WATER RESOURCES REPORT

for

Villagree Luxury Homes
Canyon Creek Ranch
Subdivision

EPC Parcel #: 6214000112

August 2022

Prepared By:

JDS-HYDRO CONSULTANTS, INC.
A Division of RESPEC Company, LLC

RESPEC

5540 TECH CENTER DRIVE, SUITE 100▪ COLORADO SPRINGS, CO▪80919▪ (719) 227-0072

VILLAGREE LUXURY HOMES
CANYON CREEK RANCH
SUBDIVISION
11550 Parallax Heights
EPC Parcel # 5208000030

WATER RESOURCES REPORT

AUGUST 2022

Prepared for:

Villagree Luxury Homes
5710 Vessey Road
Colorado Springs, CO 80908

Prepared by:

JDS-Hydro Consultants
a Division of RESPEC
5540 Tech Center Drive, Suite 100
Colorado Springs, CO 80919

Table of Contents

APPENDICES

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

The purpose of this report is to address the specific water needs of a proposed subdivision of Parcel # 6214000112 in El Paso County, CO.

EXECUTIVE SUMMARY: **The water rights and augmentation plan in place for the existing parcel are adequate to meet the needs of three (3) lots proposed for the subdivision on a 300-year basis.**

2.0 PROJECTED LAND USES

2.1 Projected Land Uses

This report pertains to the existing 23.96-acre parcel that is proposed to be divided into three (3) lots, with two lots described as 5.04 acres and one lot at 6.974 acres. Please refer to the *Land Use Exhibit* in ***Appendix A***.

3.0 WATER NEEDS AND PROJECTED DEMANDS

3.1 Water Demand Summary

It is anticipated that the proposed three residential lots, one consisting of approximately 6.974 acres and two (2) 5.04-acre lots, will use approximately 0.90 AF/year of water total for indoor household uses and a total of 1.68 AF/year of water combined water uses for the entire subdivision. This estimate is based upon information provided in Chapter 8 of the *El Paso County Land Development Code* as well as the *Findings of Fact* contained in Court Case 06CW15 located in ***Appendix C***. Water demands and wastewater loads are shown Table 3-1 below:

Table 3-1: Summary of Expected Water Demands & Wastewater Loads

Water						Wastewater
# of SFEs	Annual Indoor Use 0.30 (AF/YR/SFE)	Average Daily Indoor Use (GPD)	Irrigation 0.046 (AF/1,000 SF)	Domestic Watering 0.011 (AF/Horse/Year)	Total Indoor, Watering, & Irrigation (AF)	ADF (@ 90% Indoor Use (GPD)
	Note 1		*Note 2*	*Note 3*		
3	0.900	803	0.712	0.066	1.68	723
Total					**1.68**	**723**

Note 1: ***Per 06CW15 Section 21.A.***

Note 2: ***Assuming 0.046 per 1000 ft^2 per 06CW15 Section 21.C. and 15,489 ft^2 of lawn/garden***

Note 3: ***Per 06CW15 Section 21.B. 0.011 AF/year per head at 6 horses***

3.2 Unit Water User Characteristics

Unit water user characteristics are counted on a *single-family equivalent* (SFE) basis. All single-family homes are counted as one SFE, and user characteristics were based on information provided in the *El Paso County Land Development Code*, Chapter 8.

3.3 Demand versus Supply

An overall demand of 1.68 acre-feet for the proposed subdivision is less than the amount of supply listed in the decrees, determinations, and *Findings of Fact* (provided in ***Appendix C***) and is further discussed in Section 4.0 of this report.

4.0 WATER RIGHTS AND SUPPLY

4.1 Water Rights

Water rights, determinations, and replacement plan have been applied for as shown in ***Appendix C***. Table 4-1 below summarizes the information from said water rights and pending determinations.

Table 4-1: Water Rights Summary

Canyon Creek Ranch Subdivision

Overall Water Supply Inventory

Land Formation/ Aquifer	Determination	Tributary Status	Area	Total Decreed Water	Annual Allocation 100-Year	Annual Allocation 300-Year
			(Acres)	(AF)	(AF/Year)	(AF/Year)
Dawson	06CW15	NNT	23.96	287	2.87	0.95
Denver	06CW15	NNT	23.96	1,767	17.67	5.89
Arapahoe	06CW15	NNT	23.96	1,107	11.07	3.69
Laramie-Fox Hills	06CW15	NT	23.96	682	6.82	2.27
				Total Legal Supply	**38.43**	**12.81**
					100-Year	*300-Year*

Beneficial Uses: *Domestic Indoor*
Indoor & Outdoor Irrigation, Livestock

According to the *Findings of Fact contained in Court Case No. 06CW15* located in ***Appendix C***, the following conditions are allowed for the subject property:

- Water may be withdrawn through the existing well (Permit #268558), as well as well as allowing up to three (3) additional wells to be developed on the subject property. The existing well currently serves the existing residence on one of the proposed 5.04-acre parcels. Original permit number to operate this well is contained in **Appendix C**.
- All additional wells to be drilled to the Denver aquifer. All wells to be metered.
- Type of use to which the Denver water pumped must be used for domestic indoor use, indoor and outdoor irrigation, as well as livestock, pursuant to the augmentation plan. Other uses such as commercial, industrial, fish and wildlife propagation, fire protection, and central water supply must be approved with a modification to the current augmentation plan.

4.2 Adequacy of Water Rights

Current water rights are adequate for buildout demands of three (3) lots to meet 2040 and 2060 buildout projections on a 300-year basis.

According to the Approval of Groundwater Rights found in Court Case 06CW15 the entire 23.96-acre property has appropriated water rights located in the Dawson, Denver, Arapahoe, and Laramie Fox-Hills confined aquifers. Of these formations, the Dawson, Denver, and Arapahoe are considered not-nontribuary while the Laramie Fox-Hills is considered non-tributary. The applicant has rights to consume water from all four formations, though use from the Dawson, Denver, and Arapahoe require an augmentation and replacement plan for all uses. The associated determinations and approved augmentation plan are shown in the court cases included in ***Appendix C***:

- There are 5.89 AF/year available on a 300-year supply basis out of the Denver Formation, which is greater that the estimated annual demand of 1.68 AF-year for all three (3) lots to be served by Dawson wells as needed.
- Assuming a 0.30 AF/yr domestic use per resident (***per 06CW15 Section 21.A.***) with 90% return flows through the septic system per resident, this results in a 0.27 AF/yr replacement flow back through the septic system per resident, or 0.81 AF/year total for the three residences.
- The property is located in a 4% not-nontributary formation within the Denver aquifer. It is estimated that 0.0672 AF/year of depletions to the alluvial will occur on an annual basis through the pumping of the three proposed wells. Estimated return flows through the septic system total 0.27 AF/yr, which is in excess of required replacement water for alluvial depletions due to not-nontributary pumping from the Denver Aquifer

Conclusion:
The current water rights and augmentation plan in place are adequate to meet the estimated overall demand and resulting alluvial depletions of 0.0672 acre-feet for three (3) lots.

4.3 Description of Current Water Rights

The subject area's current water rights involve non-renewable supplies in the Denver Basin, further discussed below.

Non-Renewable Denver Basin Supply

The Denver Basin is a vast, deep-rock aquifer that stretches from southeast of Colorado Springs to Greeley, and from the base of the front range to the eastern end of Elbert County. Rights granted in the Denver basin are based on the ownership of the surface property – the larger the parcel, the larger the allocation. This water is much deeper than typical residential wells, ranging up to 2,650 feet deep.

Denver Basin water is considered finite and therefore non-renewable. In the subject area, there are four main formations that make up the Denver Basin: Dawson, Denver, Arapahoe, and Laramie-Fox Hills (LFH), described from shallowest to deepest.

The subject property was granted water rights in the four Denver Basin formations as shown in **Table 4-1** above.

5.0 WATER SYSTEM FACILITIES AND PHYSICAL SUPPLY

5.1 Source of Supply

Supply for the three (3) lots will be met with future or existing wells completed in the Denver aquifer. There is an existing well (Permit #268558) that is currently drilled into the Denver formation and serving an existing residence. Any new wells will be drilled, screened, test-pumped, and completed accordance with the Colorado Division of Water Resources rules and regulations.

5.2 Water Treatment

Water in the existing well was tested on 5/2/22 for constituents required by El Paso County regulations for a confined aquifer. Any desired treatment of existing and future wells will rely on the individual homeowners as this is not considered a *Community System* by the Colorado Department of Public Health and Environment.

5.3 Water Storage

Water storage (other than potential individual cisterns) will not be constructed. Therefore, a central water system with treatment and fire-flow capabilities will not be provided. The residents of each subdivided lot will be made aware of this since it will be included on the subdivision plat.

5.4 Distribution, Pumping, and Transmission Lines

Since there is no central water system proposed for this subdivision, no distribution, pumping, or transmission lines will be constructed.

5.5 Water Quality

The water quality in the Denver aquifer in this area has typically been suitable for residential potable use. Water samples were obtained from the existing well (well permit #268558) constructed via an exterior water tap serving the existing residence (11550 Parallax Road). Water samples were obtained from this tap on 5/2/2022, with water quality testing performed Colorado Analytical Laboratories, per the El Paso County Land Development Code section 8.4.7(B). Final results from this water quality testing can be found in ***Appendix D***. Most results were found to be below primary and secondary Maximum Contaminant Limits (MCLs). The only constituent of concern was iron. The secondary maximum contaminant limit (SMCL) for this compound is 0.3 mg/l and the well produced a result of 0.663 mg/l. An SMCL is not an enforceable exceedance. Excess iron in a water system can cause red/brown staining of laundry as well staining of water appliances. Iron removal treatment can be added as an under-the-sink point of use system or whole house filter system if the purchaser desires to remove iron from their well water.

Because of the absence of any and all evidence of fecal contamination in the form of E. Coli or Total Coliform, or that all sampled and analyzed constituents were below all primary and secondary standards the proposed water source emanating from the Denver Aquifer is deemed safe for public consumption.

6.0 EL PASO COUNTY MASTER PLANNING ELEMENTS

6.1 County Water Master Plan 2040 and 2060 Projections

The subject property lies within the El Paso County Water Master Planning area, Region #1.

6.2 Buildout (Including 2040 and 2060 Buildout):

Expected buildout of the subject property are four (4) total lots. Demands for the entire subdivision are listed in Section 3.0 of this report, which include a total demand of 2.22 AF/year as described in Decree 06CW15

6.3 Description of Long-Term Planning and Future Sources of Supply

Per El Paso County criteria, the 300-year supply of water for the subject property appears to be more than adequate for full buildout, which would include both the 2040 and 2060 scenarios. However, the proposed supply in the Denver aquifer is based on non-renewable sources.

If needed beyond the 300-year supply, the subdivision has nontributary water rights in the Arapahoe and Laramie-Fox Hills formations. Please refer to the *Plan for Augmentation* in ***Appendix C***.

6.4 Water System Interconnects

The closest source for a potential interconnect is the Colorado Springs Utilities – approximately one mile to the southwest.

It is not anticipated (and Colorado Springs Utilities has not been contacted) that an interconnect is needed or warranted.

7.0 CONCLUSION

The subject property has adequate water supply to meet the needs of the proposed subdivision on a 300-year basis.

Appendix A

CANYON CREEK RANCH

FINAL PLAT

A PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 14, TOWNSHIP 12 SOUTH, RANGE 66 WEST, OF THE 6th P.M., COUNTY OF EL PASO, STATE OF COLORADO

N

100 0 100 200

SCALE: 1" = 100'

LEGEND:

C# – INDICATES CURVE NUMBER
L# – INDICATES LINE NUMBER

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 89°55'48" E	49.49'
L2	N 22°33'39" E	20.96'
L3	N 87°01'19" E	52.14'
L4	N 39°59'21" E	101.81'
L5	S 39°59'21" W	129.58'
L6	S 87°01'19" W	52.14'
L7	S 22°33'39" W	20.96'
L8	N 89°55'48" E	49.49'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	90.00'	105.82'	99.83'	N 56°14'44" E	67°22'09"
C2	45.00'	50.63'	48.00'	S 54°47'29" W	64°27'40"
C3	105.00'	86.19'	83.79'	N 63°30'20" E	47°01'58"
C4	75.00'	61.57'	59.85'	N 63°30'20" E	47°01'58"
C5	75.00'	84.38'	80.00'	N 54°47'29" E	64°27'40"
C6	60.00'	70.55'	66.55'	S 56°14'44" W	67°22'09"

*LOT 13 *LOT 12 *LOT 11 *TIMBER LAKE ESTATES RECEPTION NO. 000327454 *LOT 10 *LOT 9 *LOT 2

N89°36'09"E 141.29'

FOUND ROD W/PLASTIC CAP P.L.S. 25968 0.2' BELOW SURFACE

FOUND 1-1/4" No. 4 RE-BAR P.L.S. 23043 0.2' ABOVE SURFACE

TIMBERLANE CT.

*LOT 5 *LOT 3 *LOT 4

*UNPLATTED

N00°26'22"W 669.32'

S12°34'10"E 686.45'

*TIMBER LAKE ESTATES #2 RECEPTION NO. 000526015

*LOT 3

N50°43'16"E 780.60'

780.60'

63.18'

S43°12'20"W 683.24'

562.43'

293.14'

60' WIDE EASEMENT FOR FUTURE ROADWAY PURPOSES (PLATTED)

CREEK VIEW RD.

TRACT B
142,959 Sq. Feet
3.28 Acres

FOUND 1" IRON PIPE 0.4' ABOVE SURFACE

FOUND 1/2" IRON PIPE IN CONCRETE 0.2' ABOVE SURFACE

237.54' 48.00'

S89°57'06"E 124.90'

FOUND 1" IRON PIPE

*LOT 4

S89°56'33"W 285.54'

124.90'

S74°53'43"E 369.78'

369.78'

N47°27'30"E 175.00'

175.00'

S00°04'12"E 1167.50'

*KETTLE CREEK SUBDIVISION RECEPTION NO. 000519778

*LOT 2

S45°22'08"W 68.25' EXISTING INGRESS AND EGRESS EASEMENT

48.00'

TRACT A
188,151 Sq. Feet
4.32 Acres

30' WIDE INGRESS, EGRESS AND UTILITY EASEMENT

104.68' 120.81'

L4 C3 L3 C2 C1 L1 C7

C4 L6 C5 L7 C6 L8

30.00'

369.18'

N00°40'50"W 325.64'

201.69'

S65°25'45"W 390.86'

313.46'

77.41'

N07°13'23"W 260.30'

405.86'

40.88'

L5

S77°22'36"W 398.05'

398.05'

LOT 3
303,783 Sq. Feet
6.974 Acres
(_____)

P.O.C.
FOUND ROD W/PLASTIC CAP P.L.S. 19586

*UNPLATTED

FOUND 1-1/4" No. 4 RE-BAR P.L.S. 25968 FLUSH W/SURFACE

30.96'

LOT 2
219548 Sq. Feet
5.04 Acres
(_____)

N15°39'14"W 463.09'

494.25'

N23°01'55"W 316.98'

412.00'

N00°02'04"E 325.74'

295.74'

LOT 1
219,465 Sq. Feet
5.04 Acres
(_____)

*UNPLATTED

EXISTING 30' WIDE INGRESS, EGRESS AND UTILITIES EASEMENT DESCRIBED AS BEING THE SOUTH 30' OF THE WESTERLY 764.02' OF THE S. 1/2 OF THE S.W. 1/4 OF SECTION 14, TOWNSHIP 12 SOUTH, RANGE 66 WEST OF THE 6th P.M., COUNTY OF EL PASO STATE OF COLORADO.

30' WIDE INGRESS, EGRESS AND UTILITY EASEMENT

L 30.00'

44.86'

S89°59'46"E 583.59'

592.02'

409.46'

211.35'

P.O.B.

N 89°59'37" W 1433.99'

FOUND 1" IRON PIPE 0.75' ABOVE SURFACE

N 44°59'40" E

N89°59'46"W 1212.84'

BASIS OF BEARINGS N 89°59'46" W 1212.84' SOUTH LINE OF SECTION 14

SOUTH 1/4 CORNER SECTION 14 FOUND 1-1/4" No. 4 RE-BAR

*UNPLATTED *UNPLATTED *UNPLATTED *UNPLATTED *UNPLATTED *UNPLATTED

EXISTING 30' WIDE INGRESS, EGRESS AND UTILITIES EASEMENT

N 00°01'20" W 628.27'

N 00°01'20" W 660.00'

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certificateron.

CALL BEFORE YOU DIG . . .
811
DIAL 811
48 HOURS BEFORE YOU DIG CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER & COMMUNICATIONS

REVISIONS

No.	Description	By	Date

H Scale: NONE
V Scale: NONE
Designed By: DLK
Drawn By: DAS
Checked By: WCS
Date: 12/20/2020

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CANYON CREEK RANCH
FINAL PLAT

A PORTION OF THE SOUTH 1/2 OF THE S.W. 1/4, SECTION 14, T. 12 S., R. 66 W., OF THE 6th P.M., COUNTY OF EL PASO, STATE OF COLORADO

Project No.: 21002

Sheet: 2 of 2

F:\21000\21002 Canyon Creek Ranch\Surveying\Land_Plats\21002 CANYON CREEK RANCH FINAL PLAT.dwg

Appendix B

WATER SUPPLY INFORMATION SUMMARY

Section 30-28-133,(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence that a Water supply that is sufficient in terms of quantity, quality, and dependability will be available to ensure an adeuate supply of water"

1. NAME OF DEVELOPMENT AS PROPOSED *Canyon Creek Ranch Subdivision*

2. LAND USE ACTION *Minor Subdivision*

3. NAME OF EXISTING PARCEL AS RECORDED *1150 Parallax Road*

SUBDIVISION *See Above* **FILING** *N/A* **BLOCK** *N/A* **Lot** *N/A*

4. TOTAL ACERAGE *23.96* | **5. NUMBER OF LOTS PROPOSED** *3* | **PLAT MAPS ENCLOSED**

6. PARCEL HISTORY - Please attach copies of deeds, plats, or other evidence or documentation. (In submittal package)

A. Was parcel recorded with county prior to June 1, 1972? ☐ YES ☑ NO

B. Has the parcel ever been part of a division of land action since June 1, 1972? ☐ YES ☑ NO

If yes, describe the previous action

7. LOCATION OF PARCEL - Include a map deliniating the project area and tie to a section corner. (In submittal)

S1/2 **OF** SW 1/4 **SECTION** 814 **TOWNSHIP** 12 S ☐ N | S **RANGE** 66 ☐ E ☑ W

PRINCIPAL MERIDIAN: ☑ 6TH ☐ N.M. ☐ UTE ☐ COSTILLA

8. PLAT - Location of all wells on property must be plotted and permit numbers provided.

Surveyors plat ☑ YES ☐ NO If not, scaled hand -drawn sketch ☑ YES ☐ NO

9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Foot per Year

HOUSEHOLD USE # [1]	*3* **of units**	*0.300* **AF/SFE/YR**	*0.900*	**AF**
COMMERCIAL USE #	*0* **SF**	*-* **GPD**	*-*	**AF**
IRRIGATION # [2]	*0.0460* **AF/1000SF**	*636* **GPD**	*0.712*	**AF**
ANIMAL WATERING # [4]	6 **Horses**	*0.011* **AF/Horse/Year**	*0.066*	**AF**
		GPD		**AF**
TOTAL		*1,498* **GPD**	***1.68***	**AF** *

[1] *Per 06CW15 Section 21.A*

[2] *Assuming 15,489 ft² of irrigatible land for 3 lots per 06CW15 Section 21.C*

[3] *Assuming 6 horses for 3 lots per 06CW15 Section 21.B*

10. WATER SUPPLY SOURCE

☑ EXISTING ☑ DEVELOPED

WELLS SPRING

WELL PERMIT NUMBERS

268558

☑ NEW WELLS

Proposed Aquifers - (Check One)

☐ Alluvial ☐ Upper

☐ Upper Dawson ☐ Lower

☐ Lower Dawson ☐ Laramie Fox

☑ Denver ☐ Dakota

☐ Other

☐ MUNICIPAL

☐ ASSOCIATION

☐ COMPANY

☐ DISTRICT

NAME: N/A

LETTER OF COMMITMENT FOR SERVICE - N/A ☐ YES N

WATER COURT DECREE CASE NUMBERS

Existing Well Permit #268558

Case Number - 06CW15

11. ENGINEER'S WATER SUPPLY REPORT ☑ YES ☐ NO If yes, please forward with this form. (This may be required before our review is completed)

12. TYPE OF SEWAGE DISPOSAL SYSTEM

☑ SEPTIC TANK/LEACH FIELD ☐ CENTRAL SYSTEM - DISTRICT NAME:

☐ LAGOON ☐ VAULT - LOCATION SEWAGE HAULED

☐ ENGINEERED SYSTEM (Attach a copy of engineering design) ☐ OTHER:

Appendix C

DISTRICT COURT, WATER DIVISION 2, COLORADO Court Address: 320 West 10th Street, #203 Pueblo, CO 81003	
CONCERNING THE APPLICATION FOR WATER RIGHTS OF: **DAVID REED** **IN EL PASO COUNTY.**	**COURT USE ONLY**
	Case Number: **06CW15**

JUDGMENT AND DECREE

THE COURT FINDS that no protest has been filed to the Ruling of the Water Referee within the time provided by law, and that said Ruling should be confirmed, approved and adopted.

IT IS, THEREFORE, ORDERED, ADJUDGED AND DECREED that the Ruling of Referee entered on July 11, 2007, be and is incorporated herein by reference and is confirmed, approved and adopted as the judgment of this Court.

Dated: August 7, 2007.

BY THE COURT:

DENNIS MAES, WATER JUDGE

C: Engineer
Cummins
Strunwin
Duda
8-7-07 MD

DISTRICT COURT, WATER DIVISION 2, CO Court Address: 320 W. 10TH St., #203 Pueblo, CO 81003 Phone Number: (719) 583-7048 **CONCERNING THE APPLICATION FOR WATER RIGHTS OF:** **DAVID REED** **IN EL PASO COUNTY, COLORADO.** Attorneys for Applicant: Chris D. Cummins, #35154 Felt, Monson & Culichia, LLC 319 N. Weber St. Colorado Springs, CO 80903 Phone Number: (719) 471-1212 Fax Number: (719)471-1234 E-mail: cdc@fmcwater.com	 Δ COURT USE ONLY Δ Case No: **06CW15**

FINDINGS OF FACT AND RULING OF REFEREE GRANTING UNDERGROUND WATER RIGHTS AND PLAN OF AUGMENTATION

This matter comes before the Water Referee on the Application for Adjudication of Denver Basin Groundwater and for Approval of Plan for Augmentation filed by David Reed, and having reviewed said Application and the other pleadings on file and being fully advised on this matter, the following findings and orders are made:

FINDINGS OF FACT

General Findings

1. The Applicant in this case is David Reed, whose address is 5785 Tuckerman Drive, Colorado Springs, CO, 80918 (hereinafter "Applicant"). Applicant seeks the adjudication of his underground water rights from the Denver Basin aquifers and approval of a proposed plan for augmentation for the use of a portion of the underground water from the Denver aquifer.

2. The Application was filed with the Water Court on March 21, 2006. The Clerk of this Court has caused publication of said filing as provided by statute, and the publication costs have been paid. All notices of the Application have been given in the manner required by law.

3. Kettle Creek, LLC and the City of Colorado Springs both filed timely statements of Opposition to the Application. Both Kettle Creek, LLC and the City of Colorado Springs have consented to the entry of this decree based upon the language contained herein, as indicated by the respective Stipulations filed with the Court, and incorporated herein.

4. The Court has jurisdiction over the subject matter of this proceeding and over all parties affected hereby, whether or not they have appeared in this action. The land and water rights involved herein are not included within the boundaries of any designated ground water basin. There

are no encumbrances of record on the property of the Applicant, hence the notice provisions of C.R.S. 37-92-302(2) and 37-92-305(6) are not applicable to this case.

5. A Determination of Facts was issued by the Office of the State Engineer on July 17, 2006, has been filed with the Court, and has been considered by the Referee in the entry of this ruling. A Consultation Report of the Division Engineer responding to this Application was issued on September 1, 2006, and has been considered by the Referee in the entry of this ruling.

6. Applicant requests the adjudication of his vested use rights to groundwater from the Dawson, Denver, Arapahoe and Laramie-Fox Hills aquifers underlying the Applicant's Property in El Paso County. Applicant also requests the adjudication of a plan for augmentation to replace any stream depletions caused by the pumping from up to four wells withdrawing water for residential purposes from the not-nontributary Denver aquifer underlying his property.

Underground Water Rights

7. The Applicant's Property consists of 23.95 acres located in the S1/2 SW1/4 of Section 14, Township 12 South, Range 66 West, 6th P.M., in El Paso County, Colorado, as more particularly described in the attached Exhibit A. Of the statutorily described Denver Basin aquifers, the Dawson, Denver, Arapahoe and Laramie-Fox Hills aquifers all exist beneath the Applicant's Property. The Dawson, Denver and Arapahoe aquifers underlying the Applicant's property contain not-nontributary water, while the water of the Laramie-Fox Hills aquifer underlying the Applicant's Property is nontributary.

8. The quantity of water in the Denver Basin aquifers exclusive of artificial recharge underlying the Applicant's Property is as follows:

Aquifer	Saturated Thickness (Feet)	Depth (Feet)	Total Water Adjudicated (Acre Feet)	Annual Average Withdrawal (Acre Feet)[1]
Dawson	60	0-135	287	0.95
Denver	434	175-1015	1767	5.89
Arapahoe	272	1075-1575	1107	3.69
Laramie Fox Hills	190	1965-2255	682	2.27

9. There is one (1) existing exempt well permitted for use on the property represented by State Engineer Well Permit No. 268558, allowing production from the Denver aquifer. Well Permit No. 268558 will be repermitted for use under the augmentation plan decreed herein.

10. In determining the amount of ground water available for withdrawal annually from these aquifers, the provisions of C.R.S. 37-90-137(4) must be applied, and pursuant to C.R.S. 37-90-137(4)(b)(I), annual withdrawals shall be allowed on the basis of an aquifer life of 100 years. The allowed average annual amount of water available for withdrawal from the Denver aquifer underlying the lands claimed in the Application is 17.67 acre feet (the quantity of water which is considered available divided by the 100 year aquifer life). Current El Paso County Land Use regulations limit withdrawals of water based upon a three hundred year aquifer life. The allowed average annual amount of water available for withdrawal from the Denver aquifer underlying the Applicant's Property

[1] Based on a 300 year aquifer life.

assuming a 300 year aquifer life would be 5.89 acre feet per year and the quantities available from the other respective Denver Basin Aquifers are illustrated in paragraph 8 above.

11. Applicant shall be entitled to withdraw amounts of ground water in excess of the allowed average annual amounts decreed for withdrawal from the Denver Basin aquifers underlying Applicant's Property, so long as the sum of the total withdrawals from all the wells in each of the Denver Basin aquifers does not exceed the product of the number of years since the date of issuance of the original well permit or the date of entry of a decree herein, whichever comes first, and the allowed average annual volume of water which Applicant is entitled to withdraw from each of the Denver Basin aquifers underlying Applicant's Property, and further subject to the requirement that such excess withdrawals do not violate the terms and conditions of the plan for augmentation decreed herein and any other plan for augmentation decreed by the Court that authorizes withdrawal of the Denver Basin ground water decreed herein.

12. Applicant shall be entitled to produce the full legal entitlement from the Denver aquifer underlying Applicant's Property through the existing well plus up to three (3) additional wells proposed to be constructed into the Denver aquifer. These wells may be treated as a well field, and may be located at any point within the boundaries of the Applicant's Property without the necessity of filing an amendment to the Application, republishing, or petitioning the Court for the opening of this Decree. Applicant has waived the 600 foot spacing requirement for these wells within the Applicant's 23.95 acre parcel, but remains subject to the 600 foot spacing requirement for any wells located outside of the property pursuant to the provisions of C.R.S. 37-90-137(2). The pumping rates for each well may vary according to aquifer conditions and well production capabilities. The Applicant shall be entitled to withdraw ground water at rates of flow necessary to withdraw the entire decreed amount. All wells constructed shall be cased so as to prevent withdrawal of water from more than one aquifer.

13. Well permit applications for the wells to be drilled pursuant to this decree shall be applied for prior to drilling or re-drilling of the wells. Applicant shall apply for a new well permit for existing Permit No. 268558 pursuant to C.R.S. 37-90-137 and withdrawals of Denver aquifer ground water from the well shall be subject to the augmentation requirements set forth in this decree. No exact location is required to be set forth for the wells in this decree, as that information will be provided when the well permit applications are submitted.

14. The Applicant shall have the right to use the ground water adjudicated herein for those beneficial uses specifically authorized by this decree under the plan for augmentation decreed herein, or specifically authorized pursuant to modification of the plan for augmentation decreed herein under the Court's retained jurisdiction or pursuant to a separate plan for augmentation decreed by the Court.

15. Applicant is awarded a vested right to the use of ground water from the Denver aquifer underlying Applicant's Property, as quantified in paragraph 8 or as modified by the Court under its retained jurisdiction. Applicant may use such water by immediate application or by storage and subsequent application. Specifically, subject to the plan for augmentation set forth in this decree, Applicant shall have the right to withdraw and use 666 acre feet of the Denver aquifer ground water decreed herein for domestic, irrigation and stock-watering purposes. However, use of the 666 acre feet of Denver aquifer ground water for beneficial uses other than domestic, irrigation and stock-watering, to include commercial, industrial, fish and wildlife propagation, fire protection, and central water supply purposes, shall not be made until Applicant or his successors in interest have complied with the requirements of paragraph 14 above by obtaining a modification of the plan for augmentation decreed herein, or a separate plan for augmentation to address other beneficial

uses. Likewise, the remaining 1,101 acre-feet of Denver aquifer groundwater not included in the plan for augmentation decreed herein shall not be withdrawn unless or until a separate plan for augmentation covering its use is decreed, or the plan for augmentation decreed herein is modified to account for such withdrawals. Applicant's use of ground water from the Denver aquifer for irrigation and stock-watering purposes shall not be allowed on the individual lots unless the Denver aquifer ground water is also being pumped and used for in-house domestic purposes on the lot on which the irrigation or stock-watering will occur, and unless non-evaporative septic systems are in use to generate return flows to augment the irrigation and stock-watering uses.

16. Applicant is awarded a vested right to the use of ground water from the Dawson and Arapahoe aquifers underlying the Applicants' Property, as quantified in paragraph 8 or as modified by the Court under its retained jurisdiction. Applicant shall not construct a well or wells in to the Dawson or Arapahoe aquifers, and shall not withdraw and use any of the ground water adjudicated herein for the Dawson and Arapahoe aquifers, unless and until a separate plan for augmentation has been decreed by the Court to cover the replacement requirements for withdrawals from those aquifers. Said plan for augmentation will describe the allowable beneficial use(s) that can be made with Applicant's Dawson and Arapahoe aquifer ground water under such plan.

17. Applicant is awarded a vested right to the use of the ground water from the Laramie-Fox Hills aquifer underlying the Applicant's Property, as quantified in paragraph 8 or as modified by the Court under its retained jurisdiction. As a term and condition of this decree, Applicant has reserved the entire volume of Laramie-Fox Hills aquifer ground water decreed herein for the purpose of replacing depletions as described in this decree. Subject to the provisions of Rule 8 of the Denver Basin Rules, 2 CCR 402-6, limiting consumption to ninety-eight percent (98%) of the amount withdrawn, Applicant's Laramie-Fox Hills aquifer ground water may only be used for augmentation and replacement purposes. Additional beneficial uses of this ground water shall not be made unless and until the Court has modified the reservation herein under its retained jurisdiction and approved such additional uses, as discussed herein at paragraphs 14, 25, and 26.

Plan for Augmentation

18. Monument Creek and the Arkansas River system are generally over-appropriated. As such, the water supply for the river system is generally insufficient to satisfy all of the decreed water rights senior to the appropriation of the Applicant, and therefore the depletions caused to the Arkansas River and its tributaries by Applicant's underground water rights must be replaced to the river in a manner so as not to cause material injury to any vested water rights or decreed conditional water rights.

19. The structures to be augmented are up to four (4) wells completed and to be completed into the not-nontributary Denver aquifer of the Denver Basin underlying the Applicant's Property including the well structure represented by State Engineer Well Permit No. 268558 and any replacement wells. The depletions attributed to Applicant's well pumping occur to Monument Creek, tributary to Fountain Creek, tributary to the Arkansas River. Applicant is the owner of the land upon which all structures are to be located and the place of use of water from the four (4) wells augmented herein.

20. Withdrawal of ground water from the Denver aquifer underlying the land claimed in the Application will, within one hundred years, deplete the flow of Monument Creek at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore, the water is not-nontributary ground water as defined in C.R.S. 37-90-103(10.7). C.R.S. 37-90-137(9)(c)(I) states that judicial approval of a plan for augmentation shall be required prior to the use of ground

water of the type sought in this Application. The water rights to be used for augmentation during pumping are the return flows of the not nontributary Denver aquifer wells to be pumped as set forth in this plan for augmentation. The water rights to be used for augmentation after pumping are Applicant's nontributary water rights in the Laramie-Fox Hills aquifer. Pursuant to C.R.S. 37-90-137(9)(c)(I), as the Applicant's Property is greater than one mile from any point of contact between the aquifer and any natural surface stream, including its alluvium, the augmentation obligation for the Denver aquifer wells requires the replacement to the affected stream system of a total amount of water equal to four percent of the amount of water withdrawn from the aquifer on an annual basis. Applicant, or his successors in interest, shall be required to replace depletions after withdrawal ceases to compensate for injurious stream depletions caused by prior withdrawals from the Denver aquifer wells.

21. Applicant shall provide for the augmentation of stream depletions caused by pumping the Denver aquifer wells approved herein for up to four (4) wells to service residential lots. Water use criteria for each of the wells are as follows:

A. Household Use Only: 0.30 acre feet annually per family dwelling with a ten percent consumptive use based upon non-evaporative septic leach field disposal systems. Any other type of waste water disposal shall require an amendment to this plan of augmentation.

B. Horses (or equivalent livestock): 0.011 acre feet annually (10 gallons per day) per head with a one hundred percent consumptive use component.

C. Landscape and Garden Irrigation: 0.046 acre feet annually per 1,000 square feet (2.0 acre feet per acre) per year, with a ninety percent assumed consumptive use rate.

Based on these estimates of diversions and consumptive use components, and based upon a three hundred year aquifer life for each of the wells, the four (4) wells should be able to pump a combined 2.22 acre feet per year, which is sufficient to support use for in-house purposes, the watering of eight horses, and the irrigation of approximately 20,652 square feet of lawn or garden. Applicant may divide these amounts equitably between the lots at such time as a subdivision plan is developed. Total depletions from Applicant's withdrawals shall in no instance exceed the 668 acre-feet reserved and available for replacement in the Laramie-Fox Hills aquifer.

22. Pursuant to C.R.S. 37-90-137(9)(c)(I), the augmentation obligation for the Denver aquifer wells during the withdrawal period requires the replacement of an amount of water equal to four (4) percent of the amount of water withdrawn from the aquifer on an annual basis. Waste water from the in-house residential uses shall be disposed of through non-evaporative septic systems which are hereby determined to have return flows to the tributary stream system of ninety percent of the in-house residential pumping of 0.30 annual acre feet per unit. In-house consumptive use is ten percent of diversions and return flows for each in-house residential use is therefore ninety percent of the above 0.30 annual acre feet of pumping, or 0.27 acre feet per residence. Total return flows from the in-house use from the four (4) Denver aquifer wells will be 1.08 annual acre feet. These return flows will adequately augment the tributary stream system in excess of the statutorily required augmentation amount of 0.089 annual acre feet and will prevent material injury to other vested water rights. These in-house use return flows are committed to this plan for augmentation and cannot be otherwise used, sold, traded, or assigned, without a subsequent order of this Court under the Court's retained jurisdiction or under further water rights application filed with this Court.

23. The use of the remaining pumping allotment from the Denver aquifer beyond in-house use will be for the watering of horses or similar livestock and for the irrigation of lawns, gardens and landscaping. Applicant asserts that ten percent of irrigation water would accrue to the stream as return flows which could be used for additional augmentation. The irrigation return flows are not used as part of this augmentation plan, but Applicant preserves their claim to those return flows and does not waive his rights thereto.

24. This plan for augmentation shall have a pumping period of at least 300 years. It is necessary for the Applicant to address the replacement of any injurious post-pumping depletions which may be caused to the stream system after pumping of the Denver aquifer wells ceases.

25. In order to ensure the replacement of all injurious depletions that may occur to the Arkansas River and its tributaries as a result of the pumping of Applicant's Denver aquifer wells, including those which may occur post-pumping, Applicant shall reserve the entire 682 acre-feet of ground water from the nontributary Laramie-Fox Hills aquifer underlying the Applicant's' Property adjudicated by this decree (subject to the limitation of consuming only 98% of the 682 acre-foot total, 668 acre-feet). Pursuant to a request by the Applicant or the future well owner, as set forth in this paragraph 25 and in paragraphs 26 and 44, the amount of Laramie-Fox Hills water reserved under this decree may be reduced by the Court under its retained jurisdiction as follows: (1) to reflect the actual volume of water available to Applicant from the Laramie-Fox Hills aquifer, as adjusted by the Court under its retained jurisdiction; (2) to reflect the amount of actual replacements made under the augmentation plan decreed herein; or (3) if the Court has authorized use of other replacement sources under this plan for augmentation, pursuant to its retained jurisdiction.

26. This decree, upon recording, shall constitute a covenant running with the Applicant's Property, benefitting and burdening said land, and requiring construction of a well or wells into the nontributary Laramie-Fox Hills aquifer and pumping of water, as necessary to replace injurious stream depletions under this decree, and Applicant and his successors and assigns are bound by such covenants to bear the financial and infrastructure burdens of constructing such wells. Pursuant to this covenant, the water from the nontributary Laramie-Fox Hills aquifer reserved herein may not be severed in ownership from the overlying subject property. This covenant shall be for the benefit of, and enforceable by, third parties owning vested water rights who would be materially injured by the failure to provide for the replacement of pumping depletions under the decree, and shall be specifically enforceable by such third parties against the owner of the Applicant's Property. In the event of a court action to specifically enforce the covenant as set forth above, the prevailing party in such action shall be entitled to recover its reasonable attorney's fees and costs incurred in such enforcement action in addition to all other remedies available.

27. Applicant or his successors shall be required to initiate pumping of the Laramie-Fox Hills aquifer for the replacement of depletions when either (1) the absolute total amount of water available to be withdrawn from the Denver aquifer (666 acre-feet) has been withdrawn from the wells; (2) the Applicant or his successors in interest has acknowledged in writing that all withdrawals for beneficial use through the wells has permanently ceased; (3) for a period of ten (10) consecutive years no withdrawals of groundwater have occurred through the Denver aquifer wells; or, (4) the accounting shows that return flows from use of the water being withdrawn is insufficient to replace depletions caused by the withdrawals that already occurred.

28. In addition, to satisfy depletion obligations, upon application to and approval of this Court under its retained jurisdiction, Applicant may use other legally available augmentation supplies which, as determined by the Court, are sufficient in quantity, time, and location to meet injurious depletions, including those which may occur post-pumping. Accounting and responsibility for all injurious depletions shall continue until such time as all injurious depletions are replaced, unless the Court determines otherwise under its retained jurisdiction.

29. The intended period of pumping for the Denver aquifer wells is for a minimum of 300 years. However, the length of pumping for a particular well or wells may be extended beyond such time provided the total volume pumped does not exceed the amount allocated to such well or wells under this decree. Should the actual operation of this augmentation plan depart from the planned diversions described in paragraph 23, such that annual diversions are increased or the duration of the plan is extended, the Applicant must prepare and submit a revised model of stream depletions caused by the actual pumping schedule. This analysis must utilize depletion modeling acceptable to the State Engineer, and to this Court under its retained jurisdiction, and must represent the water use under the plan for the entire term of the plan prior to the revised modeling. The analysis must show that return flows have equaled or exceeded actual stream depletions throughout the pumping period and that reserved nontributary water remains sufficient to replace post-pumping depletions. This augmentation plan shall continue until all injurious depletions (pumping and post-pumping) have been adequately replaced, as discussed in paragraphs 24-27 herein.

30. Consideration has been given to the depletions from Applicant's use and proposed uses of water, in quantity and in time, the amount and timing of augmentation water which will be provided by Applicant, and the existence, if any, of injury to any owner of or person entitled to use water under a vested water right or a decreed conditional water right.

31. It is determined that the timing, quantity, and location of replacement water and the protective terms outlined herein are sufficient to protect the vested rights of other water users and eliminate material injury thereto. The replacement water is of a quantity and quality so as to meet the requirements for which the water of senior appropriators has normally been used and such replacement water shall be accepted by the senior appropriators for substitution for water derived by the exercise of the Applicant's Denver aquifer wells. As a result of the operation of this plan for augmentation, the diversions and net depletions from the Applicant's wells will not result in material injury to any owner of or person entitled to use water under a vested water right.

CONCLUSIONS OF LAW

32. This Application was filed with the Water Clerk, Water Division 2, pursuant to C.R.S. 37-92-302(1)(a) and C.R.S. 37-90-137(9)(c)(I) (2006).

33. Applicant is entitled to the sole right to withdraw all the legally available water in the Denver Basin aquifers underlying Applicant's Property, and the right to use that water to the

exclusion of all others subject to the terms of this decree.

34. Applicant has complied with C.R.S. 37-90-137(4) (2006), and the 666 acre feet of the not-nontributary Denver aquifer subject to the plan for augmentation decreed herein is legally available for withdrawal from the requested not-nontributary Denver aquifer wells by entry of this decree approving an augmentation plan pursuant to C.R.S. 37-90-137(9)(c)(I) (2006). The withdrawal of such portion of the Denver aquifer water decreed herein in accordance with the terms of this decree will not result in material injury to vested water rights of others. The remaining 1,101 acre feet of Denver aquifer groundwater and the not-nontributary Dawson and Arapahoe aquifer ground water decreed herein shall not be withdrawn until such withdrawals are authorized pursuant to a court approved plan for augmentation. Applicant is entitled to a decree from this Court confirming such rights pursuant to C.R.S. 37-90-137(4) (2006).

35. The Denver Basin water rights applied for and decreed in this case are not conditional water rights, but are absolute water rights determined pursuant to C.R.S. 37-90-137 (2006). No applications for diligence are required. The claims for not-nontributary ground water meet the requirements of Colorado Law.

36. The determination of the nontributary ground water rights in the Denver Basin aquifers set forth herein is contemplated and authorized by law. C.R.S. 37-90-137 and C.R.S. 37-92-302 to 37-92-305 (2006).

37. The Applicant's request for approval of a plan of augmentation is contemplated and authorized by law. If administered in accordance with this decree, this plan for augmentation will permit the uninterrupted diversions from the Denver aquifer wells as described herein, without adversely affecting any other vested water rights in the Arkansas River and its tributaries and whenever curtailment would otherwise be required to meet a valid senior call for water. C.R.S. 37-92-305(3), (5), and (8) (2006).

38. The State Engineer may lawfully be required to administer this plan for augmentation in the manner set forth herein.

DECREE

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED, AND DECREED AS FOLLOWS:

39. All the foregoing FINDINGS OF FACT and CONCLUSIONS OF LAW are incorporated by reference herein, and are to be considered a part of the decretal portion hereof as though set out in full.

40. The Application for Adjudication of Denver Basin Water Rights and for Approval of Plan for Augmentation which has been requested by the Applicant is granted and approved, subject to the terms of this decree.

41. The Applicant shall comply with C.R.S. 37-90-137(9)(b), requiring the relinquishment of the right to consume up to two percent of the amount of the nontributary ground water withdrawn. Ninety-eight percent of the nontributary ground water withdrawn may thereby be consumed. No plan of augmentation shall be required to provide for such relinquishment. Applicant shall be required to demonstrate to the State Engineer prior to the issuance of a well permit or permits that no more than ninety-eight percent (98%) of the ground water withdrawn annually will be consumed.

42. Applicant may withdraw up to 2.2 acre feet per year for 300 years and 666 acre feet total of not-nontributary ground water from the Denver aquifer under the plan for augmentation decreed herein pursuant to C.R.S. §37-90-137(9)(c) (2006). Applicant shall not be entitled to withdraw the allowed annual amounts adjudicated herein for the Dawson and Arapahoe aquifers, nor shall Applicant be entitled to withdraw the remaining 1,101 acre feet of Denver aquifer groundwater decreed herein, unless and until a separate plan for augmentation has been decreed by the Court to cover the replacement requirements for withdrawals from those aquifers. Neither shall Applicant be entitled to beneficial uses for the ground water from the Denver and Laramie-Fox Hills aquifers, other than those uses specifically authorized in this decree under the plan for augmentation decreed herein, until such time as that plan is modified under this Court's retained jurisdiction, or a subsequent plan for augmentation addressing such uses is decreed by this Court.

43. The State Engineer, the Division Engineer, and/or the Water Commissioner shall not, at the request of other appropriators, or on their own initiative, curtail the diversion and use of water from the Denver aquifer wells drilled pursuant to this plan for augmentation, so long as the return flows from the annual diversions associated with the Denver aquifer wells through the individual septic leach fields of the Applicant's lots are of an amount at least equal to 4% of those diversions, as discussed herein. To the extent that Applicant or one of his successors or assigns is ever unable to provide the replacement water required, then the Applicant's Denver aquifer wells shall not be entitled to operate under the protection of this plan, and shall be subject to administration and curtailment in accordance with the laws, rules, and regulations of the State of Colorado. Pursuant to C.R.S. 37-92-305(8), the State Engineer shall curtail all out-of-priority diversions which are not so replaced as to prevent injury to vested water rights.

44. The Court retains jurisdiction over this matter to make adjustments in the allowed average annual amount of withdrawal from the Denver Basin aquifers as adjudicated herein either upwards or downwards, to conform to actual local aquifer characteristics after at least one geophysical log is obtained, and that the Applicant need not refile, republish, or otherwise amend this Application and Decree to request such adjustments. Such retained jurisdiction shall allow the Applicant to later seek to prove that post-pumping depletions are noninjurious, that the extent of replacement for post-pumping depletions is less than the amount of water reserved herein, or any other post pumping matters addressed in paragraphs 24-27 above. The Court further retains jurisdiction for the purposes of ensuring that the Laramie-Fox Hills well is constructed as necessary to replace post-pumping depletions following the pumping life of the Denver aquifer wells.

45. Pursuant to the provisions of C.R.S. 37-92-304(6) (2005), this plan for augmentation decreed herein shall be subject to the reconsideration of this Court, for the purpose of evaluating injury to vested water rights, for a period of time necessary to preclude injury, and in this instance such period shall be three years from the date of this decree. Any person, within a three year period, may petition the Court to invoke its retained jurisdiction. Any person seeking to invoke the Court_s retained jurisdiction shall file a verified petition with the Court setting forth with particularity the factual basis for requesting that the Court evaluate injury to vested water rights associated with the operation of this decree, together with proposed decretal language to effect the petition. The party filing the petition shall have the burden of proof of going forward to establish a prima facie case based on the facts alleged in the petition. If the Court finds those facts to be established, Applicant shall thereupon have the burden of proof to show: (a) that any modification sought by Applicant will avoid material injury to other appropriators, or (b) that any modification sought by the petitioner is not required to avoid material injury to other appropriators, or (c) that any term or condition proposed by Applicant in response to the petition does avoid material injury to other vested water rights. If no such petition is filed with in a three-year period and the retained jurisdiction period is not extended

by the Court in accordance with the provisions of the statute, this decree shall become final under its own terms.

46. The Court determines and orders that the State Engineer will process well permit applications pursuant to C.R.S. 37-92-137 pursuant to the terms of this decree. Should Applicant fail to construct any well prior to the expiration of the well permit, Applicant may reapply to the State Engineer for a new well permit and the State Engineer shall issue a new well permit with terms and conditions no more burdensome than those contained herein.

47. The wells shall be installed and metered as reasonably required by the Division Engineer and the State Engineer. Each well shall be equipped with a totalizing flow meter and Applicant shall submit diversion records to the Division Engineer or his representative on an annual basis or as otherwise required by the Division Engineer. The Applicant shall also provide accountings to the Division Engineer and Water Commissioner to demonstrate compliance under this plan of augmentation.

48. This Decree shall be recorded in the real property records of El Paso County so that a title examination of the property, or any part thereof, shall reveal to all future purchasers the existence of this decree. Copies of this ruling of referee, and the final decree, when entered by the Court, shall be mailed to the parties as required by statute.

DATED THIS 11th day of July, 2007.

BY THE REFEREE:

Mardell R. DiDomenico, Water Referee
Water Division 2
State of Colorado

EXHIBIT A

All that part of the S1/2 of the SW1/4 of Section 14 in township 12 South, Range 66 West of the 6th P.M., lying East of the following described line:

Beginning at a point on the North line of said S1/2 of the SW1/4, 1144 feet East from the Northwest corner thereof; thence Southerly parallel with the West line of said Section, 670 feet to the North line of a tract described in Book 2160 at Page 378, under reception No. 515889; thence Easterly along the North line of said Tract, 290.02 feet, more or less, to the Northeast corner thereof; thence Southerly along the East line of said tract and the extension thereof to a point on the South line of said SW1/3, 1434.02 feet Easterly from the Southwest corner of said Section;

Except that part thereof platted as Timber Lake Estates No. 2, El Paso County, State of Colorado.

Together with an easement for egress over the following described property:

That portion of the S1/2 of the SW1/4 of Section 14, Township 12 South, Range 66 West of the 6th P.M., El Paso County, Colorado, described as follows:

Beginning at a point on the Northerly line of a tract of land as described in Book 2160 at Page 378 in the records of El Paso County, Colorado that is 48.00 feet Westerly thereon from the Northeast corner thereof; thence Southeasterly to intersect a point on the Easterly line of said recorded tract that is 48.00 feet Southerly from the Northeast corner thereof; thence Northerly 48.00 feet to the Northeast corner thereof; thence Westerly 48.00 feet to the point of beginning, El Paso County, State of Colorado.

Form No. GWS-25

OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

LIC

WELL PERMIT NUMBER 268558 - -
DIV. 2 WD 10 DES. BASIN MD

APPLICANT

DAVID REED
5785 TUCKERMAN DR
COLORADO SPRINGS, CO 80918-

(719) 599-7359

APPROVED WELL LOCATION
EL PASO COUNTY
SE 1/4 SW 1/4 Section 14
Township 12 S Range 66 W Sixth P.M.

DISTANCES FROM SECTION LINES
200 Ft. from South Section Line
1520 Ft. from West Section Line

UTM COORDINATES (Meters,Zone:13,NAD83)
Easting: Northing:

PERMIT TO CONSTRUCT A WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
3) Approved pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a residential site of 23.95 acre(s) described as that portion of the SE 1/4 of the SW 1/4, Sec. 14, T12S, R66W, Sixth P.M., El Paso County, more particularly described on the attached Exhibit A.
4) The use of ground water from this well is limited to ordinary household purposes inside one single family dwelling. The ground water shall not be used for irrigation or other purposes.
5) Production from this well is restricted to the Denver aquifer, which corresponds to the interval between 235 feet and 1060 feet below the ground surface. Plain casing shall be installed and grouted to prevent production from other zones.
6) The pumping rate of this well shall not exceed 15 GPM.
7) The return flow from the use of this well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
8) This well shall be constructed not more than 200 feet from the location specified on this permit.

NOTE: To ensure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above.

NOTE: The ability of this well to withdraw its authorized amount of water from this non-renewable aquifer may be less than the 100 years upon which the amount of water in the aquifer is allocated, due to anticipated water level declines. CDK 4/24/06

APPROVED
CDK

Hal D. Simpson
State Engineer

Clay Kinnaird
By

Receipt No. 3601918 DATE ISSUED 04-24-2006 EXPIRATION DATE 04-24-2008

Appendix D

El Paso County Land Development Code
Water Quality Requirements and Results
Denver Confined Aquifer
Canyon Creek Ranch Minor Subdivision
Sampled May 2, 2022

Compound	Units	MCL/SMCL	Result
Antimony	mg/l	0.006	0
Arsenic	mg/l	0.01	0
Barium	mg/l	2	0.0489
Beryllium	mg/l	0.004	0
Cadmium	mg/l	0.005	0
Chromium	mg/l	0.1	0
Cyanide (Total)	mg/l	0	0
Fluoride	mg/l	4	0.94
Mercury	mg/l	0.002	0
Nitrate as N	mg/l	10	0
Nitrite as N	mg/l	1	0
Total Nitrate/Nitrite as N	mg/l	10	0
Selenium	mg/l	0.05	0
Thallium	mg/l	0.002	0
Aluminum	mg/l	0.05	0
Chloride	mg/l	250	2.1
Langlier Index			-1.13
Iron	mg/l	0.3	0.663
Manganese	mg/l	0.05	0.0389
pH		6.5 - 8.5	7.04
Silver	mg/l	0.1	0
Sulfate	mg/l	250	23.4
TDS	mg/l	500	130
Zinc	mg/l	5	1.243
Gross Alpha/Beta	pCi/l	15	4.1
Combined Radium 226+228	pCi/l	5	2.1
Total Coliform	#/100 ml	Absent	Absent

Green = Result below MCL - Acceptable Water Quality

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M01814
Received: May 04, 2022
Reported: May 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

Stuart Nielson
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City, CO 80640

ANALYTICAL REPORT

By: Roxanne Sullivan
Roxanne Sullivan
Analytical Laboratories Director

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M01814
Received: May 04, 2022
Reported: May 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID / Customer Sample ID			22M01814-001 **220503067-01D** - Canyon Creek Ranch - #1-Canyon Creek Ranch sampled on 05/02/22 @ 1323					
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	1.7	1.7	0.1	SM 7110 B	5/5/22 @ 0954	RG
Gross Beta	**pCi/L**	**T**	4.0	2.4	3.0	SM 7110 B	5/5/22 @ 0954	RG
Radium-226	**pCi/L**	**T**	NR	-	-	SM 7500-Ra B	-	-
Radium-228	**pCi/L**	**T**	NR	-	-	EPA Ra-05	-	-

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M01814
Received: May 04, 2022
Reported: May 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M01814-002							
Customer Sample ID	**220503067-01E** - Canyon Creek Ranch - #1-Canyon Creek Ranch sampled on 05/02/22 @ 1323							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	NR	-	-	SM 7110 B	-	-
Gross Beta	**pCi/L**	**T**	NR	-	-	SM 7110 B	-	-
Radium-226	**pCi/L**	**T**	0.3	0.2	0.1	SM 7500-Ra B	5/13/22 @ 1240	KT
Radium-228	**pCi/L**	**T**	1.8	0.8	0.2	EPA Ra-05	5/9/22 @ 1144	JR

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 05/05/2022

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(46.4)\ (1.000) - (0.0)\ (0.200)}{57.4} \times 100 = 81\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap			x
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

_____ Batch QC Passes**
_____ Batch QC Fails
x Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative: The duplicate in the batch was over mass calibration range and could not be counted. Data quality is not adversely affected and therefore the data is being reported.

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M01791	
22M01793	
22M01795	
22M01796	
22M01797	
22M01798	
22M01812	
22M01814	

Evaluator:

05/14/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 05/05/2022

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C-11 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C-11 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(39.5)\ (1.000) - (0.0)\ (0.200)}{44} \times 100 = 90\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap			x
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

_____ Batch QC Passes**
_____ Batch QC Fails
x Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative: The duplicate in the batch was over mass calibration range and could not be counted. Data quality is not adversely affected and therefore the data is being reported.

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M01791	
22M01793	
22M01795	
22M01796	
22M01797	
22M01798	
22M01812	
22M01814	

Evaluator: _____

05/14/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 05/12/2022

Batch QC Summary Form

Analyte: Radium-226

Control Standard/LFB: ID: C1-002 pCi/mL: 23 (use 2 diluted)

Spike Solution: ID: C1-002 pCi/mL: 23 (use 2 mL)

Spike Recovery Calculation: Sample: 22M01824-02c

$$\text{Calculation: } \frac{(40.1)\ (1.000) - (1.4)\ (1.000)}{46} \times 100 = 84\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M01813	22M01830
22M01814	22M01832
22M01815	22M01839
22M01819	22M01840
22M01820	22M01841
22M01821	
22M01824	
22M01825	
22M01826	
22M01829	

Evaluator: _____

05/20/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY

Date: 05/09/2022

Batch QC Summary Form

Analyte: Radium-228

Control Standard/LFB: ID: C6-002 pCi/mL: 12.8 (use 5 diluted)

Spike Solution: ID: C6-002 pCi/mL: 12.8 (use 5 mL)

Spike Recovery Calculation: Sample: 22M01814-2b

$$\text{Calculation: } \frac{(64.5)\ (1.000) - (1.8)\ (1.000)}{64} \times 100 = 98\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M01798	
22M01801	
22M01813	
22M01814	
22M01815	
22M01819	
22M01820	

Evaluator: 

05/14/2022
Date

Colorado Analytical LABORATORIES, INC.

22MO1814

Ship To: Hazen Research
Preserved: Y / N
HNO3 Lot #: N/A
Date Preserved: N/A

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Canyon Creek Ranch
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 220503067 JAK	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time	Sample ID	Matrix	Radium 226 (Sub)	Gross Alpha/Beta (Sub)	Radium 228 (Sub)	Container Type
5/2/22 1:23 PM	220503067-01D - #1 - Canyon Creek Ranch	Water - Drinking		X		1l Cylinder - Unpreserved
5/2/22 1:23 PM	220503067-01E - #1 - Canyon Creek Ranch	Water - Drinking	X		X	4 - 1L - Unpreserved

Comment:

preserved
05/04/22 1315
JS
pH✓: 5/5/22 0854RG

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
[signature]	5/4/22 900					[signature]	05/04/22 1254

fedex 5736 5682 9867

Page 1 of 1

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 220503067

Report To: Doug Schwenke
Company: JDS Hydro Consultants
5540 Tech Center Dr.
Suite 100
Colorado Springs CO 80919

Bill To: Doug Schwenke
Company: JDS Hydro Consultants
5540 Tech Center Dr.
Suite 100
Colorado Springs CO 80919

Task No.: 220503067
Client PO:
Client Project: Canyon Creek Ranch

Date Received: 5/3/22
Date Reported: 6/13/22
Matrix: Water - Drinkin

Customer Sample ID #1 - Canyon Creek Ranch
Sample Date/Time: 5/2/22 1:23 PM
Lab Number: 220503067-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**93.2 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	5/3/22	-	TAB
Calcium as CaCO3	**43.6 mg/L**	EPA 200.7	0.1 mg/L	5/5/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	5/3/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	5/3/22	-	TAB
Langelier Index	**-1.13 units**	SM 2330-B	units	5/6/22	-	SAN
pH	**7.04 units**	SM 4500-H-B	0.01 units	5/3/22	-	MLT
Temperature	**20 °C**	SM 4500-H-B	1 °C	5/3/22	-	MLT
Total Alkalinity	**93.2 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	5/3/22	QC56641	TAB
Total Dissolved Solids	**130 mg/L**	SM 2540-C	5 mg/L	5/4/22	QC56643	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 220503067

Report To: Doug Schwenke
Company: JDS Hydro Consultants

Receive Date: 5/3/22
Project Name: Canyon Creek Ranch

Test	QC Batch ID	QC Type	Result	Method
Total Alkalinity	QC56641	Blank	ND	SM 2320-B
Total Dissolved Solids	QC56643	Blank	ND	SM 2540-C

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC56641	Duplicate	0 - 20	-	0.7	SM 2320-B
		LCS	90 - 110	101.4	-	
Total Dissolved Solids	QC56643	Duplicate	0 - 20	-	1.0	SM 2540-C
		LCS	85 - 115	100.0	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 220503067

Report To: Doug Schwenke
Company: JDS Hydro Consultants
5540 Tech Center Dr.
Suite 100
Colorado Springs CO 80919

Bill To: Doug Schwenke
Company: JDS Hydro Consultants
5540 Tech Center Dr.
Suite 100
Colorado Springs CO 80919

Task No.: 220503067
Client PO:
Client Project: Canyon Creek Ranch

Date Received: 5/3/22
Date Reported: 6/13/22
Matrix: Water - Drinking

Lab Number	Customer Sample ID	Sample Date/Time		Test	Result	Method	Date Analyzed
220503067-01B	#1 - Canyon Creek Ranch	5/2/22	1:23 PM	Total Coliform	**Absent**	SM 9223	5/4/22
				E-Coli	**Absent**	SM 9223	5/4/22

Abbreviations/ References:

Absent = Coliform Not Detected
Present = Coliform Detected - Chlorination Recommended
Date Analyzed = Date Test Completed
SM = "Standard Methods for the Examination of Water and Wastewater"; APHA; 19th Edition; 1995

DATA APPROVED FOR RELEASE BY

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 220503067

Report To: Doug Schwenke
Company: JDS Hydro Consultants
5540 Tech Center Dr.
Suite 100
Colorado Springs CO 80919

Bill To: Doug Schwenke
Company: JDS Hydro Consultants
5540 Tech Center Dr.
Suite 100
Colorado Springs CO 80919

Task No.: 220503067
Client PO:
Client Project: Canyon Creek Ranch

Date Received: 5/3/22
Date Reported: 6/13/22
Matrix: Water - Drinking

Customer Sample ID #1 - Canyon Creek Ranch
Sample Date/Time: 5/2/22 1:23 PM
Lab Number: 220503067-01

Test	Result	Method	RL	MCL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**2.1 mg/L**	EPA 300.0	0.1 mg/L		5/4/22	QC56666	AMJ
Fluoride	**0.94 mg/L**	EPA 300.0	0.10 mg/L	4	5/4/22	QC56667	AMJ
Nitrate Nitrogen	**ND**	EPA 300.0	0.05 mg/L	10	5/4/22	QC56664	AMJ
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	1	5/4/22	QC56665	AMJ
Sulfate	**23.4 mg/L**	EPA 300.0	0.1 mg/L		5/4/22	QC56668	AMJ
Cyanide-Total	**ND**	EPA 335.4	0.005 mg/L	0.02	5/6/22	QC56814	ECM
Total							
Iron	**0.663 mg/L**	EPA 200.7	0.005 mg/L	0.3	5/5/22	QC56711	MAT
Aluminum	**ND**	EPA 200.8	0.001 mg/L	0.05	5/5/22	QC56723	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	0.006	5/5/22	QC56723	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	0.01	5/5/22	QC56723	MBN
Barium	**0.0489 mg/L**	EPA 200.8	0.0007 mg/L	2	5/5/22	QC56723	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	0.004	5/5/22	QC56723	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	0.005	5/5/22	QC56723	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	0.1	5/5/22	QC56723	MBN
Manganese	**0.0389 mg/L**	EPA 200.8	0.0008 mg/L	0.05	5/5/22	QC56723	MBN
Mercury	**ND**	EPA 200.8	0.0001 mg/L	0.002	5/5/22	QC56723	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	0.05	5/5/22	QC56723	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	0.1	5/5/22	QC56723	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	0.002	5/5/22	QC56723	MBN
Zinc	**1.243 mg/L**	EPA 200.8	0.001 mg/L	5	5/5/22	QC56723	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 220503067

Report To: Doug Schwenke
Company: JDS Hydro Consultants

Receive Date: 5/3/22
Project Name: Canyon Creek Ranch

Test	QC Batch ID	QC Type	Result	Method
Chloride	QC56666	Blank	ND	EPA 300.0
Cyanide-Total	QC56814	Blank	ND	EPA 335.4
Fluoride	QC56667	Blank	ND	EPA 300.0
Aluminum	QC56723	Method Blank	ND	EPA 200.8
Antimony	QC56723	Method Blank	ND	EPA 200.8
Arsenic	QC56723	Method Blank	ND	EPA 200.8
Barium	QC56723	Method Blank	ND	EPA 200.8
Beryllium	QC56723	Method Blank	ND	EPA 200.8
Cadmium	QC56723	Method Blank	ND	EPA 200.8
Chromium	QC56723	Method Blank	ND	EPA 200.8
Manganese	QC56723	Method Blank	ND	EPA 200.8
Mercury	QC56723	Method Blank	ND	EPA 200.8
Selenium	QC56723	Method Blank	ND	EPA 200.8
Silver	QC56723	Method Blank	ND	EPA 200.8
Thallium	QC56723	Method Blank	ND	EPA 200.8
Zinc	QC56723	Method Blank	ND	EPA 200.8
Iron	QC56711	Method Blank	ND	EPA 200.7
Nitrate Nitrogen	QC56664	Blank	ND	EPA 300.0
Nitrite Nitrogen	QC56665	Blank	ND	EPA 300.0
Sulfate	QC56668	Blank	ND	EPA 300.0

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chloride	QC56666	Duplicate	0 - 20	-	3.9	EPA 300.0
		LCS	90 - 110	99.5	-	
		MS	75 - 125	95.7	-	
Cyanide-Total	QC56814	Duplicate	0 - 20	-	3.9	EPA 335.4
		LCS	90 - 110	94.9	-	
		MS	75 - 125	105.0	-	
Fluoride	QC56667	Duplicate	0 - 20	-	2.9	EPA 300.0
		LCS	90 - 110	93.8	-	
		MS	75 - 125	87.6	-	
Aluminum	QC56723	LCS	90 - 110	108.0	-	EPA 200.8
		MS	70 - 130	97.8	-	
		MSD	0 - 10	-	4.2	
Antimony	QC56723	LCS	90 - 110	103.9	-	EPA 200.8
		MS	70 - 130	99.6	-	
		MSD	0 - 10	-	4.9	
Arsenic	QC56723	LCS	90 - 110	100.1	-	EPA 200.8
		MS	70 - 130	103.4	-	
		MSD	0 - 10	-	0.3	
Barium	QC56723	LCS	90 - 110	100.2	-	EPA 200.8

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS	70 - 130	91.2	-	
		MSD	0 - 10	-	2.3	
Beryllium	QC56723	LCS	90 - 110	98.7	-	EPA 200.8
		MS	70 - 130	97.4	-	
		MSD	0 - 10	-	3.6	
Cadmium	QC56723	LCS	90 - 110	100.7	-	EPA 200.8
		MS	70 - 130	99.4	-	
		MSD	0 - 10	-	2.3	
Chromium	QC56723	LCS	90 - 110	103.8	-	EPA 200.8
		MS	70 - 130	98.0	-	
		MSD	0 - 10	-	1.4	
Manganese	QC56723	LCS	90 - 110	101.2	-	EPA 200.8
		MS	70 - 130	96.7	-	
		MSD	0 - 10	-	4.3	
Mercury	QC56723	LCS	90 - 110	92.8	-	EPA 200.8
		MS	70 - 130	94.5	-	
		MSD	0 - 10	-	3.7	
Selenium	QC56723	LCS	90 - 110	100.2	-	EPA 200.8
		MS	70 - 130	93.7	-	
		MSD	0 - 10	-	0.4	
Silver	QC56723	LCS	90 - 110	91.6	-	EPA 200.8
		MS	70 - 130	85.3	-	
		MSD	0 - 10	-	4.9	
Thallium	QC56723	LCS	90 - 110	106.8	-	EPA 200.8
		MS	70 - 130	100.8	-	
		MSD	0 - 10	-	3.3	
Zinc	QC56723	LCS	90 - 110	97.2	-	EPA 200.8
		MS	70 - 130	93.2	-	
		MSD	0 - 10	-	4.0	
Iron	QC56711	Duplicate	0 - 20	-	2.4	EPA 200.7
		LCS	90 - 110	96.8	-	
		MS	75 - 125	116.4	-	
Nitrate Nitrogen	QC56664	Duplicate	0 - 20	-	6.0	EPA 300.0
		LCS	90 - 110	97.7	-	
		MS	75 - 125	92.3	-	
Nitrite Nitrogen	QC56665	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	96.4	-	
		MS	75 - 125	84.6	-	
Sulfate	QC56668	Duplicate	0 - 20	-	2.1	EPA 300.0
		LCS	90 - 110	98.3	-	
		MS	75 - 125	91.9	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.