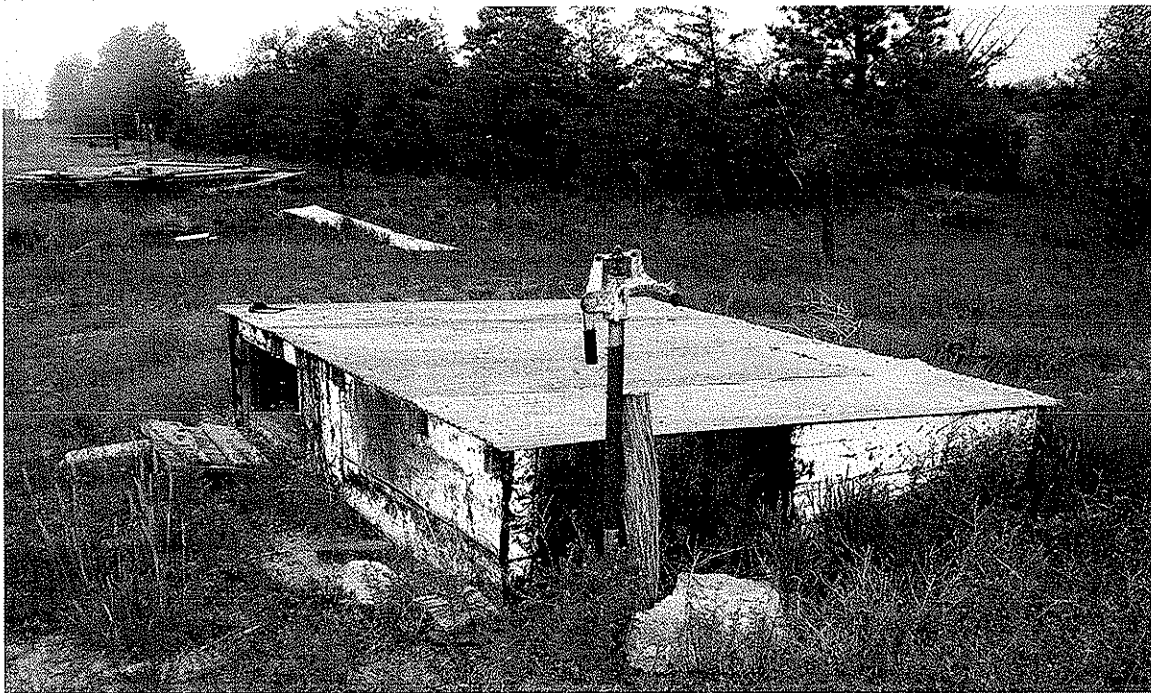


Photo 8B: Sample spigot, well head in right side of picture.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 236026
2038 JWP 8.22.08

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Owner: James Konia
Address: 57851 CR 81
Grover, CO 80729
Location: T 10 N, R 62 W, S 16
Date: 6-4-08
Weather: cloudy 60°

Location of well: ≈ 50' west of house in 6' vault
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): ≈ 20'
Description of area around well: Propane tank, other misc. things
Location and description of sample point: Spicket ≈ 15' south of well
Pump start time: 8:35

Time	Volume Purged (gal)	PH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
8:45	4	8.03	376	2.93		12.50	clear	none
8:53	4	7.99	375	2.45		12.22	clear	none
9:10	5	7.97	374	2.76		12.24	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 2038 Collection Time: 9:15 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4° C
BTEX	2	40 ml	vial	8021	HCl 4° C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4° C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4° C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4° C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4° C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4° C
pH	1	125 ml	HDPE	150.1	4° C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4° C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 50' 26.52056" N Longitude: 104° 17' 50.16307" W

Comments: GPS 3' North of well because of vault

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 2038

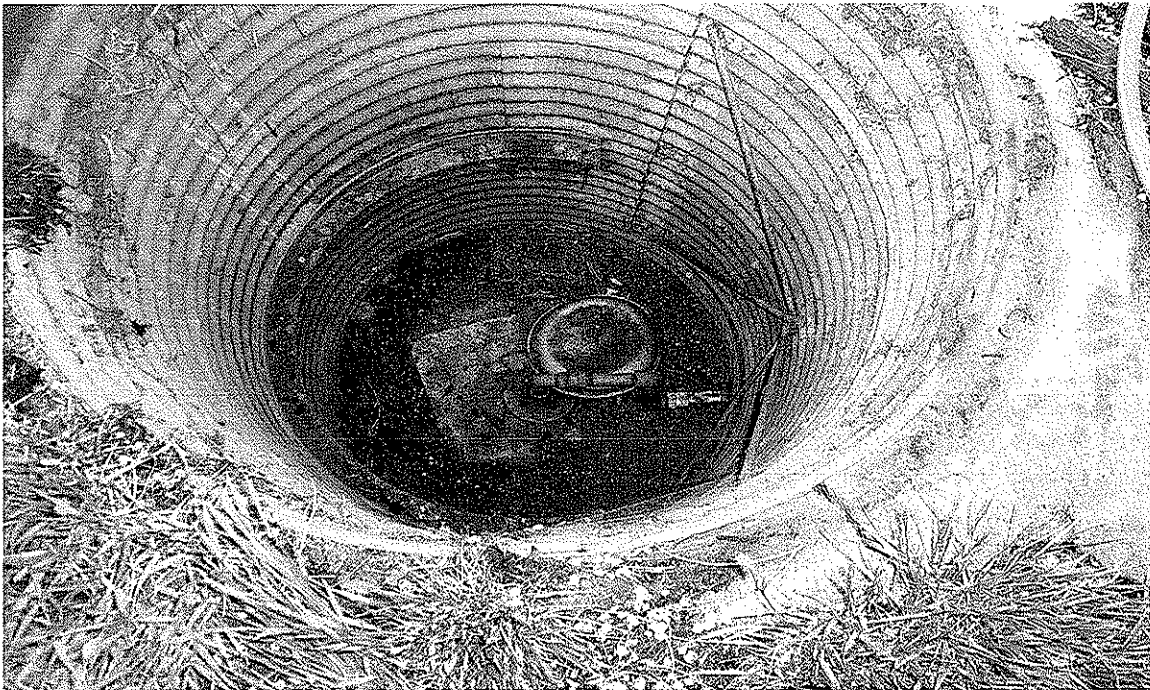


Photo 9A: Well head in vault.



Photo 9B: Sample spigot, south of well head, looking west.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 193171
137661 ^{sup} 8.22.08
Owner: Frank Burnett
Address: 55670 CR 77
Grover, CO 80729
Location: T11 N.R 61 W.S 6
Date: 6-4-08
Weather: cloudy/raining 70°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: ≈ 150 yds south of house in concrete vault with pressure tank
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" steel
Depth to Static Water Table (fluctuations): _____
Description of area around well: open field
Location and description of sample point: spicket on north corner of house
Pump start time: 10:20

Time	Volume Purged (gal.)	pH (SI Units)	Spec Cond (µmS/cm)	DO (mg/L)	turbidity (NTU)	Temperature (°C)	Clarity	Other *
10:30	5	7.76	1438	1.87		13.83	clear	none
10:35	3	7.75	1435	1.71		13.39	clear	none
10:44	3	7.75	1441	1.88		13.95	clear	none
10:55	3	7.73	1436	1.85		13.51	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 137661 Collection Time: 10:45 Number of Containers: 4

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 48' 09.12227" N Longitude: 104° 20' 00.48450" W

Comments: GPS set 2.5 feet north of well because of vault

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 137661

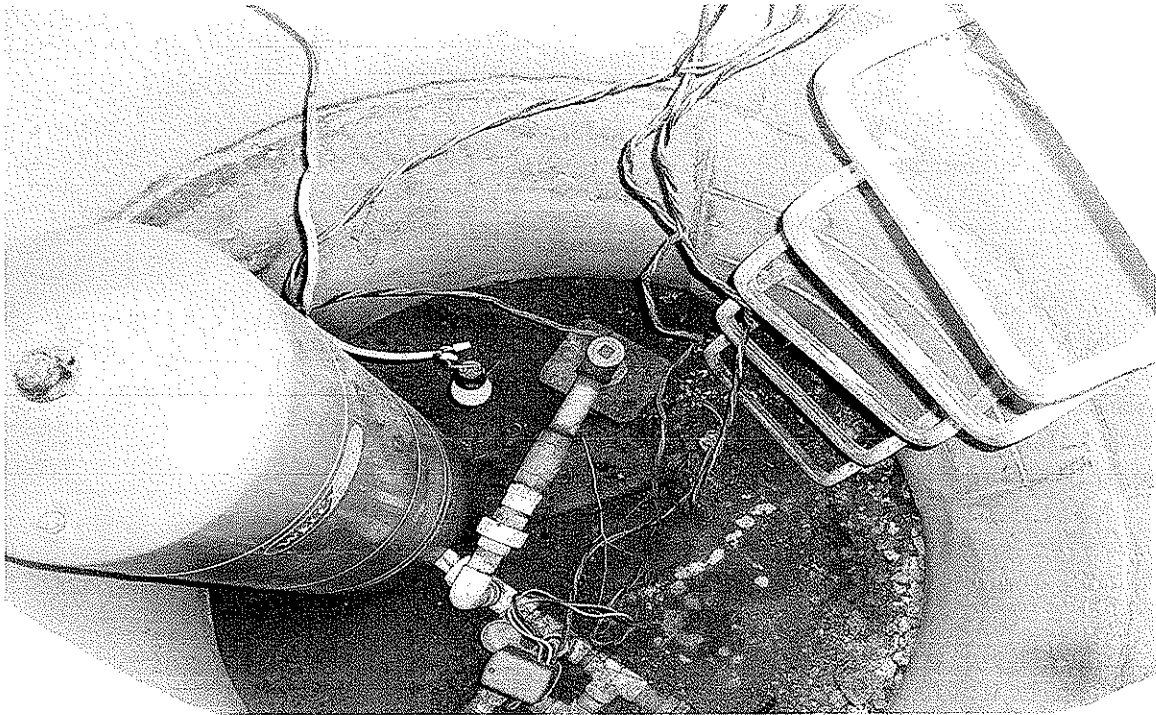


Photo 10A: Well head in vault.

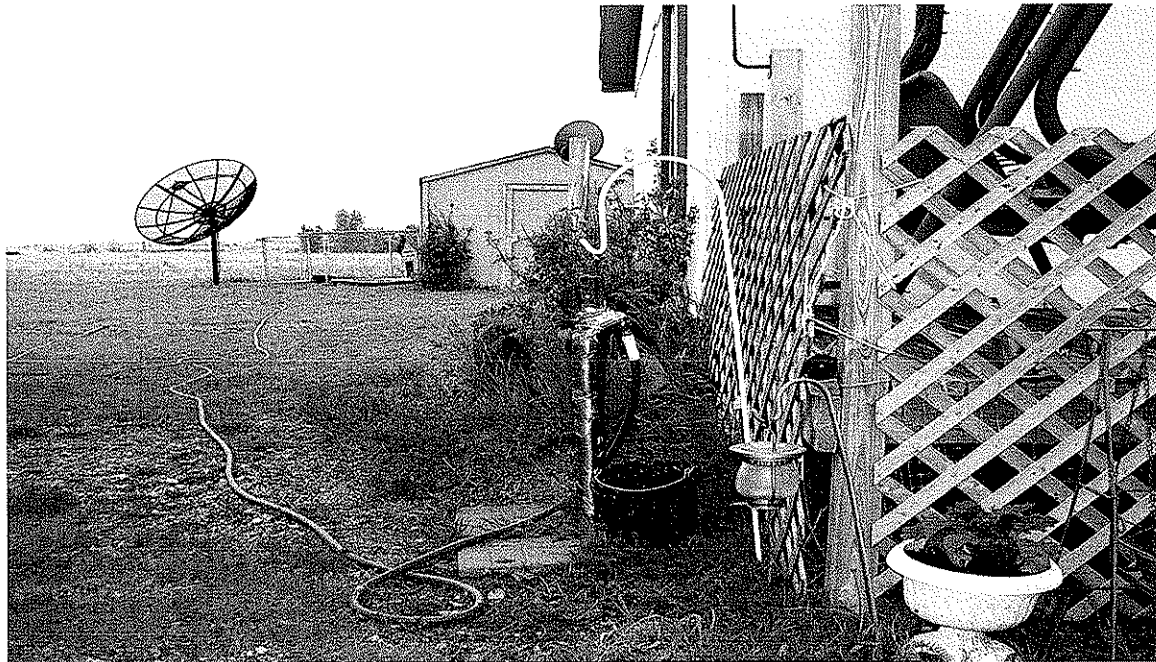


Photo 10B: Sample spigot looking south.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 42068
Owner: Grover Municipal well

Well Owner Survey

Is there a holding tank for the well? Yes water tower No _____
Do you have a water softener/treatment system? Yes chlorine No _____
Do you have an in-line filter? Yes _____ No
Sampling point upstream of pressure tank and treatment system? Yes No _____

Address: P.O. Box 57
Grover, CO 80729
Location: T10 N, R 61 W, S 5
Date: 6-4-08
Weather: cloudy 70°

Location of well: South well
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" steel
Depth to Static Water Table (fluctuations): unknown
Description of area around well: well in small building southwest of town
Location and description of sample point: Spicket on top of well
Pump start time: 11:52

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other
12:05	5	8.39	.348	.43		15.94	sem cloudy	none
12:13	4	8.43	.346	.97		15.48		none
12:20	4	8.36	.347	.95		15.55		none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 42068 Collection Time: 12:30 Number of Containers: 22

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4° C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4° C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4° C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4° C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4° C
pH	1	125 ml	HDPE	150.1	4° C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4° C
Duplicate Sample Collected?	Yes:	<input checked="" type="checkbox"/>	No:	<input type="checkbox"/>	

Sampler: Paul Downey

Duplicate ID: Duplicate

GPS Coordinates

Latitude: 40° 51' 58.67716" N Longitude: 104° 13' 21.31035" W

Comments: GPS is 3' southwest of well because of building

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 42068

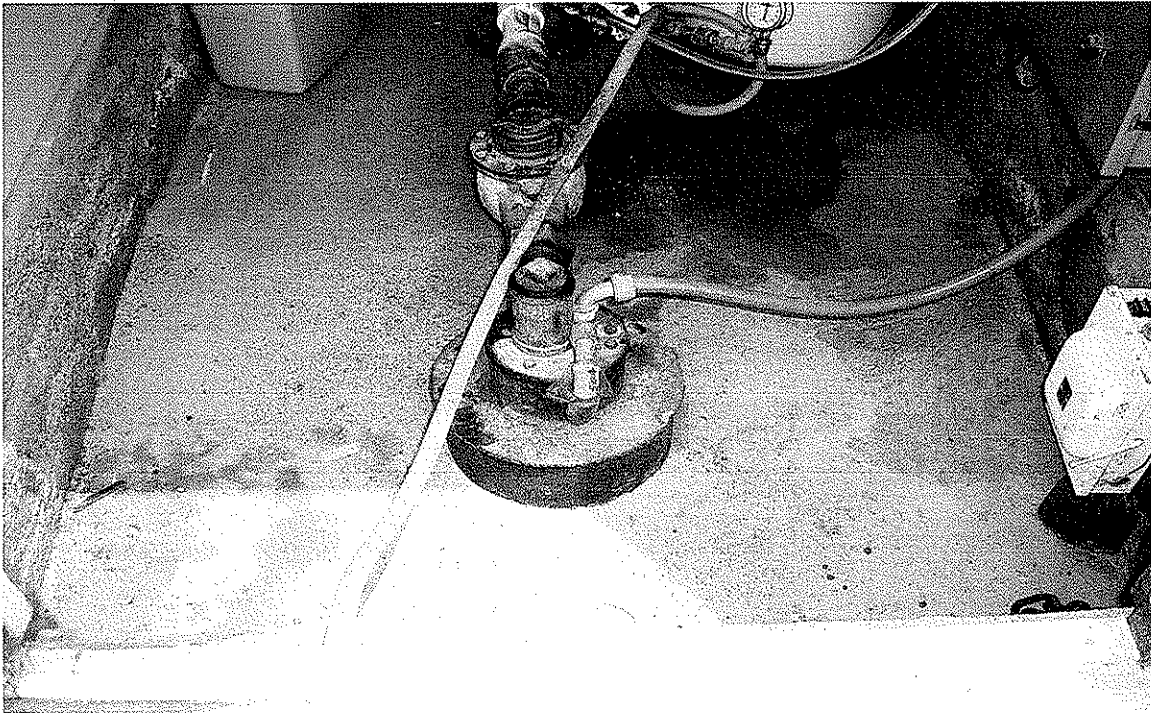


Photo 11A: Well head in small building.

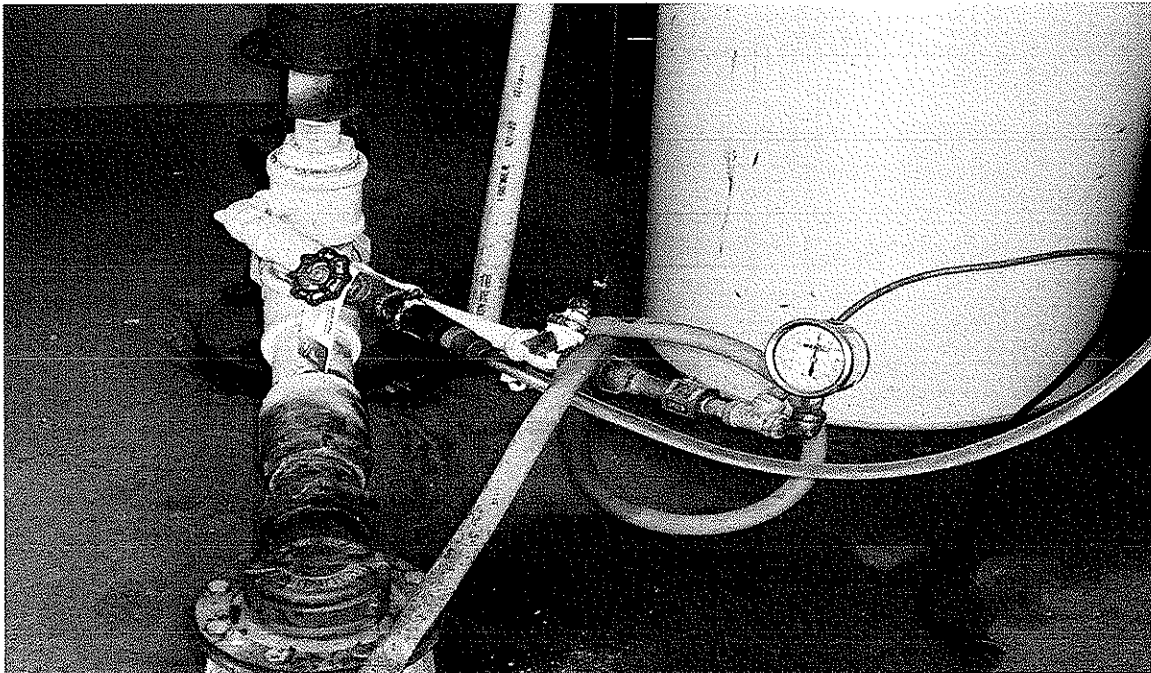


Photo 11B: Sample spigot next to well head.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 75950
Owner: William Basher
Address: 57001 GR 390
Grover, CO 80729
Location: T10N, R6E, W, S22
Date: 6-7-08
Weather: cloudy 88°

Well Owner Survey

Is there a holding tank for the well? Yes No X
Do you have a water softener/treatment system? Yes No X
Do you have an in-line filter? Yes No X
Sampling point upstream of pressure tank and treatment system? Yes No X

Location of well: ~20' East of house in vault with wooden roof
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" steel
Depth to Static Water Table (fluctuations): 90'
Description of area around well: Trees and Lawn
Location and description of sample point: spicket coming out of roof of well vault
Pump start time: 1:40

Table with 9 columns: Time, Volume Purged (gal), PH (SI Units), Spec Cond (ms/cm), DO (mg/L), Turbidity (NTU), Temperature (°C), Clarity, Other. Rows show data for times 1:50, 1:58, and 2:08.

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 75950 Collection Time: 2:15 Number of Containers: 11

Table with 7 columns: Analyte, # of Containers, Container Size, Type, Analytical Method, Preservative. Lists various analytes like Dissolved Methane, BTEX, Dissolved Metals, etc.

Sampler: Paul Downey

Duplicate ID:

CPS Coordinates

Latitude: 40° 49' 20.89289" N Longitude: 104° 12' 00.67804" W

Comments: GPS set about 4' south of well because of building

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 75950

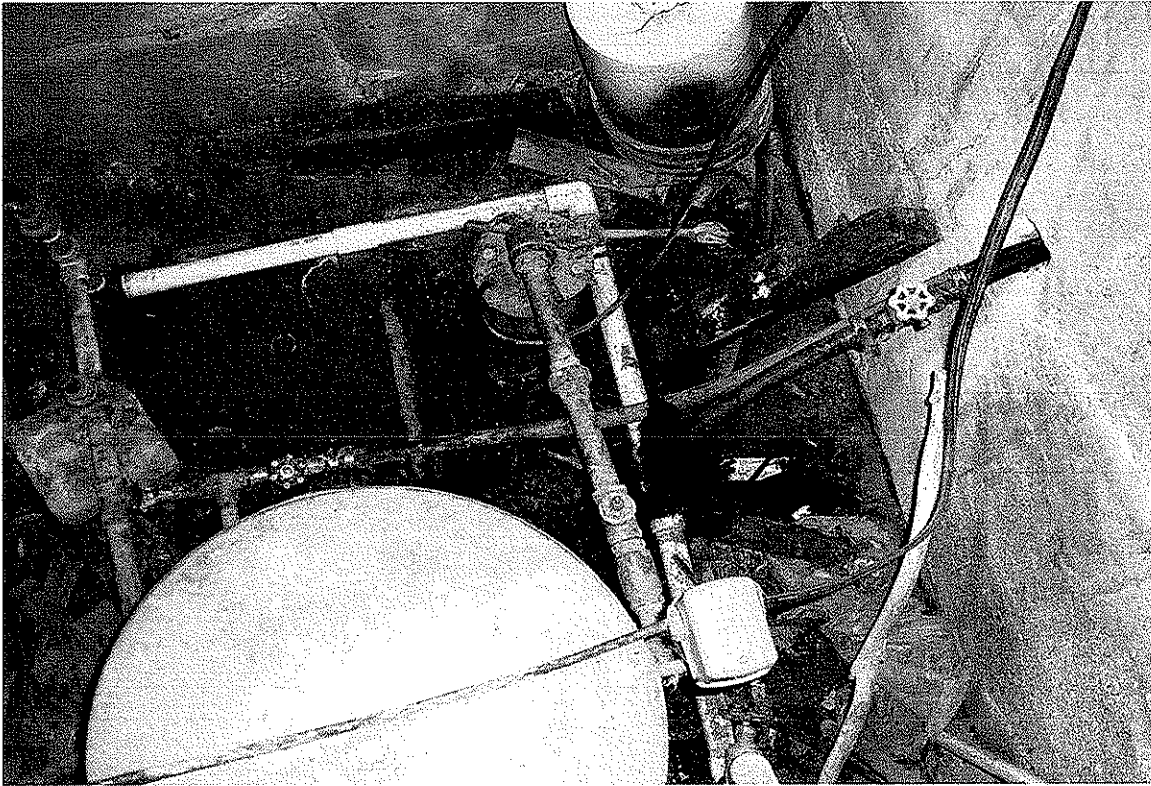


Photo 12A: Well head in vault.

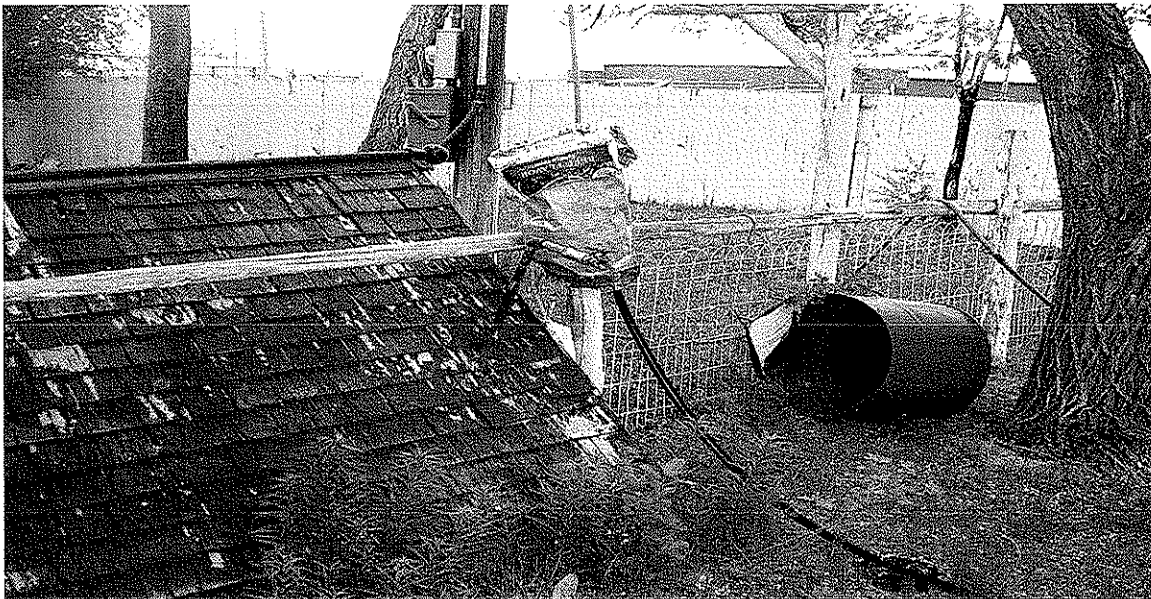


Photo 12B: Sample spigot coming out of well head roof.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 180142
Owner: Clinton Basher

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Address: 41455 CR106
Briggsdale, CO 80811
Location: T 9 N, R 62 W, S 12
Date: 6-9-08
Weather: cloudy 65°

Location of well: 800' Northeast of house by barn
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): Correct
Description of area around well: Corral's and open field
Location and description of sample point: Spicket Northeast of house by propane tank
Pump start time: 2:50

Time	Volume Purged (gal)	PH (SI Units)	Spec Cond (µS/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
3:00	5	7.18	1822	1.39		13.80	clear	none
3:10	4	7.06	1817	1.45		13.15	clear	none
3:18	4	7.05	1818	1.43		13.46	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 180142 Collection Time: 3:24 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4° C
BTEX	2	40 ml	vial	8021	HCl 4° C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4° C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4° C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4° C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4° C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4° C
pH	1	125 ml	HDPE	150.1	4° C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4° C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 45' 37.14098" N Longitude: 104° 15' 56.97958" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 180142



Photo 13A: Well head.



Photo 13B: Sample spigot looking north.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: ~~R-366~~ 114921A
~~226252~~
Owner: Charles Nussbaum
Address: 39994 CR 126
Grover, CO
Location: T 11 N, R 62 W, S 27
Date: 6-5-08
Weather: cloudy

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes X in basement No _____
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: 120' North of house in concrete vault
Type of pump (jet, submersible, suction): set
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): unknown
Description of area around well: Driveway on south side, eyles on north side, set in small lawn
Location and description of sample point: spicket on south east corner of barn, south west of house
Pump start time: 8:30

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (µmS/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other *
8:40	4	7.44	.464	5.97		11.10	clear	none
8:50	4	7.42	.466	6.02		11.20	clear	none
8:57		7.43	.463	5.99		11.08	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 114921A Collection Time: 9:05 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 53' 48.87057" N Longitude: 104° 17' 53.16604" W

Comments: GPS placed ≈ 2.5' south of well because of vault

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 114921A

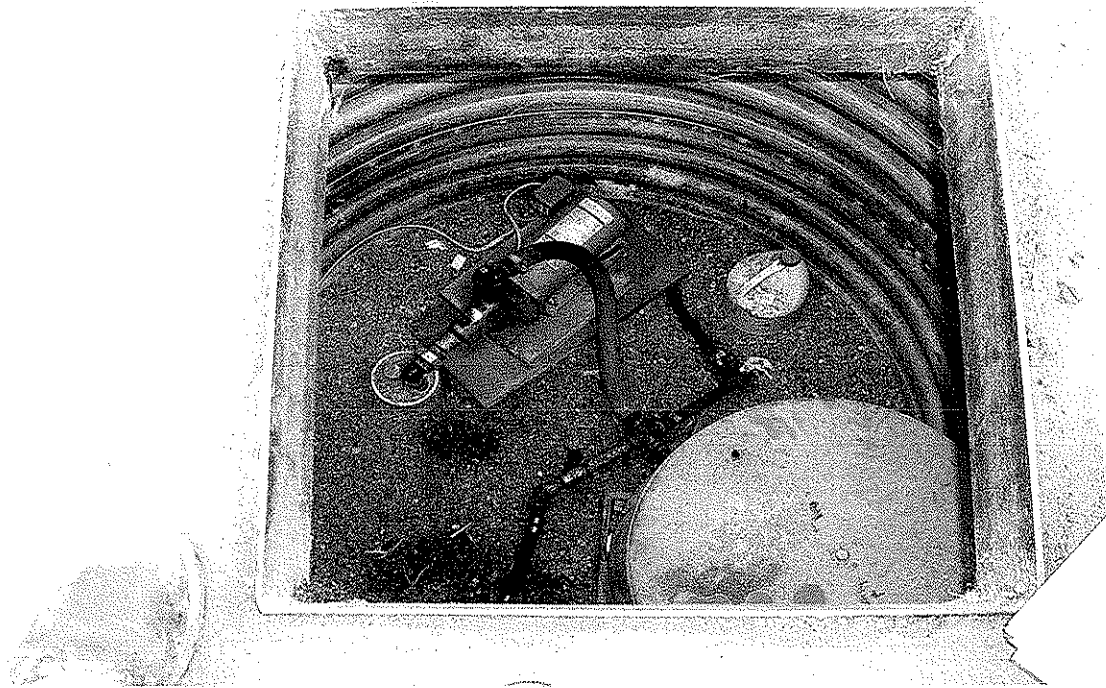


Photo 14A: Well head in vault.

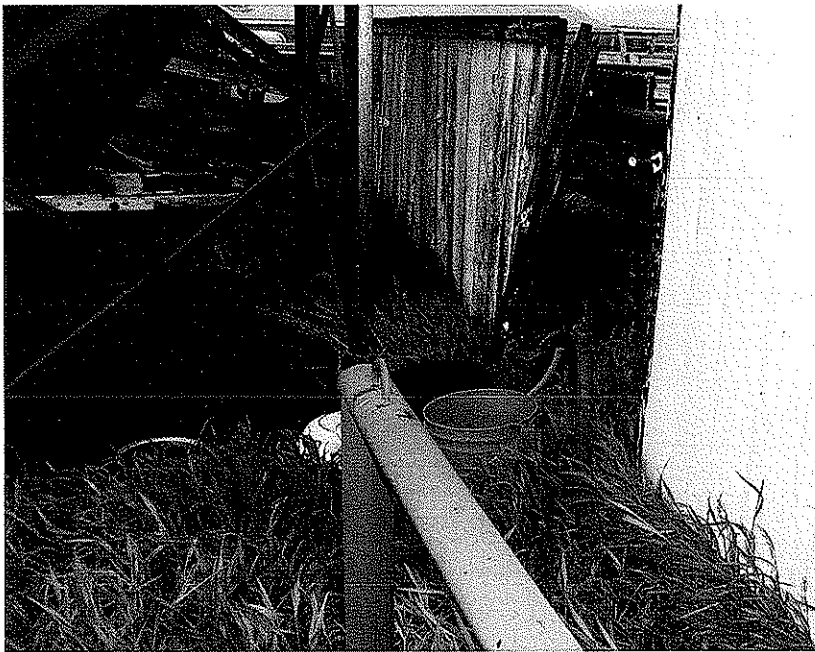


Photo14B: Sample spigot looking south.



Terracon

Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 207601
Owner: Larry Croissant
Address: 49316 CR 83
Briggsdale, CO 80611
Location: T 9 N, R 62 W, S 25
Date: 6-5-08
Weather: cloudy / Rain 52°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: 1600' from south 330' from west line
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 5" steel plastic
Depth to Static Water Table (fluctuations): unavailable
Description of area around well: Between a barn and coral
Location and description of sample point: Spicket 1.5' north of well
Pump start time: 11:25

Time	Volume Purged (gal.)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
11:30	5	8.31	1536	1.68		14.80	clear	none
11:40	5	8.37	1540	1.60		14.69	clear	none
11:50	5	8.38	1538	1.62		14.56	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 207601 Collection Time: 11:55 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 42' 59.98992" N Longitude: 104° 16' 35.92368" W

Comments: Well in concrete vault with steel roof, GPS set 2' north of well

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 207601

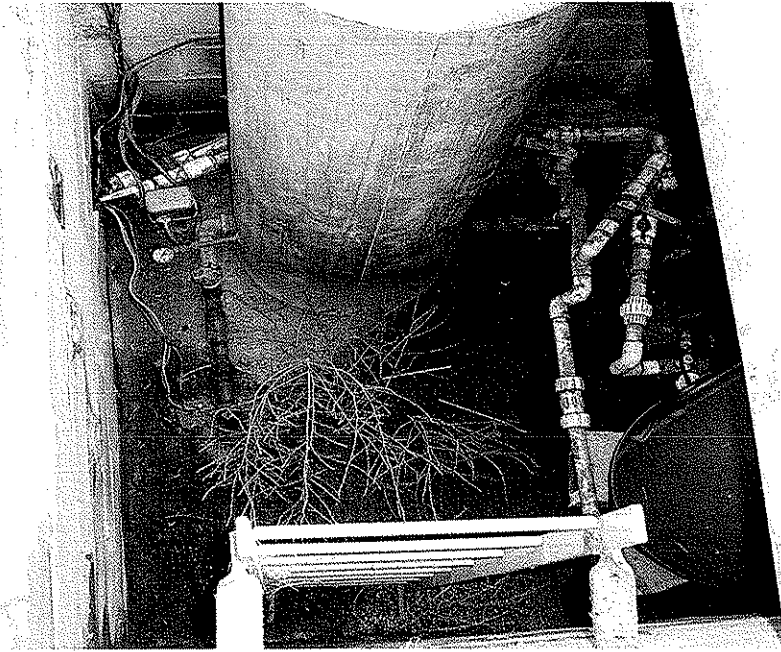


Photo 15A: Well head in vault.



Photo 15B: Sample spigot looking west, next to well vault.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 207600
Owner: Kevin Miller
Address: 49087 CR 83
Briggsdale, CO 80611
Location: T 9 N, R 62 W, S 26
Date: _____
Weather: cloudy/Rain 52°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: 500' from south line, 250' from east line
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 5" plastic
Depth to Static Water Table (fluctuations): 62'
Description of area around well: Open field
Location and description of sample point: spicket ≈ 6' south of well
Pump start time: 12:05

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (µmS/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
12:10	5	8.26	1.499	1.38		15.48	clear	none
12:17	4	8.28	1.501	1.37		15.21	clear	none
12:25	4	8.29	1.500	1.40		15.09	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (biofilms or biofilms).

Field Sample ID: 207600 Collection Time: 12:30 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 42' 46.54855" N Longitude: 109° 16' 41.64720" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 207600



Photo 16A: View of well head and sample spigot.



Photo 16B: Sample spigot looking south.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 16032
Owner: Don Sheller
Address: 44429 CR 83
Briggsdale, CO 80611
Location: T 8 N, R 62 W, S 23
Date: 6-6-08
Weather: Sunny 65°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: 50' north of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): 240'
Description of area around well: well in vault w/ wooden roof - trees and old cars around
Location and description of sample point: spicket out of roof of well vault
Pump start time: 9:05

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other
9:12	4	8.51	1,611	1.83		16.16	clear	none
9:20	3	8.53	1,614	1.86		16.08	clear	none
9:26	3	8.53	1,615	1.84		16.14	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 16032 Collection Time: 9:20 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 38' 46.62469" N Longitude: 104° 16' 40.51545" W

Comments: GPS set ≈ 3' west because of vault roof over well

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 16032

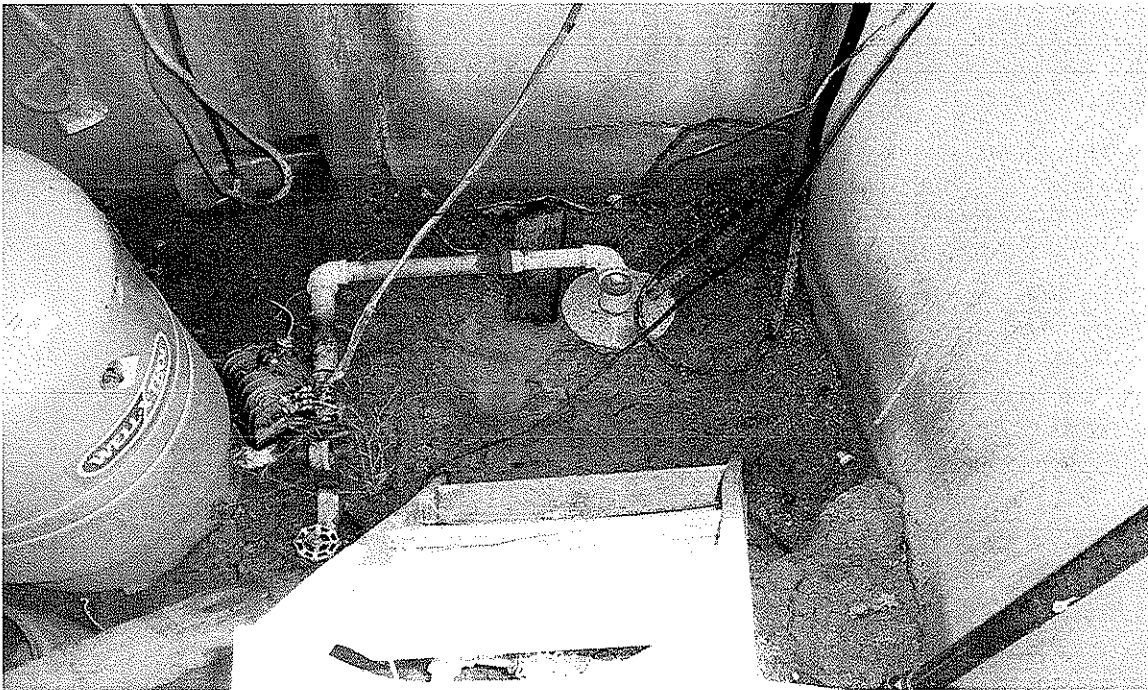


Photo 17A: Well head in vault.

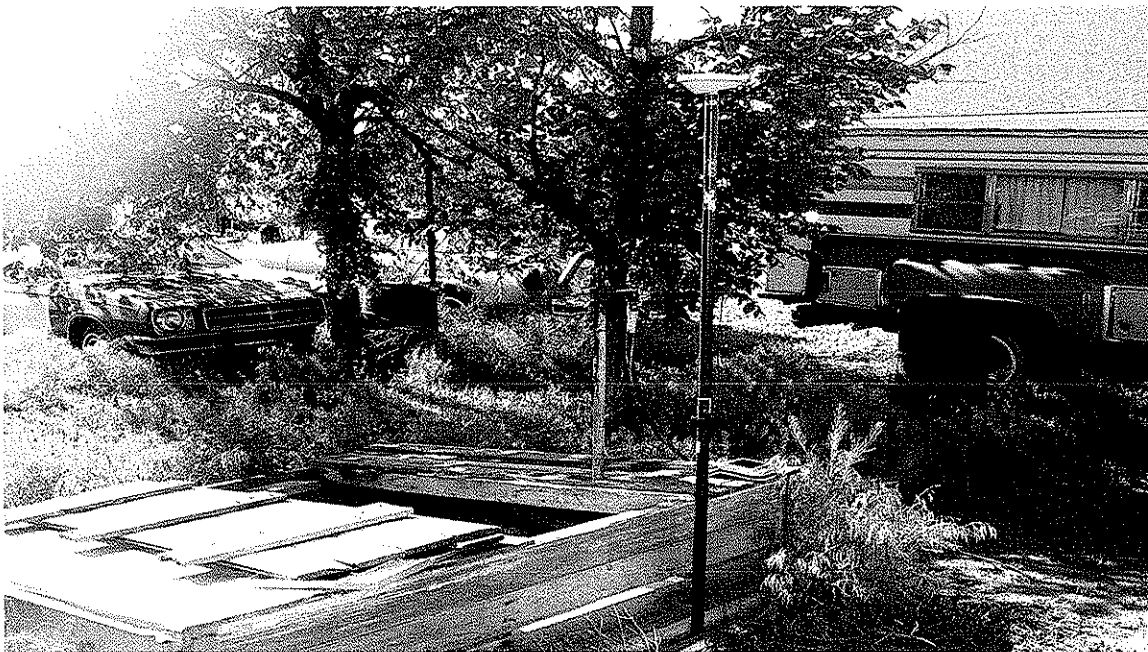


Photo 17B: Sample spigot on roof of well vault.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 6407
Owner: Fred Marick
Address: 59703 CR 87
Grover, CO 80729
Location: T10 N, R 61 W, S 6
Date: 6-6-08
Weather: Sunny 68°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: ~20' west of house in vault
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 5.5" steel
Depth to Static Water Table (fluctuations): ~10'
Description of area around well: Driveway and lawn
Location and description of sample point: spicket 5' west of well
Pump start time: 10:15

Time	Volume Purged (gal)	PH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
10:20	4	8.43	304	2.05		13.84	clear	none
10:30	4	8.44	308	2.08		14.00	clear	none
10:45	5	8.44	307	2.06		14.03	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 6407 Collection Time: 10:50 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 52' 01.5547" N Longitude: 104° 14' 22.68905" W

Comments: GPS 2' North of well

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 6407

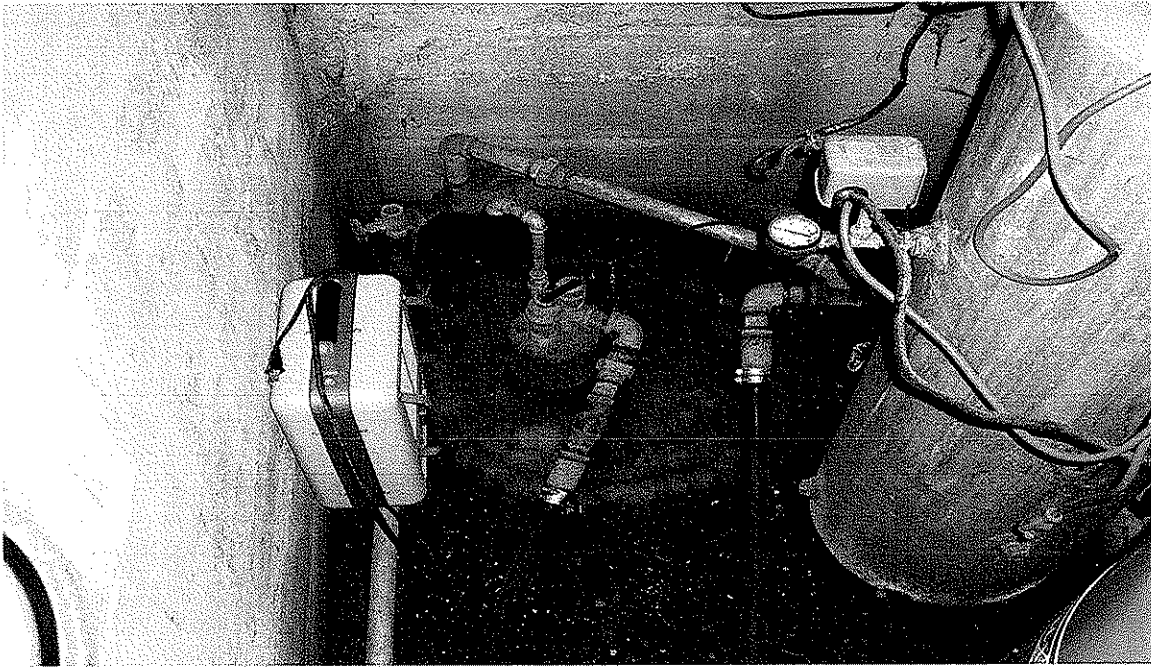


Photo 18A: Well head in vault.



Photo 18B: Sample spigot next to well vault looking south.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 17455

Owner: James Karst

Address: 59364 WCR390
Grover, CO 80729

Well Owner Survey

Is there a holding tank for the well? Yes No X

Do you have a water softener/treatment system? Yes No X

Do you have an in-line filter? Yes No X

Sampling point upstream of pressure tank and treatment system? Yes No X

Location: T10 N, R61 W, S4

Date: 6-6-08

Weather: Sunny 70°

Location of well: End of driveway ~150' southeast of house

Type of pump (jet, submersible, suction): Submersible

Casing material and diameter: 5" steel

Depth to Static Water Table (fluctuations): 20'

Description of area around well: well in star small building

Location and description of sample point: spicket out of pressure tank

Pump start time: 12:20

Table with 9 columns: Time, Volume Purged (gal), PH (SI Units), Spec Cond (ms/cm), DO (mg/L), Turbidity (NTU), Temperature (°C), Clarity, Other. Rows show data for 12:28, 12:33, and 12:40.

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 17455

Collection Time: 12:45

Number of Containers: 11

Table with 6 columns: Analyte, # of Containers, Container Size, Type, Analytical Method, Preservative. Lists various analytes like Dissolved Methane, BTEX, Dissolved Metals, etc.

Sampler: Paul Downey

Duplicate ID:

GPS Coordinates

Latitude: 40° 51' 41.41096" N

Longitude: 104° 12' 51.20602" W

Comments: GPS 4' east because of roof

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 17455



Photo 19A: Well head in small shed.



Photo 19B: Sample spigot out of pressure tank next to well head.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 153852
Owner: David Wilson

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Address: 61000 CR 97
Grover, CO 80729
Location: T 11 N, R 60 W, S 30
Date: 6-6-08
Weather: Sunny 72°

Location of well: ~ 80 yds North of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 8" steel
Depth to Static Water Table (fluctuations): 130' - 150' ± 10'
Description of area around well: Lawn
Location and description of sample point: Spicket on North side of house
Pump start time: 1:45

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (µs/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other
1:53	5	8.24	337	1.30		14.93	clear	none
2:00	4	8.26	336	1.29		14.70	clear	none
2:06	4	8.27	334	1.29		14.63	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 153852 Collection Time: 2:10 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 53' 23.06152" N Longitude: 104° 08' 04.81873" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 153852



Photo 20A: Well head looking south.



Photo 20B: Sample spigot on north side of house.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 146454
Owner: James Sievers

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes X No _____
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Address: 43605 CR 92
Briggsdale, CO 80611
Location: T 8 N, R 61 W, S 17
Date: 6-9-08
Weather: Sunny 65°

Location of well: ≈ 60' North of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 6" plastic
Depth to Static Water Table (fluctuations): ≈ 225'
Description of area around well: Between coral and driveway in grass
Location and description of sample point: Spicket ≈ 30' west of well
Pump start time: 9:05

Time	Volume Purged (gal)	PH (SI Units)	Spec Cond (ms/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
9:15	3	7.77	1.415	2.28		14.54	clear	none
9:23	4	7.79	1.418	2.23		14.83	clear	none
9:30		7.80	1.417	2.26		14.76	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 146454 Collection Time: 9:25 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 39' 17.41297" N Longitude: 107° 13' 40.03953" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 146454

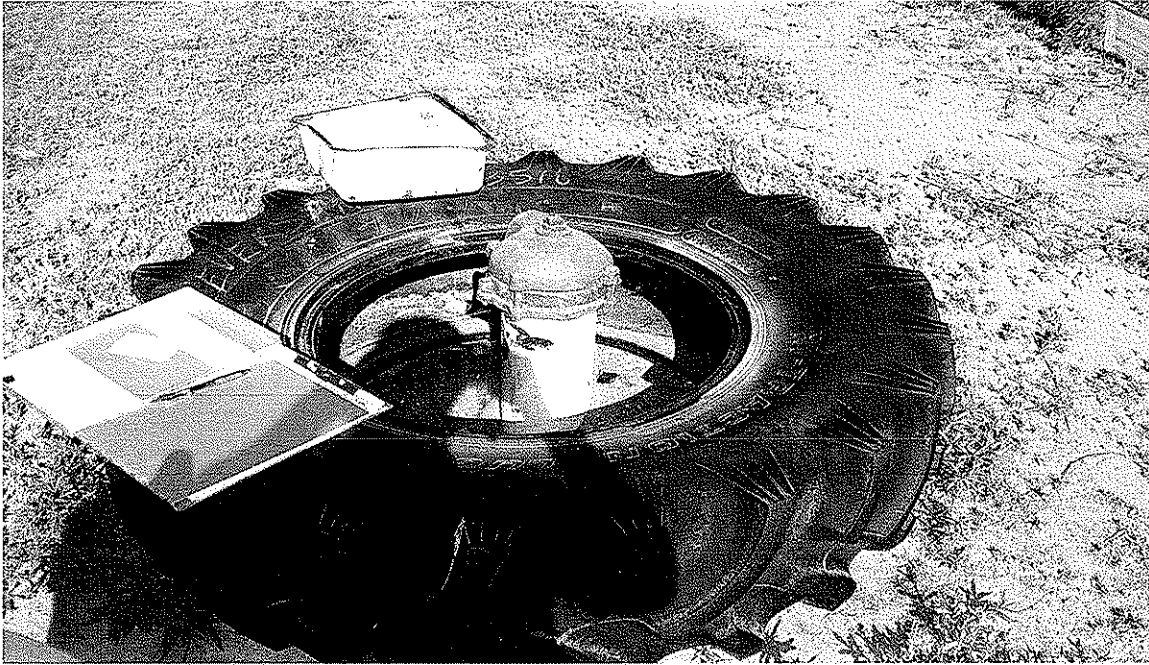


Photo 21A: Well head.

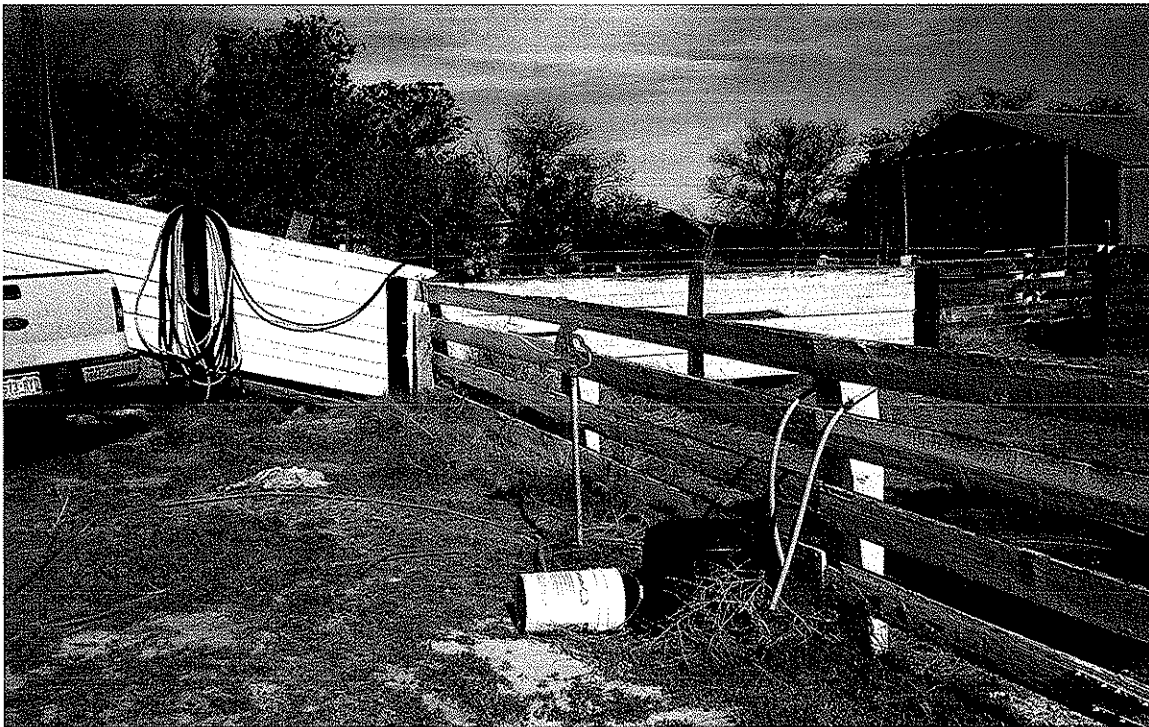


Photo 21B: Sample spigot looking west.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 56478
Owner: Robert Haynes
Address: 41670 CR 122
Grover, CO 80729
Location: T 10 N, R 62 W, S 1
Date: 6-9-08
Weather: sunny 65°

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes _____ No X

Location of well: well ≈ 100' west of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 12" steel
Depth to Static Water Table (fluctuations): _____
Description of area around well: Lawn
Location and description of sample point: Spicket ≈ 20' east of well
Pump start time: 10:20

Time	Volume Purged (gal)	PH (SI Units)	Spec Cond (mc/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other*
10:30	5	8.49	.308	1.47		13.01	clear	none
10:38	4	8.50	.310	1.50		13.89	clear	none
10:45	5	8.52	.311	1.46		13.73	clear	none

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 56478 Collection Time: 10:50 Number of Containers: 11

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4°C
BTEX	2	40 ml	vial	8021	HCl 4°C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4°C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4°C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4°C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4°C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4°C
pH	1	125 ml	HDPE	150.1	4°C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4°C
Duplicate Sample Collected?	Yes:		No:		

Sampler: Pauli Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 52' 17.01508" N Longitude: 104° 15' 56.14751" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 56478



Photo 22A: Well head and spigot looking east.



Photo 22B: closer view of sample spigot looking east.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 232575
Owner: John Wiedhorn
Address: 46981 CR 98, Briggsdale, CO 80611
Location: T 9 N, R 61 W, S 35
Date: 6-9-08
Weather: Sunny 67°

Well Owner Survey

Is there a holding tank for the well? Yes No X
Do you have a water softener/treatment system? Yes No X
Do you have an in-line filter? Yes No X
Sampling point upstream of pressure tank and treatment system? Yes No X

Location of well: ~ 200' southwest of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 8" steel
Depth to Static Water Table (fluctuations):
Description of area around well: Field
Location and description of sample point: spicket 50' west of house
Pump start time: 12:20

Table with 8 columns: Time, Volume Purged (gal.), PH (SI Units), Spec Cond (ms/cm), DO (mg/L), Turbidity (NTU), Temperature (°C), Clarity, Other. Rows show data for 12:30, 12:37, and 12:45.

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

Field Sample ID: 232575 Collection Time: 12:50 Number of Containers: 11

Table with 7 columns: Analyte, # of Containers, Container Size, Type, Analytical Method, Preservative. Lists various analytes like Dissolved Methane, BTEX, Dissolved Metals, etc.

Sampler: Paul Downey

Duplicate ID:

GPS Coordinates

Latitude: 40° 41' 57.88563" N Longitude: 104° 09' 48.47764" W

Comments:

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 232575



Photo 23A: Well head looking north-east.



Photo 23B: Sample spigot looking south-west.



Upper Crow Creek Designated Groundwater Basin Study

Project Name: COGCC - Crow Creek Aquifer Study
Project Number: 25087038

Permit No: 237976
Owner: Wayne Knight

Well Owner Survey

Is there a holding tank for the well? Yes _____ No X
Do you have a water softener/treatment system? Yes _____ No X
Do you have an in-line filter? Yes _____ No X
Sampling point upstream of pressure tank and treatment system? Yes X No _____

Address: _____
Location: T 9 N, R 61 W, S 33
Date: _____
Weather: Sunny 70°

Location of well: ≈ 50' west of house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter: 4" steel
Depth to Static Water Table (fluctuations): 721 143'
Description of area around well: Field next to dog kennel
Location and description of sample point: Spicket ≈ 20' west of house inside dog kennel
Pump start time: 2:00

Time	Volume Purged (gal)	pH (SI Units)	Spec Cond (ns/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other
<u>2:12</u>	<u>5</u>	<u>8.70</u>	<u>.477</u>	<u>1.29</u>		<u>14.90</u>	<u>clear</u>	
<u>2:20</u>	<u>5</u>	<u>8.69</u>	<u>.471</u>	<u>1.31</u>		<u>14.67</u>		
<u>2:30</u>	<u>5</u>	<u>8.69</u>	<u>.473</u>	<u>1.28</u>		<u>14.44</u>		

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).
Field Sample ID: 237976 Collection Time: 2:40 Number of Containers: _____

Analyte	# of Containers	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	2	40 ml	vial	RSK175	4° C
BTEX	2	40 ml	vial	8021	HCl 4° C
Dissolved Metals (As, Ba, Cr, Cd, Mn, Pb, Na, Ca, Mg, K, Fe, Se)	1	500 ml	HDPE	200.7	4° C
Br, Cl, F, SO ₄	1	250 ml	HDPE	300	4° C
CO ₃ , HCO ₃	1	500 ml	HDPE	2320B	4° C
Se	1	500 ml	HDPE	200.8	HNO ₃ , 4° C
NO ₃ , NO ₂	1	250 ml	HDPE	353.2	H ₂ SO ₄ , 4° C
pH	1	125 ml	HDPE	150.1	4° C
Spec. Cond., TDS	1	250 ml	HDPE	2540C	4° C
Duplicate Sample Collected?	Yes: _____		No: _____		

Sampler: Paul Downey

Duplicate ID: _____

GPS Coordinates

Latitude: 40° 42' 30.29640" N Longitude: 104° 12' 36.76159" W

Comments: _____

Upper Crow Creek Designated Groundwater Basin Study
June 2008

ID: 237976



Photo 24A: Well head.

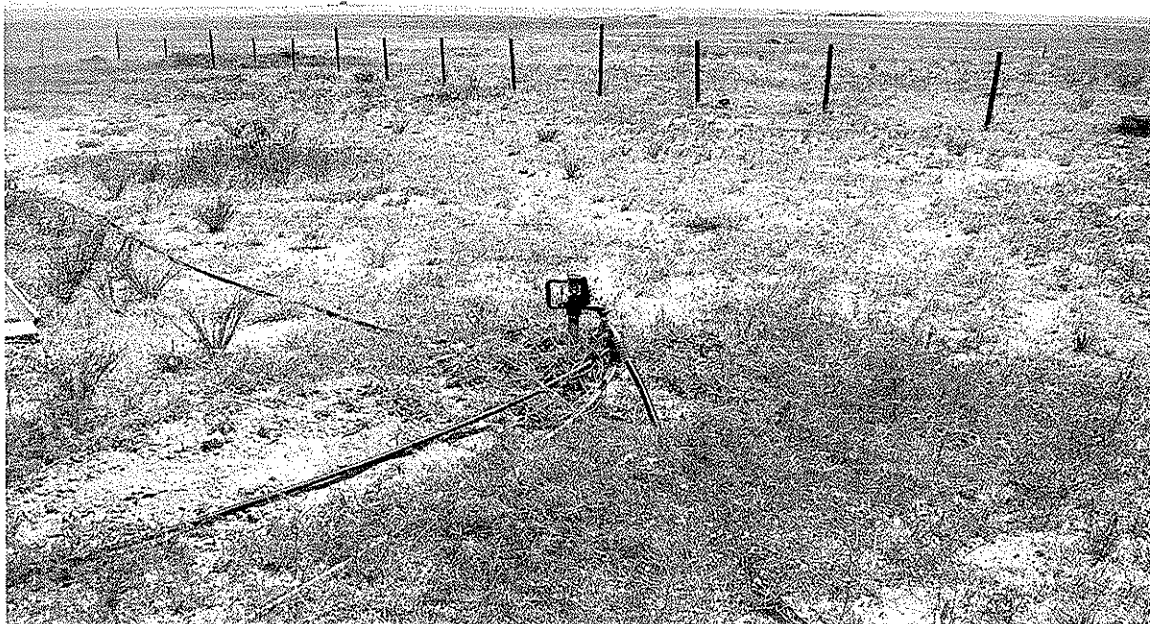


Photo 24B: Sample spigot looking south.

APPENDIX C
ANALYTICAL LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY FORMS



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Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L350658
Samples Received: 06/03/08
Client Project: 25087038


Description: Upper Crow Creek GW Study

Other Comments

Total Metal numbers from reports L349218, L349412, L349989, L348730,
L348735, L348434, L348191. John B.

The analytical results in this report are based upon information supplied
by you, the client, and are for your exclusive use. If you have any
questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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25 Samples Reported: 06/24/08 10:21 Revised: 06/24/08 14:50

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study
Sample ID : 250326
Collected By : Paul Downey
Collection Date : 06/02/08 09:20

ESC Sample # : L350658-01

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0039	0.0010	mg/l	0.010	200.8	06/18/08 1140	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1140	LAT	1
Barium	0.24	0.0050	mg/l	2.0	200.7	06/18/08 2242	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2242	EGR	1
Calcium	73.	0.50	mg/l		200.7	06/18/08 2242	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2242	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2242	EGR	1
Magnesium	13.	0.10	mg/l		200.7	06/18/08 2242	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2242	EGR	1
Potassium	6.5	0.50	mg/l		200.7	06/18/08 2242	EGR	1
Sodium	16.	0.50	mg/l		200.7	06/18/08 2242	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-02

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 22374

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 12:00

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0039	0.0010	mg/l	0.010	200.8	06/18/08 1118	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1118	LAT	1
Barium	0.20	0.0050	mg/l	2.0	200.7	06/18/08 2246	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2246	EGR	1
Calcium	53.	0.50	mg/l		200.7	06/18/08 2246	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2246	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2246	EGR	1
Magnesium	10.	0.10	mg/l		200.7	06/18/08 2246	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2246	EGR	1
Potassium	6.3	0.50	mg/l		200.7	06/18/08 2246	EGR	1
Sodium	12.	0.50	mg/l		200.7	06/18/08 2246	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
TerraCon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-03

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 43057

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 13:00

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0010	0.0010	mg/l	0.010	200.8	06/18/08 1121	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1121	LAT	1
Barium	0.039	0.0050	mg/l	2.0	200.7	06/18/08 2249	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2249	EGR	1
Calcium	17.	0.50	mg/l		200.7	06/18/08 2249	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2249	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2249	EGR	1
Magnesium	4.6	0.10	mg/l		200.7	06/18/08 2249	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2249	EGR	1
Potassium	4.4	0.50	mg/l		200.7	06/18/08 2249	EGR	1
Sodium	61.	0.50	mg/l		200.7	06/18/08 2249	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

ESC Sample # : L350658-04

Sample ID : 189301

Site ID :

Collected By : Paul Downey
Collection Date : 06/02/08 13:55

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0071	0.0010	mg/l	0.010	200.8	06/18/08 1124	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1124	LAT	1
Barium	0.18	0.0050	mg/l	2.0	200.7	06/18/08 2311	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2311	EGR	1
Calcium	43.	0.50	mg/l		200.7	06/18/08 2311	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2311	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2311	EGR	1
Magnesium	11.	0.10	mg/l		200.7	06/18/08 2311	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2311	EGR	1
Potassium	4.6	0.50	mg/l		200.7	06/18/08 2311	EGR	1
Sodium	28.	0.50	mg/l		200.7	06/18/08 2311	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study
Sample ID : 25784
Collected By : Paul Downey
Collection Date : 06/03/08 08:50

ESC Sample # : L350658-05

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0046	0.0010	mg/l	0.010	200.8	06/18/08 1127	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1127	LAT	1
Barium	0.17	0.0050	mg/l	2.0	200.7	06/18/08 2314	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2314	EGR	1
Calcium	45.	0.50	mg/l		200.7	06/18/08 2314	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2314	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2314	EGR	1
Magnesium	8.6	0.10	mg/l		200.7	06/18/08 2314	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2314	EGR	1
Potassium	5.6	0.50	mg/l		200.7	06/18/08 2314	EGR	1
Sodium	11.	0.50	mg/l		200.7	06/18/08 2314	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study
Sample ID : 165120
Collected By : Paul Downey
Collection Date : 06/03/08 10:20

ESC Sample # : L350658-06

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0031	0.0010	mg/l	0.010	200.8	06/18/08 1131	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1131	LAT	1
Barium	0.019	0.0050	mg/l	2.0	200.7	06/18/08 2318	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2318	EGR	1
Calcium	6.2	0.50	mg/l		200.7	06/18/08 2318	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2318	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2318	EGR	1
Magnesium	1.7	0.10	mg/l		200.7	06/18/08 2318	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2318	EGR	1
Potassium	3.5	0.50	mg/l		200.7	06/18/08 2318	EGR	1
Sodium	90.	0.50	mg/l		200.7	06/18/08 2318	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Sample ID : 271304

Collected By : Paul Downey
Collection Date : 06/03/08 11:50

ESC Sample # : L350658-07

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.014	0.0010	mg/l	0.010	200.8	06/18/08 1134	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1134	LAT	1
Barium	0.027	0.0050	mg/l	2.0	200.7	06/18/08 2321	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2321	EGR	1
Calcium	24.	0.50	mg/l		200.7	06/18/08 2321	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2321	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2321	EGR	1
Magnesium	7.2	0.10	mg/l		200.7	06/18/08 2321	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2321	EGR	1
Potassium	6.4	0.50	mg/l		200.7	06/18/08 2321	EGR	1
Sodium	26.	0.50	mg/l		200.7	06/18/08 2321	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-08

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 32124

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 13:20

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0010	0.0010	mg/l	0.010	200.8	06/18/08 1137	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1137	LAT	1
Barium	0.032	0.0050	mg/l	2.0	200.7	06/18/08 2324	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2324	EGR	1
Calcium	20.	0.50	mg/l		200.7	06/18/08 2324	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2324	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2324	EGR	1
Magnesium	4.6	0.10	mg/l		200.7	06/18/08 2324	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2324	EGR	1
Potassium	5.1	0.50	mg/l		200.7	06/18/08 2324	EGR	1
Sodium	98.	0.50	mg/l		200.7	06/18/08 2324	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

ESC Sample # : L350658-09

Sample ID : DUPLICATE

Site ID :

Collected By : Paul Downey
Collection Date : 06/04/08 00:00

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0048	0.0010	mg/l	0.010	200.8	06/18/08 1044	LAT	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 1044	LAT	1
Barium	0.026	0.0050	mg/l	2.0	200.7	06/18/08 2328	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2328	EGR	1
Calcium	7.5	0.50	mg/l		200.7	06/18/08 2328	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2328	EGR	1
Iron	0.68	0.10	mg/l	0.30	200.7	06/18/08 2328	EGR	1
Magnesium	2.2	0.10	mg/l		200.7	06/18/08 2328	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2328	EGR	1
Potassium	2.7	0.50	mg/l		200.7	06/18/08 2328	EGR	1
Sodium	80.	0.50	mg/l		200.7	06/18/08 2328	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-10

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 75950

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 14:15

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0030	0.0010	mg/l	0.010	200.8	06/19/08 0004	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0004	LF	1
Barium	0.039	0.0050	mg/l	2.0	200.7	06/18/08 2222	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2222	EGR	1
Calcium	8.7	0.50	mg/l		200.7	06/18/08 2222	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2222	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2222	EGR	1
Magnesium	2.8	0.10	mg/l		200.7	06/18/08 2222	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2222	EGR	1
Potassium	3.6	0.50	mg/l		200.7	06/18/08 2222	EGR	1
Sodium	80.	0.50	mg/l		200.7	06/18/08 2222	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-11

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 180142

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 15:24

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0029	0.0010	mg/l	0.010	200.8	06/19/08 0007	LF	1
Lead	0.0013	0.0010	mg/l	0.015	200.8	06/19/08 0007	LF	1
Barium	0.084	0.0050	mg/l	2.0	200.7	06/19/08 0019	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0019	EGR	1
Calcium	90.	0.50	mg/l		200.7	06/19/08 0019	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0019	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0019	EGR	1
Magnesium	17.	0.10	mg/l		200.7	06/19/08 0019	EGR	1
Manganese	0.23	0.010	mg/l	0.050	200.7	06/19/08 0019	EGR	1
Potassium	12.	0.50	mg/l		200.7	06/19/08 0019	EGR	1
Sodium	100	0.50	mg/l		200.7	06/19/08 0019	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-12

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 2038

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 09:15

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0014	0.0010	mg/l	0.010	200.8	06/19/08 0010	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0010	LF	1
Barium	0.043	0.0050	mg/l	2.0	200.7	06/19/08 0023	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0023	EGR	1
Calcium	18.	0.50	mg/l		200.7	06/19/08 0023	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0023	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0023	EGR	1
Magnesium	4.7	0.10	mg/l		200.7	06/19/08 0023	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0023	EGR	1
Potassium	5.8	0.50	mg/l		200.7	06/19/08 0023	EGR	1
Sodium	82.	0.50	mg/l		200.7	06/19/08 0023	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study
Sample ID : 137661
Collected By : Paul Downey
Collection Date : 06/04/08 10:45

ESC Sample # : L350658-13

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0013	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0013	LF	1
Barium	0.045	0.0050	mg/l	2.0	200.7	06/19/08 0026	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0026	EGR	1
Calcium	22.	0.50	mg/l		200.7	06/19/08 0026	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0026	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0026	EGR	1
Magnesium	4.4	0.10	mg/l		200.7	06/19/08 0026	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0026	EGR	1
Potassium	5.3	0.50	mg/l		200.7	06/19/08 0026	EGR	1
Sodium	97.	0.50	mg/l		200.7	06/19/08 0026	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-14

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 42068

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 12:30

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0016	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0016	LF	1
Barium	0.026	0.0050	mg/l	2.0	200.7	06/19/08 0048	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0048	EGR	1
Calcium	7.4	0.50	mg/l		200.7	06/19/08 0048	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0048	EGR	1
Iron	0.71	0.10	mg/l	0.30	200.7	06/19/08 0048	EGR	1
Magnesium	2.2	0.10	mg/l		200.7	06/19/08 0048	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0048	EGR	1
Potassium	2.8	0.50	mg/l		200.7	06/19/08 0048	EGR	1
Sodium	84.	0.50	mg/l		200.7	06/19/08 0048	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-15

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 114921A

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 09:05

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	0.0042	0.0010	mg/l	0.010	200.8	06/19/08 0019	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0019	LF	1
Barium	0.15	0.0050	mg/l	2.0	200.7	06/19/08 0052	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0052	EGR	1
Calcium	67.	0.50	mg/l		200.7	06/19/08 0052	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0052	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0052	EGR	1
Magnesium	13.	0.10	mg/l		200.7	06/19/08 0052	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0052	EGR	1
Potassium	11.	0.50	mg/l		200.7	06/19/08 0052	EGR	1
Sodium	38.	0.50	mg/l		200.7	06/19/08 0052	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-16

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 207601

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 11:55

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0022	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0022	LF	1
Barium	0.052	0.0050	mg/l	2.0	200.7	06/19/08 0055	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0055	EGR	1
Calcium	14.	0.50	mg/l		200.7	06/19/08 0055	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0055	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0055	EGR	1
Magnesium	2.9	0.10	mg/l		200.7	06/19/08 0055	EGR	1
Manganese	0.012	0.010	mg/l	0.050	200.7	06/19/08 0055	EGR	1
Potassium	3.7	0.50	mg/l		200.7	06/19/08 0055	EGR	1
Sodium	130	0.50	mg/l		200.7	06/19/08 0055	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-17

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 207600

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 12:30

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0025	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0025	LF	1
Barium	0.037	0.0050	mg/l	2.0	200.7	06/19/08 0058	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0058	EGR	1
Calcium	10.	0.50	mg/l		200.7	06/19/08 0058	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0058	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0058	EGR	1
Magnesium	2.1	0.10	mg/l		200.7	06/19/08 0058	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0058	EGR	1
Potassium	3.3	0.50	mg/l		200.7	06/19/08 0058	EGR	1
Sodium	120	0.50	mg/l		200.7	06/19/08 0058	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study
Sample ID : 16032
Collected By : Paul Downey
Collection Date : 06/06/08 09:30

ESC Sample # : L350658-18

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0028	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0028	LF	1
Barium	0.033	0.0050	mg/l	2.0	200.7	06/19/08 0101	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0101	EGR	1
Calcium	6.6	0.50	mg/l		200.7	06/19/08 0101	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0101	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0101	EGR	1
Magnesium	1.4	0.10	mg/l		200.7	06/19/08 0101	EGR	1
Manganese	0.019	0.010	mg/l	0.050	200.7	06/19/08 0101	EGR	1
Potassium	2.3	0.50	mg/l		200.7	06/19/08 0101	EGR	1
Sodium	160	0.50	mg/l		200.7	06/19/08 0101	EGR	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/24/08 10:21 Revised: 06/24/08 14:51



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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study
Sample ID : 6407
Collected By : Paul Downey
Collection Date : 06/06/08 10:15

ESC Sample # : L350658-19

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/18/08 2333	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/18/08 2333	LF	1
Barium	0.028	0.0050	mg/l	2.0	200.7	06/19/08 0105	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0105	EGR	1
Calcium	5.3	0.50	mg/l		200.7	06/19/08 0105	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0105	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0105	EGR	1
Magnesium	1.4	0.10	mg/l		200.7	06/19/08 0105	EGR	1
Manganese	0.011	0.010	mg/l	0.050	200.7	06/19/08 0105	EGR	1
Potassium	2.8	0.50	mg/l		200.7	06/19/08 0105	EGR	1
Sodium	82.	0.50	mg/l		200.7	06/19/08 0105	EGR	1

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study
Sample ID : 17455
Collected By : Paul Downey
Collection Date : 06/06/08 12:45

ESC Sample # : L350658-20

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0407	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0407	LF	1
Barium	0.037	0.0050	mg/l	2.0	200.7	06/18/08 2359	EGR	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/18/08 2359	EGR	1
Calcium	8.2	0.50	mg/l		200.7	06/18/08 2359	EGR	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/18/08 2359	EGR	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/18/08 2359	EGR	1
Magnesium	3.0	0.10	mg/l		200.7	06/18/08 2359	EGR	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/18/08 2359	EGR	1
Potassium	2.9	0.50	mg/l		200.7	06/18/08 2359	EGR	1
Sodium	77.	0.50	mg/l		200.7	06/18/08 2359	EGR	1

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-21

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 153822

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 14:10

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0410	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0410	LF	1
Barium	0.038	0.0050	mg/l	2.0	200.7	06/19/08 0913	BGL	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0913	BGL	1
Calcium	10.	0.50	mg/l		200.7	06/19/08 0913	BGL	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0913	BGL	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0913	BGL	1
Magnesium	3.7	0.10	mg/l		200.7	06/19/08 0913	BGL	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0913	BGL	1
Potassium	3.7	0.50	mg/l		200.7	06/19/08 0913	BGL	1
Sodium	80.	0.50	mg/l		200.7	06/19/08 0913	BGL	1

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Det. Limit - Estimated Quantitation Limit (EQL)

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study
Sample ID : 146454
Collected By : Paul Downey
Collection Date : 06/09/08 09:35

ESC Sample # : L350658-22

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0414	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0414	LF	1
Barium	0.0068	0.0050	mg/l	2.0	200.7	06/19/08 0917	BGL	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0917	BGL	1
Calcium	52.	0.50	mg/l		200.7	06/19/08 0917	BGL	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0917	BGL	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0917	BGL	1
Magnesium	11.	0.10	mg/l		200.7	06/19/08 0917	BGL	1
Manganese	0.082	0.010	mg/l	0.050	200.7	06/19/08 0917	BGL	1
Potassium	6.8	0.50	mg/l		200.7	06/19/08 0917	BGL	1
Sodium	330	0.50	mg/l		200.7	06/19/08 0917	BGL	1

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study
Sample ID : 56478
Collected By : Paul Downey
Collection Date : 06/09/08 10:50

ESC Sample # : L350658-23

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0417	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0417	LF	1
Barium	0.034	0.0050	mg/l	2.0	200.7	06/19/08 0920	BGL	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0920	BGL	1
Calcium	5.7	0.50	mg/l		200.7	06/19/08 0920	BGL	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0920	BGL	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0920	BGL	1
Magnesium	1.3	0.10	mg/l		200.7	06/19/08 0920	BGL	1
Manganese	0.016	0.010	mg/l	0.050	200.7	06/19/08 0920	BGL	1
Potassium	2.1	0.50	mg/l		200.7	06/19/08 0920	BGL	1
Sodium	88.	0.50	mg/l		200.7	06/19/08 0920	BGL	1

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L350658-24

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 232575

Project : 25087038

Collected By : Paul Downey
Collection Date : 06/09/08 12:50

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0420	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0420	LF	1
Barium	0.017	0.0050	mg/l	2.0	200.7	06/19/08 0941	BGL	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0941	BGL	1
Calcium	2.9	0.50	mg/l		200.7	06/19/08 0941	BGL	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0941	BGL	1
Iron	BDL	0.10	mg/l	0.30	200.7	06/19/08 0941	BGL	1
Magnesium	0.56	0.10	mg/l		200.7	06/19/08 0941	BGL	1
Manganese	BDL	0.010	mg/l	0.050	200.7	06/19/08 0941	BGL	1
Potassium	1.8	0.50	mg/l		200.7	06/19/08 0941	BGL	1
Sodium	140	0.50	mg/l		200.7	06/19/08 0941	BGL	1

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study
Sample ID : 237976
Collected By : Paul Downey
Collection Date : 06/09/08 14:40

ESC Sample # : L350658-25

Site ID :

Project : 25087038

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Arsenic	BDL	0.0010	mg/l	0.010	200.8	06/19/08 0423	LF	1
Lead	BDL	0.0010	mg/l	0.015	200.8	06/19/08 0423	LF	1
Barium	0.019	0.0050	mg/l	2.0	200.7	06/19/08 0944	BGL	1
Cadmium	BDL	0.0050	mg/l	0.0050	200.7	06/19/08 0944	BGL	1
Calcium	3.1	0.50	mg/l		200.7	06/19/08 0944	BGL	1
Chromium	BDL	0.010	mg/l	0.10	200.7	06/19/08 0944	BGL	1
Iron	0.21	0.10	mg/l	0.30	200.7	06/19/08 0944	BGL	1
Magnesium	0.59	0.10	mg/l		200.7	06/19/08 0944	BGL	1
Manganese	0.010	0.010	mg/l	0.050	200.7	06/19/08 0944	BGL	1
Potassium	1.5	0.50	mg/l		200.7	06/19/08 0944	BGL	1
Sodium	150	0.50	mg/l		200.7	06/19/08 0944	BGL	1

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Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L350658-10	Sodium	v

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:51:06

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L350658-01 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348191-01
Sample: L350658-02 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348191-02
Sample: L350658-03 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348191-03
Sample: L350658-04 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348191-04
Sample: L350658-05 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348434-01
Sample: L350658-06 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348434-02
Sample: L350658-07 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348434-03
Sample: L350658-08 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348434-04
Sample: L350658-09 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348730-01
Sample: L350658-10 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348730-02
Sample: L350658-11 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348730-03
Sample: L350658-12 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348735-01
Sample: L350658-13 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348735-02
Sample: L350658-14 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348735-03
Sample: L350658-15 Account: TERRWRCO Received: 06/06/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348989-01
Sample: L350658-16 Account: TERRWRCO Received: 06/06/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348989-02
Sample: L350658-17 Account: TERRWRCO Received: 06/06/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L348989-03
Sample: L350658-18 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349218-01
Sample: L350658-19 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349218-02
Sample: L350658-20 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349218-03
Sample: L350658-21 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349218-04
Sample: L350658-22 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349412-01
Sample: L350658-23 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349412-02
Sample: L350658-24 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349412-03
Sample: L350658-25 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/24/08 00:00 RPT Date: 06/24/08 10:21
Relogged from L349412-04



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Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L348191

Samples Received: 06/03/08

Client Project: 25087038

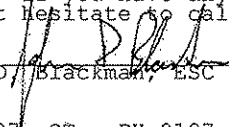
Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/10/08 16:57 Revised: 06/24/08 14:49

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348191-01

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 250326

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 09:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	40000	1000	ug/l	9056	06/03/08	1
Fluoride	680	100	ug/l	9056	06/03/08	1
Nitrate	3200	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	32000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/06/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/06/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	7.5		su	9040C	06/06/08	1
Nitrate-Nitrite	3300	100	ug/l	353.2	06/04/08	1
Specific Conductance	570		umhos/cm	9050A	06/06/08	1
Dissolved Solids	370000	10000	ug/l	2540C	06/06/08	1
Selenium	2.3	1.0	ug/l	6020	06/04/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	98.6		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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L348191-01 (PH) - 7.5@21.4c



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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 24, 2008

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

ESC Sample # : L348191-02

Sample ID : 22374

Site ID :

Collected By : Paul Downey
Collection Date : 06/02/08 12:00

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	14000	1000	ug/l	9056	06/03/08	1
Fluoride	800	100	ug/l	9056	06/03/08	1
Nitrate	4200	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	17000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/10/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/10/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	7.6		su	9040C	06/06/08	1
Nitrate-Nitrite	4000	100	ug/l	353.2	06/04/08	1
Specific Conductance	420		umhos/cm	9050A	06/06/08	1
Dissolved Solids	300000	10000	ug/l	2540C	06/06/08	1
Selenium	1.2	1.0	ug/l	6020	06/04/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	98.8		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348191-02 (PH) - 7.6@21.4c



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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348191-03

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 43057

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	4000	1000	ug/l	9056	06/03/08	1
Fluoride	430	100	ug/l	9056	06/03/08	1
Nitrate	580	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	31000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/10/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/10/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	8.0		su	9040C	06/06/08	1
Nitrate-Nitrite	600	100	ug/l	353.2	06/04/08	1
Specific Conductance	390		umhos/cm	9050A	06/06/08	1
Dissolved Solids	240000	10000	ug/l	2540C	06/06/08	1
Selenium	4.1	1.0	ug/l	6020	06/04/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	98.4		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348191-03 (PH) - 8.0@21.4c



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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348191-04

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 189301

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 13:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	31000	1000	ug/l	9056	06/03/08	1
Fluoride	490	100	ug/l	9056	06/03/08	1
Nitrate	4800	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	23000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/10/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/10/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	7.8		su	9040C	06/06/08	1
Nitrate-Nitrite	4700	100	ug/l	353.2	06/04/08	1
Specific Conductance	470		umhos/cm	9050A	06/06/08	1
Dissolved Solids	330000	10000	ug/l	2540C	06/06/08	1
Selenium	6.4	1.0	ug/l	6020	06/04/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a,a,a-TriFluorotoluene (PID)	98.3		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348191-04 (PH) - 7.8@21.4c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348191-01	pH	T8
L348191-02	pH	T8
L348191-03	pH	T8
L348191-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:49:59

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L348191-01 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/10/08 00:00 RPT Date: 06/10/08 16:57

Sample: L348191-02 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/10/08 00:00 RPT Date: 06/10/08 16:57

Sample: L348191-03 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/10/08 00:00 RPT Date: 06/10/08 16:57

Sample: L348191-04 Account: TERRWRCO Received: 06/03/08 09:00 Due Date: 06/10/08 00:00 RPT Date: 06/10/08 16:57



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Est. 1970

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L348434

Samples Received: 06/04/08

Client Project: 25087038


Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A21A - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/11/08 11:02 Revised: 06/24/08 14:49

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-01

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 25784

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 08:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	6600	1000	ug/l	9056	06/04/08	1
Fluoride	720	100	ug/l	9056	06/04/08	1
Nitrate	3600	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	11000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	7.5		su	9040C	06/05/08	1
Nitrate-Nitrite	4300	100	ug/l	353.2	06/06/08	1
Specific Conductance	370		umhos/cm	9050A	06/06/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	3.0	1.0	ug/l	6020	06/05/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348434-01 (PH) - 7.5@23.7c



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Est. 1970

REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-02

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 165120

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 10:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	13000	1000	ug/l	9056	06/04/08	1
Fluoride	440	100	ug/l	9056	06/04/08	1
Nitrate	BDL	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	39000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.3		su	9040C	06/05/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	470		umhos/cm	9050A	06/06/08	1
Dissolved Solids	310000	10000	ug/l	2540C	06/07/08	1
Selenium	1.8	1.0	ug/l	6020	06/05/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348434-02 (PH) - 8.3023.9c



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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-03

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 271304

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 11:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	5200	1000	ug/l	9056	06/04/08	1
Fluoride	980	100	ug/l	9056	06/04/08	1
Nitrate	2200	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	16000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	150000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.0		su	9040C	06/05/08	1
Nitrate-Nitrite	2700	100	ug/l	353.2	06/06/08	1
Specific Conductance	310		umhos/cm	9050A	06/06/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	2.6	1.0	ug/l	6020	06/05/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	99.9		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348434-03 (PH) - 8.0@23.8c



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-04

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 32124

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 13:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	26000	1000	ug/l	9056	06/04/08	1
Fluoride	190	100	ug/l	9056	06/04/08	1
Nitrate	260	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	70000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	210000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.0		su	9040C	06/06/08	1
Nitrate-Nitrite	380	100	ug/l	353.2	06/06/08	1
Specific Conductance	600		umhos/cm	9050A	06/06/08	1
Dissolved Solids	390000	10000	ug/l	2540C	06/07/08	1
Selenium	7.1	1.0	ug/l	6020	06/05/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/11/08 11:02 Revised: 06/24/08 14:50
L348434-04 (PH) - 8.0@21.4c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348434-01	pH	T8
L348434-02	pH	T8
L348434-03	pH	T8
L348434-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:50:03

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L348434-01 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/11/08 00:00 RPT Date: 06/11/08 11:02

Sample: L348434-02 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/11/08 00:00 RPT Date: 06/11/08 11:02

Sample: L348434-03 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/11/08 00:00 RPT Date: 06/11/08 11:02

Sample: L348434-04 Account: TERRWRCO Received: 06/04/08 09:00 Due Date: 06/11/08 00:00 RPT Date: 06/11/08 11:02



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Est. 1970

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L348730

Samples Received: 06/05/08

Client Project: 25087038

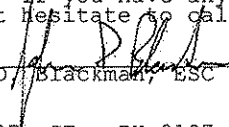
Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

AZLA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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3 Samples Reported: 06/12/08 11:31 Revised: 06/24/08 14:50

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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348730-01

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : DUPLICATE

Project # : 25087038

Collected By :
Collection Date : 06/04/08 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	8900	1000	ug/l	9056	06/05/08	1
Fluoride	360	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	36000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	440		umhos/cm	9050A	06/12/08	1
Dissolved Solids	320000	10000	ug/l	2540C	06/07/08	1
Selenium	4.4	1.0	ug/l	200.8	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	99.5		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348730-01 (PH) - 8.5@20.6c



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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348730-02

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 75950

Project # : 25087038

Collected By :
Collection Date : 06/04/08 14:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	9400	1000	ug/l	9056	06/05/08	1
Fluoride	330	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	37000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	190000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	430		umhos/cm	9050A	06/12/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	4.8	1.0	ug/l	200.8	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	100.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/12/08 11:31 Revised: 06/24/08 14:50
L348730-02 (PH) - 8.5@20.5c



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REPORT OF ANALYSIS

June 24, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348730-03

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 180142

Project # : 25087038

Collected By :
Collection Date : 06/04/08 15:24

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	78000	1000	ug/l	9056	06/05/08	1
Fluoride	790	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	180000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	290000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	7.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	1100		umhos/cm	9050A	06/12/08	1
Dissolved Solids	660000	10000	ug/l	2540C	06/11/08	1
Selenium	3.4	1.0	ug/l	200.8	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	99.6		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/12/08 11:31 Revised: 06/24/08 14:50
L348730-03 (PH) - 7.5@20.5c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348730-01	pH	T8
L348730-02	pH	T8
L348730-03	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:50:14

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L348730-01 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/12/08 00:00 RPT Date: 06/12/08 11:31

Sample: L348730-02 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/12/08 00:00 RPT Date: 06/12/08 11:31

Sample: L348730-03 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/12/08 00:00 RPT Date: 06/12/08 11:31



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Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L348735

Samples Received: 06/05/08

Client Project: 25087038

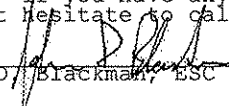
Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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3 Samples Reported: 06/12/08 16:24 Revised: 06/24/08 14:49

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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348735-01

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 2038

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 09:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	21000	1000	ug/l	9056	06/05/08	1
Fluoride	280	100	ug/l	9056	06/05/08	1
Nitrate	520	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	44000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.1		su	9040C	06/07/08	1
Nitrate-Nitrite	660	100	ug/l	353.2	06/06/08	1
Specific Conductance	510		umhos/cm	9050A	06/12/08	1
Dissolved Solids	430000	10000	ug/l	2540C	06/07/08	1
Selenium	18.	1.0	ug/l	6020	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	100.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/12/08 16:24 Revised: 06/24/08 14:50
L348735-01 (PH) - 8.1@20.8c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348735-02

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 137611

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 10:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	10000	1000	ug/l	9056	06/05/08	1
Fluoride	560	100	ug/l	9056	06/05/08	1
Nitrate	110	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	38000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	300000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	7.9		su	9040C	06/07/08	1
Nitrate-Nitrite	160	100	ug/l	353.2	06/06/08	1
Specific Conductance	580		umhos/cm	9050A	06/12/08	1
Dissolved Solids	470000	10000	ug/l	2540C	06/07/08	1
Selenium	5.1	1.0	ug/l	6020	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/12/08 16:24 Revised: 06/24/08 14:50
L348735-02 (PH) - 7.9@20.9c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348735-03

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 42068

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/04/08 12:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	8400	1000	ug/l	9056	06/05/08	1
Fluoride	360	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	36000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	190000	10000	ug/l	310.2	06/12/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/12/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	430		umhos/cm	9050A	06/12/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	BDL	1.0	ug/l	6020	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	102.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/12/08 16:24 Revised: 06/24/08 14:50
L348735-03 (PH) - 8.5@21.0c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348735-01	pH	T8
L348735-02	pH	T8
L348735-03	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:50:13

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L348735-01 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/12/08 00:00 RPT Date: 06/12/08 16:24

Sample: L348735-02 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/12/08 00:00 RPT Date: 06/12/08 16:24

Sample: L348735-03 Account: TERRWRCO Received: 06/05/08 09:00 Due Date: 06/12/08 00:00 RPT Date: 06/12/08 16:24



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Est. 1970

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L348989

Samples Received: 06/06/08

Client Project: 25087038

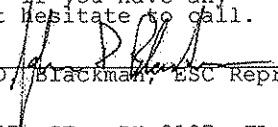
Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

AZLA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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3 Samples Reported: 06/13/08 10:11 Revised: 06/24/08 15:02

Page 1 of 6



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348989-01

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 114921A

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 09:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/06/08	1
Chloride	39000	1000	ug/l	9056	06/06/08	1
Fluoride	990	100	ug/l	9056	06/06/08	1
Nitrate	2500	100	ug/l	9056	06/06/08	1
Nitrite	BDL	100	ug/l	9056	06/06/08	1
Sulfate	54000	5000	ug/l	9056	06/06/08	1
Alkalinity, Bicarbonate	230000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	7.5		su	9040C	06/10/08	1
Nitrate-Nitrite	2900	100	ug/l	353.2	06/09/08	1
Specific Conductance	650		umhos/cm	9050A	06/12/08	1
Dissolved Solids	400000	10000	ug/l	2540C	06/11/08	1
Selenium	1.2	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/10/08	1
Toluene	BDL	5.0	ug/l	8021B	06/10/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/10/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/10/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/10/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/13/08 10:11 Revised: 06/24/08 15:02
L348989-01 (PH) - 7.5@23.5c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study
Sample ID : 207601
Collected By : Paul Downey
Collection Date : 06/05/08 11:55

ESC Sample # : L348989-02

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/06/08	1
Chloride	21000	1000	ug/l	9056	06/06/08	1
Fluoride	280	100	ug/l	9056	06/06/08	1
Nitrate	BDL	100	ug/l	9056	06/06/08	1
Nitrite	BDL	100	ug/l	9056	06/06/08	1
Sulfate	120000	5000	ug/l	9056	06/06/08	1
Alkalinity, Bicarbonate	210000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.4		su	9040C	06/10/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	710		umhos/cm	9050A	06/12/08	1
Dissolved Solids	420000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/10/08	1
Toluene	BDL	5.0	ug/l	8021B	06/10/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/10/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/10/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	103.		% Rec.	8021B	06/10/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/13/08 10:11 Revised: 06/24/08 15:02
L348989-02 (PH) - 8.4@23.6c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study
Sample ID : 207600
Collected By : Paul Downey
Collection Date : 06/05/08 12:30

ESC Sample # : L348989-03

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/06/08	1
Chloride	23000	1000	ug/l	9056	06/06/08	1
Fluoride	350	100	ug/l	9056	06/06/08	1
Nitrate	170	100	ug/l	9056	06/06/08	1
Nitrite	BDL	100	ug/l	9056	06/06/08	1
Sulfate	92000	5000	ug/l	9056	06/06/08	1
Alkalinity, Bicarbonate	210000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.3		su	9040C	06/10/08	1
Nitrate-Nitrite	210	100	ug/l	353.2	06/09/08	1
Specific Conductance	650		umhos/cm	9050A	06/12/08	1
Dissolved Solids	390000	10000	ug/l	2540C	06/11/08	1
Selenium	3.0	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348989-03 (PH) - 8.3@23.1c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348989-01	pH	T8
L348989-02	pH	T8
L348989-03	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

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Definitions

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- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 15:02:39

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L348989-01 Account: TERRWRCO Received: 06/06/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11

Sample: L348989-02 Account: TERRWRCO Received: 06/06/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11

Sample: L348989-03 Account: TERRWRCO Received: 06/06/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11



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Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L349218

Samples Received: 06/07/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/13/08 10:11 Revised: 06/24/08 14:50

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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study
Sample ID : 16032
Collected By : Paul Downey
Collection Date : 06/06/08 09:30

ESC Sample # : L349218-01

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	20000	1000	ug/l	9056	06/07/08	1
Fluoride	740	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	91000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.6		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	770		umhos/cm	9050A	06/13/08	1
Dissolved Solids	460000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/13/08 10:11 Revised: 06/24/08 14:50
L349218-01 (PH) - 8.6@24.6C



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-02

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 6407

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 10:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	4200	1000	ug/l	9056	06/07/08	1
Fluoride	420	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	33000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.5		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	400		umhos/cm	9050A	06/13/08	1
Dissolved Solids	230000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/13/08 10:11 Revised: 06/24/08 14:50
L349218-02 (PH) - 8.5@24.8C



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-03

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 17455

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 12:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	8800	1000	ug/l	9056	06/07/08	1
Fluoride	480	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	39000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.3		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	420		umhos/cm	9050A	06/13/08	1
Dissolved Solids	240000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.
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Reported: 06/13/08 10:11 Revised: 06/24/08 14:50
L349218-03 (PH) - 8.3@24.7c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-04

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 153852

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 14:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	12000	1000	ug/l	9056	06/07/08	1
Fluoride	560	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	41000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.3		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	430		umhos/cm	9050A	06/13/08	1
Dissolved Solids	240000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/13/08 10:11 Revised: 06/24/08 14:50
L349218-04 (PH) - 8.3@24.5c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L349218-01	pH	T8
L349218-02	pH	T8
L349218-03	pH	T8
L349218-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:50:53

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L349218-01 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11

Sample: L349218-02 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11

Sample: L349218-03 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11

Sample: L349218-04 Account: TERRWRCO Received: 06/07/08 09:00 Due Date: 06/13/08 00:00 RPT Date: 06/13/08 10:11



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Est. 1970

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Case Narrative

Tuesday June 24, 2008

Report Number: L349412

Samples Received: 06/10/08

Client Project: 25087038


Description: Upper Crow Creek GW Study

Other Comments

Dissolved Metals have been removed. 6/24/2008 John B.

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/16/08 16:12 Revised: 06/24/08 14:50

Page 1 of 7



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349412-01

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 146454

Project # : 25087038

Collected By :
Collection Date : 06/09/08 09:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	71000	1000	ug/l	9056	06/10/08	1
Fluoride	100	100	ug/l	9056	06/10/08	1
Nitrate	290	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	640000	50000	ug/l	9056	06/11/08	10
Alkalinity, Bicarbonate	230000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	7.7		su	9040C	06/13/08	1
Nitrate-Nitrite	270	100	ug/l	353.2	06/11/08	1
Specific Conductance	1800		umhos/cm	9050A	06/13/08	1
Dissolved Solids	1200000	10000	ug/l	2540C	06/12/08	1
Selenium	1.3	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/16/08 16:12 Revised: 06/24/08 14:50
L349412-01 (PH) - 7.7@22.0c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349412-02

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 56478

Project # : 25087038

Collected By :
Collection Date : 06/09/08 10:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	5000	1000	ug/l	9056	06/10/08	1
Fluoride	230	100	ug/l	9056	06/10/08	1
Nitrate	BDL	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	35000	5000	ug/l	9056	06/10/08	1
Alkalinity, Bicarbonate	280000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.5		su	9040C	06/13/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/11/08	1
Specific Conductance	410		umhos/cm	9050A	06/13/08	1
Dissolved Solids	250000	10000	ug/l	2540C	06/12/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a,a,a-TriFluorotoluene (PID)	104.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/16/08 16:12 Revised: 06/24/08 14:50
L349412-02 (PH) - 8.5@21.9c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study
Sample ID : 232575
Collected By :
Collection Date : 06/09/08 12:50

ESC Sample # : L349412-03

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	22000	1000	ug/l	9056	06/10/08	1
Fluoride	380	100	ug/l	9056	06/10/08	1
Nitrate	BDL	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	36000	5000	ug/l	9056	06/10/08	1
Alkalinity, Bicarbonate	230000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	15.	10.	ug/l	3810/RSK17	06/12/08	1
pH	8.6		su	9040C	06/13/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/11/08	1
Specific Conductance	610		umhos/cm	9050A	06/13/08	1
Dissolved Solids	350000	10000	ug/l	2540C	06/12/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	105.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/16/08 16:12 Revised: 06/24/08 14:50
L349412-03 (PH) - 8.6@22.0c



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REPORT OF ANALYSIS

June 24, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349412-04

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 237976

Project # : 25087038

Collected By :
Collection Date : 06/09/08 14:40

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	12000	1000	ug/l	9056	06/10/08	1
Fluoride	520	100	ug/l	9056	06/10/08	1
Nitrate	BDL	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	11000	5000	ug/l	9056	06/10/08	1
Alkalinity, Bicarbonate	250000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	17.	10.	ug/l	3810/RSK17	06/12/08	1
pH	8.7		su	9040C	06/13/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/11/08	1
Specific Conductance	610		umhos/cm	9050A	06/13/08	1
Dissolved Solids	360000	10000	ug/l	2540C	06/13/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a, a, a-TriFluorotoluene (PID)	105.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/16/08 16:12 Revised: 06/24/08 14:50
L349412-04 (PH) - 8.7@22.3c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L349412-01	pH	T8
L349412-02	pH	T8
L349412-03	pH	T8
L349412-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/08 at 14:50:51

TSR Signing Reports: 151
R5 - Desired TAT

Meth, Eth and Eth = \$125 tgthr; Watch for dilutions on 8260btex, may require rerun by 8021; ppb
on GW samples

Sample: L349412-01 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/17/08 00:00 RPT Date: 06/16/08 16:12

Sample: L349412-02 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/17/08 00:00 RPT Date: 06/16/08 16:12

Sample: L349412-03 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/17/08 00:00 RPT Date: 06/16/08 16:12

Sample: L349412-04 Account: TERRWRCO Received: 06/10/08 09:00 Due Date: 06/17/08 00:00 RPT Date: 06/16/08 16:12

Terracon - Wheat Ridge, CO
 10625 W I-70 Frontage Rd N
 Suite 3
 Wheat Ridge, CO 80033

Alternate billing information:
 Report to: Paul Downey
 Email to: pdowney@terracon.com

Project Description: Upper Crow Creek GW Study
 Client Project #: 25087038
 Site/Facility ID#: _____
 City/State Collected: _____
 ESC Key: _____
 P.O.#: _____

Phone: 303-423-3300
 FAX: 303-423-3353

Collected by: *Paul Downey*

Collected by (signature): _____
 Rush? (Lab MUST Be Notified)
 Same Day.....200%
 Next Day.....100%
 Two Day.....50%

Packed on Ice: N Y

Date Results Needed:
 Email? No Yes
 FAX? No Yes

Sample ID	Comp/Grab	Matrix	Depth	Date	Time	No. of Cnts	
						_____	_____
250326	Grab	GW		6-2-08	9:20	10	10
22324	11	11		11	12:00	10	10
43057	11	11		11	1:00	10	10
189301	11	11		11	1:55	11	11

Prepared by:
ENVIRONMENTAL SCIENCE CORP.
 12065 Lebanon Road
 Mt. Juliet, TN 37122
 Phone (615) 758-5858
 Phone (800) 767-5859
 FAX (615) 758-5859

Co Code: _____ (lab use only)
 Template/Releasin: _____
 Shipped Via: _____

Remarks/Contaminant	Sample # (lab only)
	23481910
	02
	03
	04

Analysis/Container/Preservative									
RCA8 dissolved - 500ml HDPE - NO PRES - need to filter	X	X	X	X	X	X	X	X	X
BTEX by 8021 - (2) 40ml vial w/ HCl	X	X	X	X	X	X	X	X	X
Methane RSK-175 - (2) 40ml vial w/ HCl	X	X	X	X	X	X	X	X	X
ANIONS by Method 300 ** - (1) 250ml HDPE no pres	X	X	X	X	X	X	X	X	X
Carbonate & Bicarbonate by 2320B - (1) 500ml HDPE no pres	X	X	X	X	X	X	X	X	X
Selenium by 200.8 - (1) 500ml HDPE w/ HNO3	X	X	X	X	X	X	X	X	X
Nitrite Nitrate by 353.2 (1) 250ml HDPE w/ H2SO4	X	X	X	X	X	X	X	X	X
pH by 150.1 (1) 125ml HDPE no pres	X	X	X	X	X	X	X	X	X

*Matrix SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: **Bromide, Chloride, Fluoride, Nitrite, Nitrate, Sulfate

Relinquished by: (Signature) <i>[Signature]</i>	Date: 6-2-08	Time: _____	Received by: (Signature) <i>[Signature]</i>	Date: _____	Time: _____
Relinquished by: (Signature) <i>[Signature]</i>	Date: _____	Time: _____	Received by: (Signature) <i>[Signature]</i>	Date: _____	Time: _____
Relinquished by: (Signature) <i>[Signature]</i>	Date: _____	Time: _____	Received for lab by: (Signature) <i>[Signature]</i>	Date: 6-3-08	Time: 04:00

Temp: 3/2 Bottles Received: 4/11
 Date: 6-3-08 Time: 04:00
 pH Checked: 2 NCF:

pH _____ Temp _____

Flow _____ Other _____

Terracon. - Wheat Ridge, CO
 10625 W I-70 Frontage Rd N
 Suite 3
 Wheat Ridge, CO 80033

Alternate billing information:

Report to: Paul Downey
 Email to: pdowney@terracon.com

Project Description: Upper Crow Creek GW Study

Client Project #: 25087038
 ESC Key:

Site/Facility ID#: P.O.#:

Collected by: *Paul Downey*
 Collected by (signature):
 Packed on Ice: N Y X

Rush? (Lab MUST Be Notified)
 Same Day.....200%
 Next Day.....100%
 Two Day.....50%

Date Results Needed:
 Email? No Yes
 FAX? No Yes

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
25787	Gmb	GW		6-3-08	8:50	10
165120	K	K		K	10:20	10
271304	A	K		H	11:50	10
32124	II	H		H	1:20	11

PD

*Matrix SS- Soil/Solid GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other

Remarks: Bromide, Chloride, Fluoride, Nitrite, Nitrate, Sulfate

Relinquished by (Signature): *Paul Downey*
 Date: 6-3-08 Time: 11:05
 Relinquished by (Signature):
 Date: Time:
 Relinquished by (Signature):
 Date: Time:

Samples returned via: UPS
 FedEx Courier
 Temp: 4.2°C Bottles Received: 44
 Date: 6/3/08 Time: 0900

Prepared by:
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 Mt. Juliet, TN 37122
 Phone (615) 758-5858
 Phone (800) 767-5859
 FAX (615) 758-5859

Analysis/Container/Preservative
 RCRA8 dissolved - 500ml HDPE - NO PRES - need to filter
 BTEX by 8021 - (2) 40ml vial w/ HCl
 Methane RSK 175 - (2) 40ml vial w/ HCl
 ANIONS by Method 300 - (1) 250ml HDPE no pres
 Carbonate & Bicarbonate by 2320B - (1) 500ml HDPE no pres
 Selenium by 200.8 - (1) 500ml HDPE w/ HNO3
 Nitrite Nitrate by 353.2 (1) 250ml HDPE w/ H2SO4
 PH by 150.1 (1) 125ml HDPE no pres

Code	Remarks/Contaminant	Sample # (lab only)
		1350658-05734934
		06
		07
		08

pH _____ Temp _____

Flow _____ Other _____

260346322949

PH Checked: 2.2
 NSF: *[Signature]*

Received by (Signature): *[Signature]*
 Received by (Signature): *[Signature]*
 Received by (Signature): *[Signature]*

Terracon - Wheat Ridge, CO
 10625 W I-70 Frontage Rd N
 Suite 3
 Wheat Ridge, CO 80033

Alternate billing information:
 Report to: Paul Downey
 Email to: pdowney@terracon.com

Project Description: Upper Crow Creek GW Study
 Phone: 303-423-3300
 FAX: 303-423-3353
 Client Project #: 25087038
 ESC Key:
 Site/Facility ID#: P.O.#

Collected by (signature):
 (Rush?) (Lab MUST Be Notified)
 Same Day.....200%
 Next Day.....100%
 Two Day.....50%
 Date Results Needed:
 Email? No Yes
 FAX? No Yes
 Date Time
 No. of Cans

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Remarks/Contaminant	Sample # (lab only)
Duplicate	Grab	GW		6-4-08	1:15		1350658-01
75950	Grab	GW		6-4-08	2:15		10
180192	Grab	GW		6-4-08	3:24		11

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 Phone (800) 767-5859
 FAX (615) 758-5859

CoCode	Template/Prep	Shipper/Vol	Remarks/Contaminant	Sample # (lab only)

Analysis/Container/Preservative							
RCRA8 dissolved - 500ml HDPE - NO PRES - need to filter	X						
BTEX by 8021 - (2) 40ml vial w/ HCl	X						
Methane RSK 175 - (2) 40ml vial w/ HCl	X						
ANIONS by Method 300 ** - (1) 250ml HDPE no pres	X						
Carbonate & Bicarbonate by 2320B - (1) 500ml HDPE no pres	X						
Selenium by 200.8 - (1) 500ml HDPE w/ HNO3	X						
Nitrite Nitrate by 353.2 (1) 250ml HDPE w/ H2SO4	X						
PH by 150.1 (1) 125ml HDPE no pres	X						

*Matrix SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other
 pH _____ Temp _____
 Remarks: **Bromide, Chloride, Fluoride, Nitrite, Nitrate, Sulfate

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6-4-08	4:40 PM									

86034632308
 Samples returned via: UPS FedEx Courier
 Temp: 5.1°C
 Date: 6/5/08
 Time: 0900

Condition:	Temp	Other

erracon - Wheat Ridge, CO
 10625 W I-70 Frontage Rd N
 Suite 3
 Wheat Ridge, CO 80033

Alternate billing information:

Report to: Paul Downey
 Email to: pdowney@terracon.com

Project Description: Upper Crow Creek GW Study
 Client Project #: 25087038
 Phone: 303-423-3300
 FAX: 303-423-3353
 Collected by: Paul Downey
 Site/Facility ID#: _____
 P.O.#: _____

Collected by (Signature): *Paul Downey*
 Date Results Needed:
 Same Day: _____ 200%
 Next Day: _____ 100%
 Two Day: _____ 50%
 Rush? (Lab MUST Be Notified)
 Packed on Ice: N Y A

Sample ID: 114921A
 207601
 207600
 No. of Cntrs: 101
 Date: 9:05
 Time: 11:55
 Date: 12:30

Comp/Grab	Matrix*	Depth	Date	Time

Analysis/Container/Preservative									
FORA8 dissolved - 500ml HDPE - NO PRES - need to filter	X	X	X	X	X	X	X	X	X
BTEX by 8021 - (2) 40ml vial w/ HCl	X	X	X	X	X	X	X	X	X
Methane RSK (75 - (2) 40ml vial w/ HCl	X	X	X	X	X	X	X	X	X
ANIONS by Method 300 ** - (1) 250ml HDPE no pres	X	X	X	X	X	X	X	X	X
Carbonate & Bicarbonate by 2320B - (1) 500ml HDPE no pres	X	X	X	X	X	X	X	X	X
Selenium by 200.8 - (1) 500ml HDPE w/ HNO3	X	X	X	X	X	X	X	X	X
Nitrite-Nitrate by 353.2 (1) 250ml HDPE w/ H2SO4	X	X	X	X	X	X	X	X	X
pH by 150.1 (1) 125ml HDPE no pres	X	X	X	X	X	X	X	X	X

Prepared by: ENVIRONMENTAL SCIENCE CORP.
 12065 Lebanon Road
 Mt. Juliet, TN 37122
 Phone (615) 758-5858
 Phone (800) 767-5859
 FAX (615) 758-5859

CoCode	Template/Prefix	Shipped Via	Remarks/Contaminant	Sample # (lab only)
			7350658-15	16
				17

Chain of Custody Page 1 of 2

*Matrix: SS - Soil/Solid GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other
 Remarks: **Bromide, Chloride, Fluoride, Nitrite, Nitrate, Sulfate
 Relinquished by (Signature): *Paul Downey* Date: 6-5-08 Time: 18:10
 Relinquished by (Signature): *Paul Downey* Date: _____ Time: _____
 Relinquished by (Signature): *Paul Downey* Date: _____ Time: _____
 Received by (Signature): *Paul Downey* Date: 6/16/08 Time: 09:00
 Received by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____
 Samples returned via: UPS FedEx Courier
 Temp: 32°C
 Date: 6/16/08
 pH Checked: 2.2
 Condition: *OK*
 Other: _____

Terracon - Wheat Ridge, CO
 10625 W I-70 Frontage Rd N
 Suite 3
 Wheat Ridge, CO 80033

Project Description: Upper Crow Creek GW Study

Phone: 303-423-3300
 FAX: 303-423-3353

Collected by: Paul Downey

Collected by (Signature): 

Packed on Ice: N Y X

Alternate Billing Information:
 Report to: Paul Downey
 Email to: pdowney@terracon.com

City/Site Collected: Terracon.com

ESC Key: 25087038

P.O.#:

Rush? (Lab MUST Be Notified)
 Same Day.....200%
 Next Day.....100%
 Two Day.....50%

Date Results Needed:
 Email? No Yes
 FAX? No Yes

Date Time
 6-6-08 9:30
 10:15
 12:45
 2:10

Comp/Grab Matrix* Depth
 Grab GW
 10
 10
 10
 10

Sample ID
 16032
 6407
 17455
 153852

Analysis/Container/Preservative

BTEX by 8021 - (2) 40ml vial w/ HCl
 Methane RSK 175 - (2) 40ml vial w/ HCl
 ANIONS by Method 300 ** - (1) 250ml HDPE no pres
 Carbonate & Bicarbonate by 2320B - (1) 500ml HDPE no pres
 Selenium by 200.8 - (1) 500ml HDPE w/ HNO3
 Nitrite Nitrate by 353.2 (1) 250ml HDPE w/ H2SO4
 PH by 150.1 (1) 125ml HDPE no pres

Remarks/Contaminant

Sample # (lab only)

1350558-10
 19
 20
 21

Chain of Custody Page 1 of 2

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
 12065 Lebanon Road
 Mt. Juliet, TN 37122

Phone (615) 758-5858
 Phone (800) 767-5859
 FAX (615) 758-5859

Coaches (lab use only)
 Template/Prelogin
 Shipped Via

pH _____ Temp _____

Flow _____ Other _____

*Matrix SS - Soil/Solid GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other
 Remarks: Bromide, Chloride, Fluoride, Nitrate, Sulfate 85847066 6417

Relinquished by (Signature): 	Date: 6-6-08	Time: 10:20	Received by (Signature): 	Date: 6/7/08	Time: 09:00	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by (Signature): 	Date:	Time:	Received by (Signature): 	Date:	Time:	Temp: 34°C	Bothles Received: 44
Relinquished by (Signature): 	Date:	Time:	Received for lab by (Signature): 	Date:	Time:	Checked: 22	Checked: NCF

Prepared by:

**ENVIRONMENTAL
SCIENCE CORP.**

12065 Lebanon Road
Mt. Juliet, TN 37122

Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

Co-Code (lab use only)
Template/Prelogin
Shipped Via

Remarks/Contaminant	Sample # (lab only)
U3D658-22	22
23	23
24	24
25	25

Analysis/Container/Preservative	PH by 150.1 (1) 125ml HDPE no pres		Nitrite Nitrate by 353.2 (1) 250ml HDPE w/H2SO4		Selenium by 200.8 - (1) 500ml HDPE w/HNO3		Carbonate & Bicarbonate by 23208 - (1) 500ml HDPE no pres		ANIONS by Method 300 ** - (1) 250ml HDPE no pres		Methane RSK 175 - (2) 40ml vial w/HCl		BTEX by 8021 - (2) 40ml vial w/HCl		PCRB# dissolved - 500ml HDPE - NO PRES - need to filter	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Alternate billing information:
Report to: Paul Downey
Email to: pdowney@terracon.com

City/State Collected
ESC Key:
P.O.#:

Client Project #: 25087038
Site/Facility ID#:

Rush? (Lab MUST Be Notified)
Same Day.....200%
Next Day.....100%
Two Day.....50%

Date Results Needed:
Email? No Yes
FAX? No Yes

No. of Crits

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time
146454	Grab	GW		6-9-09	9:35
56478					10:50
232575					12:50
237976					2:40

pH _____ Temp _____

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: **Bromide, Chloride, Fluoride, Nitrite, Nitrate, Sulfate

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Temp:	Bottles Received:	Condition:	Other:
	6-9-09					53.3	4/1	OK	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:			Temp Checked:	NGF:
								22	

Samples returned via: UPS Courier

Temp: 53.3

Bottles Received: 4/1

Date: 6/9/09

Time: 09:00

Temp Checked: 22

NGF:

APPENDIX D
DISSOLVED METALS LABORATORY REPORTS
AND COMPARISON OF TOTAL METALS
AND DISSOLVED METALS CONCENTRATIONS

TABLE D1
**COMPARISON OF TOTAL METALS AND DISSOLVED METALS CONCENTRATIONS
 DOMESTIC AND MUNICIPAL
 WELL WATER SAMPLES**

Parameter	250326				22374				43057			
	Total	Dissolved	Delta (1)	Delta (1)	Total	Dissolved	Delta (1)	Delta (1)	Total	Dissolved	Delta (1)	Delta (1)
Arsenic	0.0039	0.021	0.017	0.017	0.0039	BDL	BDL	BDL	0.0010	0.021	0.020	0.020
Barium	0.24	0.260	0.020	0.010	0.20	0.210	0.010	0.010	0.039	0.043	0.004	0.004
Cadmium	BDL	BDL			BDL	BDL			BDL	BDL		
Calcium	73	NA			53	NA			17	NA		
Chromium	BDL	BDL			BDL	BDL			BDL	BDL		
Iron	BDL	NA			BDL	NA			BDL	NA		
Lead	BDL	BDL			BDL	BDL			BDL	BDL		
Magnesium	13	NA			10	NA			4.6	NA		
Manganese	BDL	NA			BDL	NA			BDL	NA		
Mercury	NA	BDL			NA	BDL			NA	BDL		
Potassium	6.5	NA			6.3	NA			4.4	NA		
Sodium	16	NA			12	NA			61	NA		
Selenium	0.0023	0.027	0.025	0.025	0.0012	BDL			0.0041	BDL		

Parameter	189301				25784				165120			
	Total	Dissolved	Delta (1)	Delta (1)	Total	Dissolved	Delta (1)	Delta (1)	Total	Dissolved	Delta (1)	Delta (1)
Arsenic	0.0071	0.020	0.013	0.013	0.0046	BDL	BDL	BDL	0.0031	BDL	BDL	BDL
Barium	0.18	0.200	0.020	0.010	0.17	0.18	0.010	0.010	0.019	0.022	0.003	0.003
Cadmium	BDL	BDL			BDL	BDL			BDL	BDL		
Calcium	43	NA			45	NA			6.2	NA		
Chromium	BDL	BDL			BDL	BDL			BDL	BDL		
Iron	BDL	NA			BDL	NA			BDL	NA		
Lead	BDL	BDL			BDL	BDL			BDL	BDL		
Magnesium	11	NA			8.6	NA			1.7	NA		
Manganese	BDL	NA			BDL	NA			BDL	NA		
Mercury	NA	BDL			NA	BDL			NA	BDL		
Potassium	4.6	NA			5.6	NA			3.5	NA		
Sodium	28	NA			11	NA			90	NA		
Selenium	0.0064	BDL			0.0030	BDL			0.0018	BDL		

1) Difference in milligrams per liter (Dissolved concentration - Total concentration).
 BDL = Below Detection Limit
 NA = Not Analyzed
 Water concentrations in milligrams per liter

**TABLE D1
COMPARISON OF TOTAL METALS AND DISSOLVED METALS CONCENTRATIONS
DOMESTIC AND MUNICIPAL
WELL WATER SAMPLES**

Parameter	271304			32124			2038		
	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)
Arsenic	0.014	0.029	0.015	0.0010	0.022	0.021	0.0014	BDL	
Barium	0.027	0.029	0.002	0.032	0.036	0.004	0.043	0.046	0.003
Cadmium	BDL	BDL		BDL	BDL		BDL	BDL	
Calcium	24	NA		20	NA		18	NA	
Chromium	BDL	BDL		BDL	BDL		BDL	BDL	
Iron	BDL	NA		BDL	NA		BDL	NA	
Lead	BDL	BDL		BDL	BDL		BDL	BDL	
Magnesium	7.2	NA		4.6	NA		4.7	NA	
Manganese	BDL	NA		BDL	NA		BDL	NA	
Mercury	NA	BDL		NA	BDL		NA	BDL	
Potassium	6.4	NA		5.1	NA		5.8	NA	
Sodium	26	NA		98	NA		82	NA	
Selenium	0.0026	BDL		0.0071	BDL		0.0180	BDL	

Parameter	137661			42068			75950		
	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)
Arsenic	BDL	BDL		BDL	BDL		0.0030	BDL	
Barium	0.045	0.048	0.003	0.026	0.024		0.039	0.091	0.052
Cadmium	BDL	BDL		BDL	BDL		BDL	BDL	
Calcium	22	NA		7	NA		8.7	NA	
Chromium	BDL	BDL		BDL	BDL		BDL	BDL	
Iron	BDL	NA		0.71	NA		BDL	NA	
Lead	BDL	BDL		BDL	BDL		BDL	BDL	
Magnesium	4.4	NA		2.2	NA		2.8	NA	
Manganese	BDL	NA		BDL	NA		BDL	NA	
Mercury	NA	BDL		NA	BDL		NA	BDL	
Potassium	5.3	NA		2.8	NA		3.6	NA	
Sodium	97	NA		84	NA		80	NA	
Selenium	0.0051	BDL		BDL	BDL		0.0048	BDL	

1) Difference in milligrams per liter (Dissolved concentration - Total concentration).

BDL = Below Detection Limit

NA = Not Analyzed

Water concentrations in milligrams per liter

TABLE D1
COMPARISON OF TOTAL METALS AND DISSOLVED METALS CONCENTRATIONS
DOMESTIC AND MUNICIPAL
WELL WATER SAMPLES

Parameter	180142			114921A			207601		
	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)
Arsenic	0.0029	BDL		0.0042	BDL		BDL	BDL	
Barium	0.084	0.096	0.012	0.15	0.043	-0.107	0.052	0.057	0.005
Cadmium	BDL	BDL		BDL	BDL		BDL	BDL	
Calcium	90	NA		67	NA		14	NA	
Chromium	BDL	BDL		BDL	BDL		BDL	BDL	
Iron	BDL	NA		BDL	NA		BDL	NA	
Lead	0.0013	BDL		BDL	BDL		BDL	BDL	
Magnesium	17	NA		13	NA		2.9	NA	
Manganese	0.23	NA		BDL	NA		0.012	NA	
Mercury	NA	BDL		NA	BDL		NA	BDL	
Potassium	12	NA		11	NA		3.7	NA	
Sodium	100	NA		38	NA		130	NA	
Selenium	0.0034	BDL		0.0012	BDL		BDL	BDL	

Parameter	207600			16032			6407		
	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)
Arsenic	BDL	BDL		BDL	BDL		BDL	BDL	
Barium	0.037	BDL		0.033	0.035	0.002	0.028	0.030	0.002
Cadmium	BDL	BDL		BDL	BDL		BDL	BDL	
Calcium	10	NA		6.6	NA		5.3	NA	
Chromium	BDL	BDL		BDL	BDL		BDL	BDL	
Iron	BDL	NA		BDL	NA		BDL	NA	
Lead	BDL	BDL		BDL	BDL		BDL	BDL	
Magnesium	2.1	NA		1.4	NA		1.4	NA	
Manganese	BDL	NA		0.019	NA		0.011	NA	
Mercury	NA	BDL		NA	BDL		NA	BDL	
Potassium	3.3	NA		2.3	NA		2.8	NA	
Sodium	120	NA		160	NA		82	NA	
Selenium	0.0030	BDL		BDL	BDL		BDL	BDL	

1) Difference in milligrams per liter (Dissolved concentration - Total concentration).
BDL = Below Detection Limit
NA = Not Analyzed
Water concentrations in milligrams per liter

**TABLE D1
COMPARISON OF TOTAL METALS AND DISSOLVED METALS CONCENTRATIONS
DOMESTIC AND MUNICIPAL
WELL WATER SAMPLES**

Parameter	17455			153852			146454		
	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)
Arsenic	BDL	BDL		BDL	BDL		BDL	BDL	
Barium	0.037	0.040	0.003	0.038	0.038	0.000	0.0068	0.008	0.001
Cadmium	BDL	NA		BDL	BDL		BDL	BDL	
Calcium	8.2	BDL		10	NA		52	NA	
Chromium	BDL	BDL		BDL	BDL		BDL	BDL	
Iron	BDL	NA		BDL	NA		BDL	NA	
Lead	BDL	BDL		BDL	BDL		BDL	BDL	
Magnesium	3.0	NA		3.7	NA		11	NA	
Manganese	BDL	NA		BDL	NA		0.082	NA	
Mercury	NA	0.290		NA	BDL		NA	BDL	
Potassium	2.9	NA		3.7	NA		6.8	NA	
Sodium	77	NA		80	NA		330	NA	
Selenium	BDL	BDL		BDL	BDL		0.0013	BDL	
Parameter	56478			232575			237976		
	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)	Total	Dissolved	Delta (1)
Arsenic	BDL	BDL		BDL	BDL		BDL	BDL	
Barium	0.034	0.035	0.001	0.017	0.019	0.002	0.019	0.021	0.002
Cadmium	BDL	BDL		BDL	BDL		BDL	BDL	
Calcium	5.7	NA		2.9	NA		3.1	NA	
Chromium	BDL	BDL		BDL	BDL		BDL	BDL	
Iron	BDL	NA		BDL	NA		0.21	NA	
Lead	BDL	BDL		BDL	BDL		BDL	BDL	
Magnesium	1.3	NA		0.56	NA		0.59	NA	
Manganese	0.016	NA		BDL	NA		0.010	NA	
Mercury	NA	BDL		NA	BDL		NA	BDL	
Potassium	2.1	NA		1.8	NA		1.5	NA	
Sodium	88	NA		140	NA		150	NA	
Selenium	BDL	BDL		BDL	BDL		BDL	BDL	

1) Difference in milligrams per liter (Dissolved concentration - Total concentration).

BDL = Below Detection Limit

NA = Not Analyzed

Water concentrations in milligrams per liter



ENVIRONMENTAL
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12065 Lebanon Rd.
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(615) 758-5858
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Tax I.D. 62-0814289

Est. 1970

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Friday June 13, 2008

Report Number: L349218

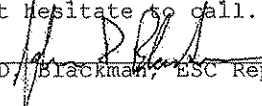
Samples Received: 06/07/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/13/08 10:11 Printed: 06/13/08 10:11

Page 1 of 7



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-01

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 16032

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 09:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	20000	1000	ug/l	9056	06/07/08	1
Fluoride	740	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	91000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.6		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	770		umhos/cm	9050A	06/13/08	1
Dissolved Solids	460000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Barium, Dissolved	35.	5.0	ug/l	6010B	06/11/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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L349218-01 (PH) - 8.6@24.6C



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REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-02

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 6407

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 10:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	4200	1000	ug/l	9056	06/07/08	1
Fluoride	420	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	33000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.5		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	400		umhos/cm	9050A	06/13/08	1
Dissolved Solids	230000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Barium, Dissolved	30.	5.0	ug/l	6010B	06/11/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-03

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 17455

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 12:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	8800	1000	ug/l	9056	06/07/08	1
Fluoride	480	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	39000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.3		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	420		umhos/cm	9050A	06/13/08	1
Dissolved Solids	240000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	0.29	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Barium, Dissolved	40.	5.0	ug/l	6010B	06/11/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349218-04

Date Received : June 07, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 153852

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/06/08 14:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/07/08	1
Chloride	12000	1000	ug/l	9056	06/07/08	1
Fluoride	560	100	ug/l	9056	06/07/08	1
Nitrate	BDL	100	ug/l	9056	06/07/08	1
Nitrite	BDL	100	ug/l	9056	06/07/08	1
Sulfate	41000	5000	ug/l	9056	06/07/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.3		su	9040C	06/09/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	430		umhos/cm	9050A	06/13/08	1
Dissolved Solids	240000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Barium, Dissolved	38.	5.0	ug/l	6010B	06/11/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/11/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/11/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/11/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L349218-04 (PH) - 8.3@24.5c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L349218-01	pH	T8
L349218-02	pH	T8
L349218-03	pH	T8
L349218-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Friday June 13, 2008

Report Number: L348989


Samples Received: 06/06/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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3 Samples Reported: 06/13/08 10:11 Revised: 06/13/08 15:42

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REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348989-01

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 114921A

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 09:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/06/08	1
Chloride	39000	1000	ug/l	9056	06/06/08	1
Fluoride	990	100	ug/l	9056	06/06/08	1
Nitrate	2500	100	ug/l	9056	06/06/08	1
Nitrite	BDL	100	ug/l	9056	06/06/08	1
Sulfate	54000	5000	ug/l	9056	06/06/08	1
Alkalinity, Bicarbonate	230000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	7.5		su	9040C	06/10/08	1
Nitrate-Nitrite	2900	100	ug/l	353.2	06/09/08	1
Specific Conductance	650		umhos/cm	9050A	06/12/08	1
Dissolved Solids	400000	10000	ug/l	2540C	06/11/08	1
Selenium	1.2	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/10/08	1
Barium, Dissolved	43.	5.0	ug/l	6010B	06/10/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/10/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/10/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/10/08	1
Benzene	BDL	0.50	ug/l	8021B	06/10/08	1
Toluene	BDL	5.0	ug/l	8021B	06/10/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/10/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/10/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/10/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348989-01 (PH) - 7.5@23.5c



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REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348989-02

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 207601

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 11:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/06/08	1
Chloride	21000	1000	ug/l	9056	06/06/08	1
Fluoride	280	100	ug/l	9056	06/06/08	1
Nitrate	BDL	100	ug/l	9056	06/06/08	1
Nitrite	BDL	100	ug/l	9056	06/06/08	1
Sulfate	120000	5000	ug/l	9056	06/06/08	1
Alkalinity, Bicarbonate	210000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.4		su	9040C	06/10/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/09/08	1
Specific Conductance	710		umhos/cm	9050A	06/12/08	1
Dissolved Solids	420000	10000	ug/l	2540C	06/11/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/10/08	1
Barium, Dissolved	57.	5.0	ug/l	6010B	06/10/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/10/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/10/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/10/08	1
Benzene	BDL	0.50	ug/l	8021B	06/10/08	1
Toluene	BDL	5.0	ug/l	8021B	06/10/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/10/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/10/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/10/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348989-02 (PH) - 8.4@23.6c



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REPORT OF ANALYSIS

June 13, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348989-03

Date Received : June 06, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 207600

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/05/08 12:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/06/08	1
Chloride	23000	1000	ug/l	9056	06/06/08	1
Fluoride	350	100	ug/l	9056	06/06/08	1
Nitrate	170	100	ug/l	9056	06/06/08	1
Nitrite	BDL	100	ug/l	9056	06/06/08	1
Sulfate	92000	5000	ug/l	9056	06/06/08	1
Alkalinity, Bicarbonate	210000	10000	ug/l	310.2	06/13/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/13/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.3		su	9040C	06/10/08	1
Nitrate-Nitrite	210	100	ug/l	353.2	06/09/08	1
Specific Conductance	650		umhos/cm	9050A	06/12/08	1
Dissolved Solids	390000	10000	ug/l	2540C	06/11/08	1
Selenium	3.0	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/11/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/10/08	1
Barium, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/10/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/10/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/10/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/10/08	1
Benzene	BDL	0.50	ug/l	8021B	06/11/08	1
Toluene	BDL	5.0	ug/l	8021B	06/11/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/11/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/11/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	103.		% Rec.	8021B	06/11/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/13/08 10:11 Revised: 06/13/08 15:42
L348989-03 (PH) - 8.3@23.1c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348989-01	pH	T8
L348989-02	pH	T8
L348989-03	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Est. 1970

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Tuesday June 17, 2008

Report Number: L349412

Samples Received: 06/10/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/16/08 16:12 Revised: 06/17/08 15:10

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REPORT OF ANALYSIS

June 17, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349412-01

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 146454

Project # : 25087038

Collected By :
Collection Date : 06/09/08 09:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	71000	1000	ug/l	9056	06/10/08	1
Fluoride	100	100	ug/l	9056	06/10/08	1
Nitrate	290	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	640000	50000	ug/l	9056	06/11/08	10
Alkalinity, Bicarbonate	230000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	7.7		su	9040C	06/13/08	1
Nitrate-Nitrite	270	100	ug/l	353.2	06/11/08	1
Specific Conductance	1800		umhos/cm	9050A	06/13/08	1
Dissolved Solids	1200000	10000	ug/l	2540C	06/12/08	1
Selenium	1.3	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/12/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Barium, Dissolved	8.2	5.0	ug/l	6010B	06/13/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L349412-01 (PH) - 7.7@22.0c



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REPORT OF ANALYSIS

June 17, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349412-02

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 56478

Project # : 25087038

Collected By :
Collection Date : 06/09/08 10:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	5000	1000	ug/l	9056	06/10/08	1
Fluoride	230	100	ug/l	9056	06/10/08	1
Nitrate	BDL	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	35000	5000	ug/l	9056	06/10/08	1
Alkalinity, Bicarbonate	280000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/11/08	1
pH	8.5		su	9040C	06/13/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/11/08	1
Specific Conductance	410		umhos/cm	9050A	06/13/08	1
Dissolved Solids	250000	10000	ug/l	2540C	06/12/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/12/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Barium, Dissolved	35.	5.0	ug/l	6010B	06/13/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	104.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L349412-02 (PH) - 8.5@21.9c



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REPORT OF ANALYSIS

June 17, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L349412-03

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 232575

Project # : 25087038

Collected By :
Collection Date : 06/09/08 12:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	22000	1000	ug/l	9056	06/10/08	1
Fluoride	380	100	ug/l	9056	06/10/08	1
Nitrate	BDL	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	36000	5000	ug/l	9056	06/10/08	1
Alkalinity, Bicarbonate	230000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	15.	10.	ug/l	3810/RSK17	06/12/08	1
pH	8.6		su	9040C	06/13/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/11/08	1
Specific Conductance	610		umhos/cm	9050A	06/13/08	1
Dissolved Solids	350000	10000	ug/l	2540C	06/12/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/12/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Barium, Dissolved	19.	5.0	ug/l	6010B	06/13/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Silver, Dissolved	11.	10.	ug/l	6010B	06/13/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	105.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L349412-03 (PH) - 8.6@22.0c



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REPORT OF ANALYSIS

June 17, 2008

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 10, 2008
Description : Upper Crow Creek GW Study
Sample ID : 237976
Collected By :
Collection Date : 06/09/08 14:40

ESC Sample # : L349412-04

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/10/08	1
Chloride	12000	1000	ug/l	9056	06/10/08	1
Fluoride	520	100	ug/l	9056	06/10/08	1
Nitrate	BDL	100	ug/l	9056	06/10/08	1
Nitrite	BDL	100	ug/l	9056	06/10/08	1
Sulfate	11000	5000	ug/l	9056	06/10/08	1
Alkalinity, Bicarbonate	250000	10000	ug/l	310.2	06/16/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/16/08	1
Methane	17.	10.	ug/l	3810/RSK17	06/12/08	1
pH	8.7		su	9040C	06/13/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/11/08	1
Specific Conductance	610		umhos/cm	9050A	06/13/08	1
Dissolved Solids	360000	10000	ug/l	2540C	06/13/08	1
Selenium	BDL	1.0	ug/l	200.8	06/11/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/12/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Barium, Dissolved	21.	5.0	ug/l	6010B	06/13/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/13/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/13/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/13/08	1
Benzene	BDL	0.50	ug/l	8021B	06/12/08	1
Toluene	BDL	5.0	ug/l	8021B	06/12/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/12/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/12/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	105.		% Rec.	8021B	06/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L349412-04 (PH) - 8.7@22.3c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L349412-01	pH	T8
L349412-02	pH	T8
L349412-03	Silver, Dissolved	J6J3
	pH	T8
L349412-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Est. 1970

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Thursday June 12, 2008

Report Number: L348730

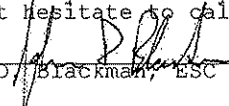
Samples Received: 06/05/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
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NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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3 Samples Reported: 06/12/08 11:31 Printed: 06/12/08 15:24

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REPORT OF ANALYSIS

June 12, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348730-01

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : DUPLICATE

Project # : 25087038

Collected By :
Collection Date : 06/04/08 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	8900	1000	ug/l	9056	06/05/08	1
Fluoride	360	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	36000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	440		umhos/cm	9050A	06/12/08	1
Dissolved Solids	320000	10000	ug/l	2540C	06/07/08	1
Selenium	4.4	1.0	ug/l	200.8	06/06/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/10/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Barium, Dissolved	170	5.0	ug/l	6010B	06/09/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	99.5		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348730-01 (PH) - 8.5@20.6c



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REPORT OF ANALYSIS

June 12, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study
Sample ID : 75950
Collected By :
Collection Date : 06/04/08 14:15

ESC Sample # : L348730-02

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	9400	1000	ug/l	9056	06/05/08	1
Fluoride	330	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	37000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	190000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	430		umhos/cm	9050A	06/12/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	4.8	1.0	ug/l	200.8	06/06/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/10/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Barium, Dissolved	91.	5.0	ug/l	6010B	06/09/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	100.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/12/08 11:31 Printed: 06/12/08 15:25
L348730-02 (PH) - 8.5@20.5c



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REPORT OF ANALYSIS

June 12, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348730-03

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 180142

Project # : 25087038

Collected By :
Collection Date : 06/04/08 15:24

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	78000	1000	ug/l	9056	06/05/08	1
Fluoride	790	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	180000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	290000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	7.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	1100		umhos/cm	9050A	06/12/08	1
Dissolved Solids	660000	10000	ug/l	2540C	06/11/08	1
Selenium	3.4	1.0	ug/l	200.8	06/06/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/10/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Barium, Dissolved	96.	5.0	ug/l	6010B	06/09/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	99.6		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/12/08 11:31 Printed: 06/12/08 15:25
L348730-03 (PH) - 7.5@20.5c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348730-01	pH	T8
L348730-02	pH	T8
L348730-03	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Wednesday June 11, 2008

Report Number: L348434

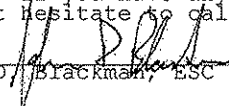
Samples Received: 06/04/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

AZLA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/11/08 11:02 Printed: 06/11/08 11:02

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REPORT OF ANALYSIS

June 11, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study
Sample ID : 25784
Collected By : Paul Downey
Collection Date : 06/03/08 08:50

ESC Sample # : L348434-01

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	6600	1000	ug/l	9056	06/04/08	1
Fluoride	720	100	ug/l	9056	06/04/08	1
Nitrate	3600	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	11000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	7.5		su	9040C	06/05/08	1
Nitrate-Nitrite	4300	100	ug/l	353.2	06/06/08	1
Specific Conductance	370		umhos/cm	9050A	06/06/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	3.0	1.0	ug/l	6020	06/05/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/09/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	180	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348434-01 (PH) - 7.5@23.7c



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REPORT OF ANALYSIS

June 11, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-02

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 165120

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 10:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	13000	1000	ug/l	9056	06/04/08	1
Fluoride	440	100	ug/l	9056	06/04/08	1
Nitrate	BDL	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	39000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.3		su	9040C	06/05/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	470		umhos/cm	9050A	06/06/08	1
Dissolved Solids	310000	10000	ug/l	2540C	06/07/08	1
Selenium	1.8	1.0	ug/l	6020	06/05/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/09/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	22.	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348434-02 (PH) - 8.3@23.9c



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REPORT OF ANALYSIS

June 11, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-03

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 271304

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 11:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	5200	1000	ug/l	9056	06/04/08	1
Fluoride	980	100	ug/l	9056	06/04/08	1
Nitrate	2200	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	16000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	150000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.0		su	9040C	06/05/08	1
Nitrate-Nitrite	2700	100	ug/l	353.2	06/06/08	1
Specific Conductance	310		umhos/cm	9050A	06/06/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	2.6	1.0	ug/l	6020	06/05/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/09/08	1
Arsenic, Dissolved	29.	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	29.	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	99.9		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348434-03 (PH) - 8.0@23.8c



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REPORT OF ANALYSIS

June 11, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348434-04

Date Received : June 04, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 32124

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/03/08 13:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/04/08	1
Chloride	26000	1000	ug/l	9056	06/04/08	1
Fluoride	190	100	ug/l	9056	06/04/08	1
Nitrate	260	100	ug/l	9056	06/04/08	1
Nitrite	BDL	100	ug/l	9056	06/04/08	1
Sulfate	70000	5000	ug/l	9056	06/04/08	1
Alkalinity, Bicarbonate	210000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/06/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/06/08	1
pH	8.0		su	9040C	06/06/08	1
Nitrate-Nitrite	380	100	ug/l	353.2	06/06/08	1
Specific Conductance	600		umhos/cm	9050A	06/06/08	1
Dissolved Solids	390000	10000	ug/l	2540C	06/07/08	1
Selenium	7.1	1.0	ug/l	6020	06/05/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/09/08	1
Arsenic, Dissolved	22.	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	36.	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/06/08	1
Toluene	BDL	5.0	ug/l	8021B	06/06/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/06/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/06/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/06/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 06/11/08 11:02 Printed: 06/11/08 11:03
L348434-04 (PH) - 8.0@21.4c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348434-01	pH	T8
L348434-02	pH	T8
L348434-03	pH	T8
L348434-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

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- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Tuesday June 10, 2008

Report Number: L348191

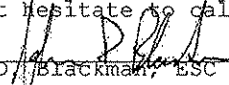
Samples Received: 06/03/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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4 Samples Reported: 06/10/08 16:57 Printed: 06/10/08 16:57

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

June 10, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W 170 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348191-01

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 250326

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 09:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	40000	1000	ug/l	9056	06/03/08	1
Fluoride	680	100	ug/l	9056	06/03/08	1
Nitrate	3200	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	32000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/06/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/06/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	7.5		su	9040C	06/06/08	1
Nitrate-Nitrite	3300	100	ug/l	353.2	06/04/08	1
Specific Conductance	570		umhos/cm	9050A	06/06/08	1
Dissolved Solids	370000	10000	ug/l	2540C	06/06/08	1
Selenium	2.3	1.0	ug/l	6020	06/04/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/05/08	1
Arsenic, Dissolved	21.	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	260	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	27.	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (PID)	98.6		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

June 10, 2008

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

ESC Sample # : L348191-02

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study

Site ID :

Sample ID : 22374

Project # : 25087038

Collected By : Paul Downey
Collection Date : 06/02/08 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	14000	1000	ug/l	9056	06/03/08	1
Fluoride	800	100	ug/l	9056	06/03/08	1
Nitrate	4200	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	17000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/10/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/10/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	7.6		su	9040C	06/06/08	1
Nitrate-Nitrite	4000	100	ug/l	353.2	06/04/08	1
Specific Conductance	420		umhos/cm	9050A	06/06/08	1
Dissolved Solids	300000	10000	ug/l	2540C	06/06/08	1
Selenium	1.2	1.0	ug/l	6020	06/04/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/05/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	210	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	98.8		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 10, 2008

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study
Sample ID : 43057
Collected By : Paul Downey
Collection Date : 06/02/08 13:00

ESC Sample # : L348191-03

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	4000	1000	ug/l	9056	06/03/08	1
Fluoride	430	100	ug/l	9056	06/03/08	1
Nitrate	580	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	31000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	180000	10000	ug/l	310.2	06/10/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/10/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	8.0		su	9040C	06/06/08	1
Nitrate-Nitrite	600	100	ug/l	353.2	06/04/08	1
Specific Conductance	390		umhos/cm	9050A	06/06/08	1
Dissolved Solids	240000	10000	ug/l	2540C	06/06/08	1
Selenium	4.1	1.0	ug/l	6020	06/04/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/05/08	1
Arsenic, Dissolved	21.	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	43.	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	98.4		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 10, 2008

Date Received : June 03, 2008
Description : Upper Crow Creek GW Study
Sample ID : 189301
Collected By : Paul Downey
Collection Date : 06/02/08 13:55

ESC Sample # : L348191-04

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/03/08	1
Chloride	31000	1000	ug/l	9056	06/03/08	1
Fluoride	490	100	ug/l	9056	06/03/08	1
Nitrate	4800	100	ug/l	9056	06/03/08	1
Nitrite	BDL	100	ug/l	9056	06/03/08	1
Sulfate	23000	5000	ug/l	9056	06/03/08	1
Alkalinity, Bicarbonate	170000	10000	ug/l	310.2	06/10/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/10/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethane	BDL	10.	ug/l	3810/RSK17	06/05/08	1
Ethene	BDL	10.	ug/l	3810/RSK17	06/05/08	1
pH	7.8		su	9040C	06/06/08	1
Nitrate-Nitrite	4700	100	ug/l	353.2	06/04/08	1
Specific Conductance	470		umhos/cm	9050A	06/06/08	1
Dissolved Solids	330000	10000	ug/l	2540C	06/06/08	1
Selenium	6.4	1.0	ug/l	6020	06/04/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/05/08	1
Arsenic, Dissolved	20.	20.	ug/l	6010B	06/06/08	1
Barium, Dissolved	200	5.0	ug/l	6010B	06/06/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/06/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/06/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/06/08	1
Benzene	BDL	0.50	ug/l	8021B	06/05/08	1
Toluene	BDL	5.0	ug/l	8021B	06/05/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/05/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/05/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	98.3		% Rec.	8021B	06/05/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L348191-04 (PH) - 7.8@21.4c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348191-01	pH	T8
L348191-02	pH	T8
L348191-03	pH	T8
L348191-04	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3

Wheat Ridge, CO 80033

Report Summary

Friday June 13, 2008

Report Number: L348735


Samples Received: 06/05/08

Client Project: 25087038

Description: Upper Crow Creek GW Study

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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REPORT OF ANALYSIS

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 13, 2008

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study
Sample ID : 2038
Collected By : Paul Downey
Collection Date : 06/04/08 09:15

ESC Sample # : L348735-01

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	21000	1000	ug/l	9056	06/05/08	1
Fluoride	280	100	ug/l	9056	06/05/08	1
Nitrate	520	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	44000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	200000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.1		su	9040C	06/07/08	1
Nitrate-Nitrite	660	100	ug/l	353.2	06/06/08	1
Specific Conductance	510		umhos/cm	9050A	06/12/08	1
Dissolved Solids	430000	10000	ug/l	2540C	06/07/08	1
Selenium	18.	1.0	ug/l	6020	06/06/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/10/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Barium, Dissolved	46.	5.0	ug/l	6010B	06/09/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	100.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 13, 2008

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study

ESC Sample # : L348735-02

Sample ID : 137611

Site ID :

Collected By : Paul Downey
Collection Date : 06/04/08 10:45

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	10000	1000	ug/l	9056	06/05/08	1
Fluoride	560	100	ug/l	9056	06/05/08	1
Nitrate	110	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	38000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	300000	10000	ug/l	310.2	06/11/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/11/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	7.9		su	9040C	06/07/08	1
Nitrate-Nitrite	160	100	ug/l	353.2	06/06/08	1
Specific Conductance	580		umhos/cm	9050A	06/12/08	1
Dissolved Solids	470000	10000	ug/l	2540C	06/07/08	1
Selenium	5.1	1.0	ug/l	6020	06/06/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/10/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Barium, Dissolved	48.	5.0	ug/l	6010B	06/09/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

Mr. Paul Downey
Terracon - Wheat Ridge, CO
10625 W I70 Frontage Rd, Ste 3
Wheat Ridge, CO 80033

June 13, 2008

Date Received : June 05, 2008
Description : Upper Crow Creek GW Study
Sample ID : 42068
Collected By : Paul Downey
Collection Date : 06/04/08 12:30

ESC Sample # : L348735-03

Site ID :

Project # : 25087038

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1000	ug/l	9056	06/05/08	1
Chloride	8400	1000	ug/l	9056	06/05/08	1
Fluoride	360	100	ug/l	9056	06/05/08	1
Nitrate	BDL	100	ug/l	9056	06/05/08	1
Nitrite	BDL	100	ug/l	9056	06/05/08	1
Sulfate	36000	5000	ug/l	9056	06/05/08	1
Alkalinity, Bicarbonate	190000	10000	ug/l	310.2	06/12/08	1
Alkalinity, Carbonate	BDL	10000	ug/l	310.2	06/12/08	1
Methane	BDL	10.	ug/l	3810/RSK17	06/10/08	1
pH	8.5		su	9040C	06/07/08	1
Nitrate-Nitrite	BDL	100	ug/l	353.2	06/06/08	1
Specific Conductance	430		umhos/cm	9050A	06/12/08	1
Dissolved Solids	260000	10000	ug/l	2540C	06/07/08	1
Selenium	BDL	1.0	ug/l	6020	06/06/08	1
Mercury, Dissolved	BDL	0.20	ug/l	7470A	06/10/08	1
Arsenic, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Barium, Dissolved	24.	5.0	ug/l	6010B	06/09/08	1
Cadmium, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Chromium, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Lead, Dissolved	BDL	5.0	ug/l	6010B	06/09/08	1
Selenium, Dissolved	BDL	20.	ug/l	6010B	06/09/08	1
Silver, Dissolved	BDL	10.	ug/l	6010B	06/09/08	1
Benzene	BDL	0.50	ug/l	8021B	06/09/08	1
Toluene	BDL	5.0	ug/l	8021B	06/09/08	1
Ethylbenzene	BDL	0.50	ug/l	8021B	06/09/08	1
Total Xylene	BDL	1.5	ug/l	8021B	06/09/08	1
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (PID)	102.		% Rec.	8021B	06/09/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/12/08 16:24 Revised: 06/13/08 15:30
L348735-03 (PH) - 8.5@21.0c

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L348735-01	pH	T8
L348735-02	pH	T8
L348735-03	pH	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.