

# WATER QUALITY REPORT

## Telle Subdivision

El Paso County, Colorado

January 16 , 2021



Julia M. Murphy, MS PG

Professional Geologist /Hydrogeologist



Ground Water Investigations LLC • 11590 Black Forest Rd. 614 N Suite 15  
Colorado Springs, CO 80908 • (719) 338-1805



This Water Quality Report was completed for Clifford J. Telle and Nicole T. Telle ("Applicants") by Julia Murphy of Groundwater Investigations LLC ("GWI"), a Professional Geologist, in accordance with the requirements of the El Paso County Land Development Code and the Amendment to the Land Development Code dated August 27 2019 Section 8.4.7 (B)(10). Ms. Murphy has over 25 years' experience in geologic and hydrogeologic investigations with 9 years experience in water quality sampling and analysis of drinking water aquifers with specialization in contaminant hydrogeology.

This report presents a description of groundwater sampling and analysis for the purpose of providing all necessary information for a determination of sufficiency in water quality for the Telle subdivision water supply. The subdivision water supply is required to meet the Primary Drinking Water Regulations as defined by the Water Quality Control Commissions Regulation 11 under 5CCR 1002-1.

## **1.0 Site Location**

The subdivision site consists of approximately 10.12 acres located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 10, Township 12 south, Range 66 West of the 6<sup>th</sup> P.M., El Paso County, Colorado and also described as Lot 4, Bridle Bit Subdivision. The address is 12730 Bridle Bit Road, Colorado Springs, CO 80908 (Figure 1). The Applicants intends to subdivide the property into two lots containing 5.055 acres "Lot 1" and 5.066 acres "Lot 2". There is an existing home with a well and septic system on Lot 2 (Figure 2).

## **2.0 Subdivision Water Source**

### **2.1 Denver Aquifer**

Lot 1 will be served by a well completed in the confined Denver aquifer. The water will be used for in-home purposes, irrigation of lawn and garden, and domestic animals. This water supply will be used within the first 5-years following subdivision approval.

### **2.2. Dawson Aquifer**

The Dawson aquifer has been the primary source of water since 1982 for the existing home within the Bridle Bit Subdivision in compliance with the subdivisions' Water Supply Plan. The same well will continue to supply groundwater for in-home purposes, irrigation of lawn and landscape and domestic animals on Lot 2. Because the supply has not change and the existing well will be used, water quality samples were not collected from the Dawson aquifer.

## **3.0 Sample Location**

A Denver aquifer well does not exist within the Telle Subdivision, therefore a well completed in the Denver aquifer located to the west within New Breed Ranch subdivision was selected for sampling. The selected Denver aquifer well having permit 61195-F (Exhibit A) is located within a  $\frac{1}{2}$  mile of the

Telle Subdivision in agreement with Section of the El Paso County Land Development Code Section 10(e) (Figure 2).

#### **4.0 Sample Collection**

Representative water quality samples were collected by GWI on November 2, 2020 using standard collection and preservation methods. Water quality samples were received by the laboratory on November 3, 2020 and all holding times were met. A Chain of Custody was maintained for the transfer of samples to a Colorado Certified Laboratory and their subcontracted laboratory. Constituents selected to be measured are listed in the Amendment to the Land Development Code dated August 27 2019, Section 8.4.7(B)(3)(d)(10)(a). These are described as "Inorganic Chemicals", "Secondary Maximum Contaminants", "Radionuclides" and "Bacteriological". The Denver aquifer is a confined aquifer therefore Volatile Organic Compounds and Synthetic Organic Compounds were not analyzed.

#### **5.0 Analysis Results**

The analysis results for each constituent were compared to the Colorado Primary Drinking Water Standards maximum contaminant levels (MCL) and secondary MCLs. The primary MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act (SDWA). Private wells are not regulated under the SDWA however the El Paso County Public Health has required that subdivisions on wells evaluate their water supply based on the same criteria. All constituent concentrations are at or below the primary drinking water MCL. The secondary MCL was exceeded for Manganese and iron. Secondary MCLs primarily affect the aesthetic qualities of the water and are not enforceable in public water systems but are intended as guidelines. Both iron and manganese concentrations can be mitigated by use of a water softener.

#### **6.0 Sources of Potential Contaminants**

The Telle Subdivision is situated in a rural residential area surrounded by lots of 2.5 to 40 acres. There are no existing commercial sites in the area or upgradient of the property. Zoning is rural residential and there is no proposed plan that would indicate future commercial or industrial use. Domestic wells in the vicinity are completed to depths generally ranging from 300 to 640 feet below ground surface completed in the Dawson and Denver bedrock aquifers. Due to slow vertical infiltration as a result of impeding clay layers, there is a low possibility for on-site or off-site sources of potential water quality degradation. On-site septic system with leach field will be used to treat wastewater, however they are not considered a potential contaminant source when they are constructed in accordance with protective regulations regarding design and setbacks from the well.

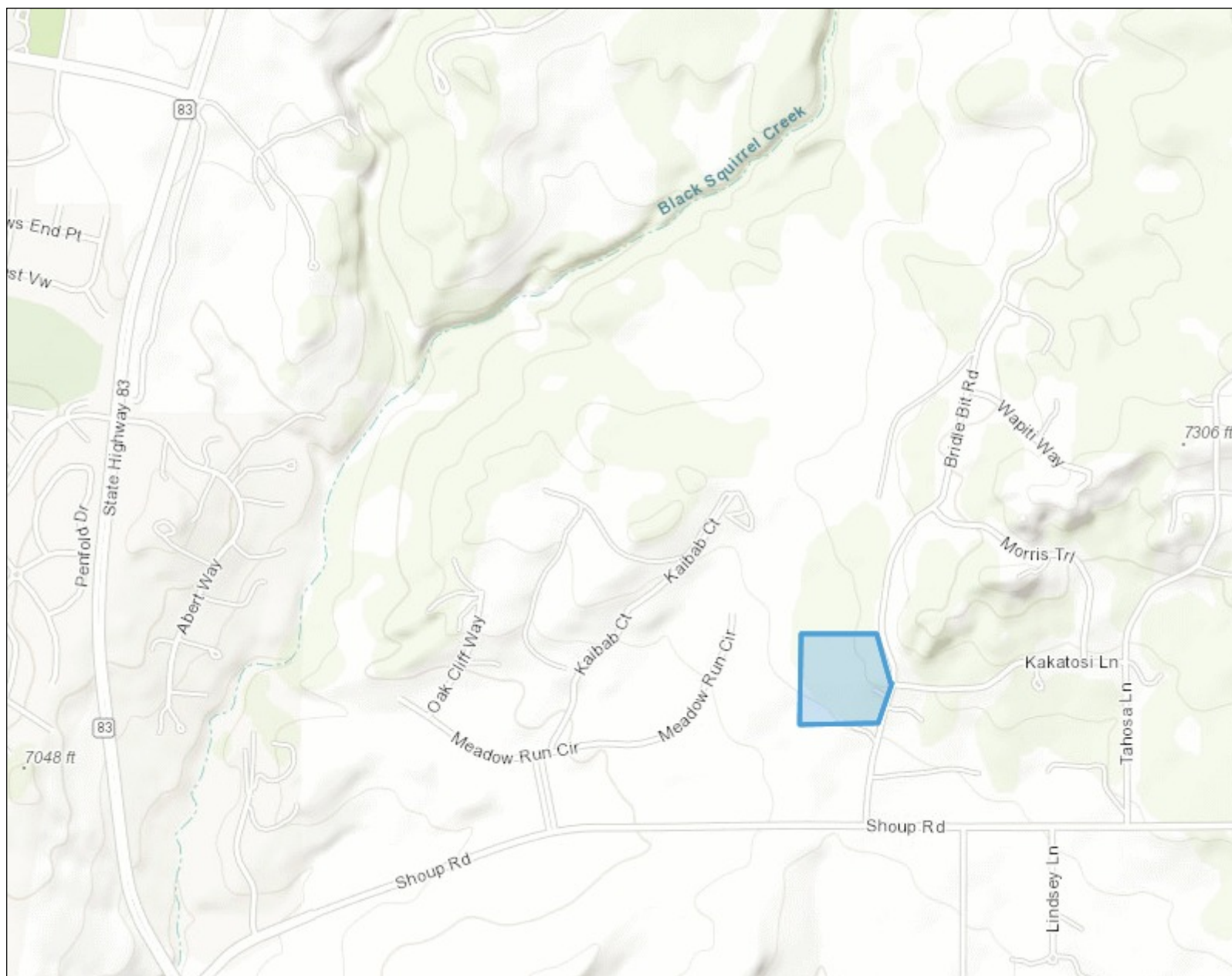


CDSS


Colorado's Decision Support Systems

## PROPERTY LOCATION

FIGURE 1



### Legend

 County

### Location



### Notes

12730 Bridle Bit Road  
SE1/4 SE1/4 Sec10 T12S R66W

2,339 0 1,169 2,339 Feet

1: 14,032



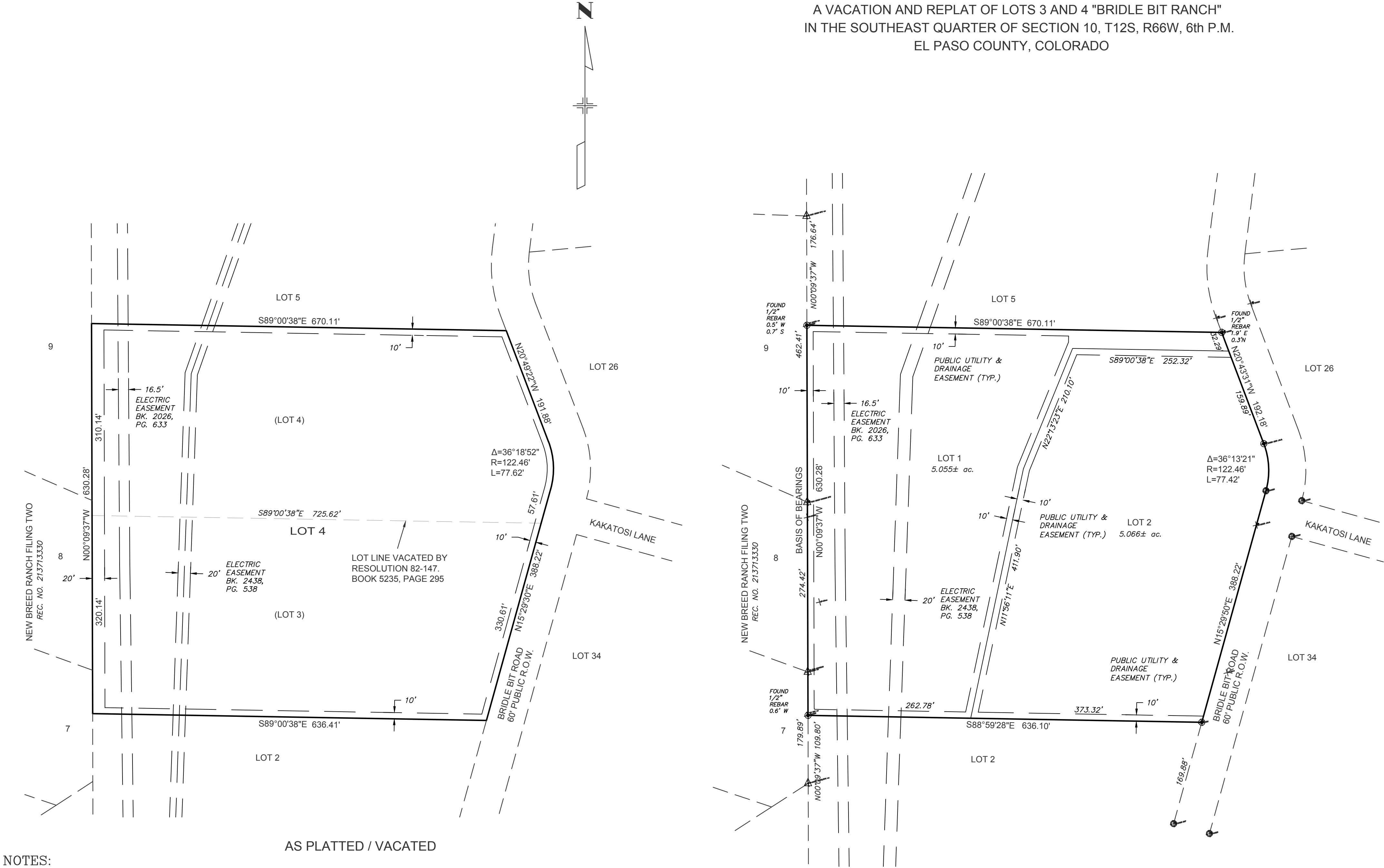
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Date Prepared: 5/17/2019 2:41:02 PM

BRIDLE BIT RANCH SUBDIVISION FILING NO. 1A

A VACATION AND REPLAT OF LOTS 3 AND 4 "BRIDLE BIT RANCH"  
IN THE SOUTHEAST QUARTER OF SECTION 10, T12S, R66W, 6th P.M.  
EL PASO COUNTY, COLORADO

FIGURE 2

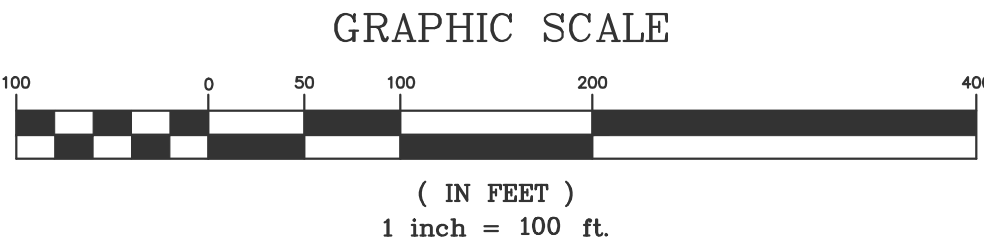


NOTES:

- STRUCTURAL FOUNDATIONS ON THE LOTS IN THIS SUBDIVISION SHALL BE DESIGNED BY A COLORADO REGISTERED PROFESSIONAL ENGINEER.
- INDIVIDUAL WELLS ARE THE RESPONSIBILITY OF EACH PROPERTY OWNER. PERMITS FOR INDIVIDUAL WELLS MUST BE OBTAINED FROM THE STATE ENGINEER WHO BY LAW HAS THE AUTHORITY TO SET CONDITIONS FOR THE ISSUANCE OF THESE PERMITS.
- SEWAGE TREATMENT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PROPERTY OWNER. THE EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT MUST APPROVE EACH SYSTEM AND IN SOME CASES THE DEPARTMENT MAY REQUIRE AN ENGINEERED DESIGN PRIOR TO PERMIT APPROVAL.
- THE FOLLOWING REPORTS HAVE BEEN SUBMITTED IN ASSOCIATION WITH THE FINAL PLAT FOR THIS SUBDIVISION AND ARE ON FILE AT THE COUNTY DEVELOPMENT SERVICES DEPARTMENT: DRAINAGE REPORT; WATER RESOURCES REPORT; WASTEWATER DISPOSAL REPORT; GEOLOGY AND SOILS REPORT; FIRE PROTECTION REPORT.
- ALL PROPERTY OWNERS ARE RESPONSIBLE FOR MAINTAINING PROPER STORM WATER DRAINAGE IN AND THROUGH THEIR PROPERTY. PUBLIC DRAINAGE EASEMENTS AS SPECIFICALLY NOTED ON THE PLAT SHALL BE MAINTAINED BY THE INDIVIDUAL LOT OWNERS UNLESS OTHERWISE INDICATED. STRUCTURES, FENCES, MATERIALS OR LANDSCAPING THAT COULD IMPEDE THE FLOW OR RUNOFF SHALL NOT BE PLACED IN DRAINAGE EASEMENTS.
- MAILBOXES SHALL BE INSTALLED IN ACCORDANCE WITH ALL EL PASO COUNTY DEPARTMENT OF TRANSPORTATION AND UNITED STATES POSTAL SERVICE REGULATIONS.
- THE OWNER, ITS SUCCESSORS AND ASSIGNS SHALL ADVISE THE FUTURE OWNERS OF THESE LOTS OF ALL APPLICABLE REQUIREMENTS OF THE DETERMINATION OF WATER RIGHT RECORDED AT RECEPTION NO. \_\_\_\_\_.
- WATER IN THE DAWSON AQUIFER IS ALLOCATED BASED ON A 100 YEAR AQUIFER LIFE; HOWEVER, FOR EL PASO COUNTY PLANNING PURPOSES, WATER IN THE DAWSON AQUIFER IS EVALUATED BASED ON A 300 YEAR AQUIFER LIFE, WHICH IS BASED ON AN ALLOCATION APPROACH. APPLICANTS, ALL FUTURE OWNERS IN THE SUBDIVISION SHOULD BE AWARE THAT THE ECONOMIC LIFE OF A WATER SUPPLY BASED ON WELLS IN A GIVEN DAWSON BASIN AQUIFER MAY BE LESS THAN EITHER THE 100 YEARS OR 300 YEARS INDICATED DUE TO ANTICIPATED WATER LEVEL DECLINES. FURTHERMORE, THE WATER SUPPLY PLAN SHOULD NOT RELY SOLELY UPON NON-RENEWABLE AQUIFERS AND ALTERNATIVE RENEWABLE WATER RESOURCES SHOULD BE ACQUIRED AND INCORPORATED IN A PERMANENT WATER SUPPLY PLAN THAT PROVIDES FUTURE GENERATIONS WITH A WATER SUPPLY.
- THE DEVELOPER SHALL COMPLY WITH FEDERAL AND STATE LAWS, REGULATIONS, ORDINANCES, REVIEW AND PERMIT REQUIREMENTS, AND OTHER AGENCY REQUIREMENTS, IF ANY, OF APPLICABLE AGENCIES INCLUDING, BUT NOT LIMITED TO, THE COLORADO DEPARTMENT OF WILDLIFE, COLORADO DEPARTMENT OF TRANSPORTATION, U.S. ARMY CORP. OF ENGINEERS, THE U.S. FISH AND WILDLIFE SERVICE REGARDING THE ENDANGERED SPECIES ACT.
- THE ADDRESSES EXHIBITED ON THIS PLAT ARE FOR INFORMATIONAL PURPOSES ONLY. THEY ARE NOT THE LEGAL DESCRIPTION AND ARE SUBJECT TO CHANGE.
- NO DRIVEWAY SHALL BE ESTABLISHED UNLESS AN ACCESS PERMIT HAS BEEN GRANTED BY EL PASO COUNTY. INDIVIDUAL LOT PURCHASERS ARE RESPONSIBLE FOR CONSTRUCTING DRIVEWAYS, INCLUDING THE NECESSARY CULVERTS.
- PROPERTY WITHIN THIS SUBDIVISION IS SUBJECT TO THE TERMS OF THE EL PASO COUNTY TRANSPORTATION IMPROVEMENT FEE RESOLUTION (RESOLUTION 16-454) AS AMENDED. FEES FOR EACH LOT WITHIN THIS SUBDIVISION SHALL BE PAID IN FULL AT THE TIME OF BUILDING PERMIT ISSUANCE.
- THIS PROPERTY IS LOCATED WITHIN AND SERVICED BY THE MOUNTAIN VIEW ELECTRIC ASSOCIATION SERVICE DISTRICT, THE FALCON FIRE PROTECTION DISTRICT, EL PASO COUNTY SCHOOL DISTRICT NO. 49 AND THE BLACK HILLS ENERGY CORPORATION SERVICE DISTRICT.
- DRAINAGE EASEMENTS: NO PERMANENT DWELLING UNIT, TEMPORARY STRUCTURES, INCLUDING SHEDS AND OUT BUILDING, WATER WELL OR WASTEWATER TREATMENT SYSTEM MAY BE CONSTRUCTED IN THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. DRAINAGE CULVERTS AND FENCES THAT DO NOT BLOCK OR IMPEDE STORM WATER RUNOFF ARE ALLOWED IN AND ACROSS DRAINAGE EASEMENTS.
- SOILS, GEOLOGY, GEOLOGIC HAZARD, AND WASTEWATER STUDY FOR THIS SUBDIVISION DATED JANUARY 16, 2019, PREPARED BY RMG AND FOUND IN DSD FILE # SP-19-\_\_\_\_\_.
- THIS PROPERTY IS LOCATED WITHIN ZONE X "AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN" AS DETERMINED BY THE FLOOD INSURANCE RATE MAP NUMBER 08041C0295 G, EFFECTIVE DATE DECEMBER 7, 2018.

AS PLATTED / VACATED

AS REPLATTED



BOARD OF COUNTY COMMISSIONERS CERTIFICATE:

THIS PLAT FOR SILVERADO RANCH FILING NO. 1 WAS APPROVED FOR FILING BY THE EL PASO COUNTY, COLORADO BOARD OF COUNTY COMMISSIONERS ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, OF 2019, SUBJECT TO ANY NOTES SPECIFIED HEREON AND ANY CONDITIONS INCLUDED IN THE RESOLUTION OF APPROVAL. THE DEDICATIONS OF LAND TO THE PUBLIC, STREETS, TRACTS AND EASEMENTS ARE ACCEPTED, BUT PUBLIC IMPROVEMENTS THEREON WILL NOT BECOME THE MAINTENANCE RESPONSIBILITY OF EL PASO COUNTY UNTIL PRELIMINARY ACCEPTANCE OF THE PUBLIC IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE AND ENGINEERING CRITERIA MANUAL, AND THE SUBDIVISION IMPROVEMENTS AGREEMENT.

PRESIDENT, BOARD OF COUNTY COMMISSIONERS \_\_\_\_\_ DATE \_\_\_\_\_  
DIRECTOR, COUNTY PLANNING AND COMMUNITY DEVELOPMENT \_\_\_\_\_ DATE \_\_\_\_\_  
COUNTY ASSESSOR \_\_\_\_\_ DATE \_\_\_\_\_

BE IT KNOWN BY THESE PRESENTS:

THAT NICOLE T. TELLE IS THE OWNER OF THE FOLLOWING DESCRIBED TRACT OF LAND, TO WIT:

LOTS 3 AND 4, BRIDLE BIT RANCH, NOW KNOWN AS LOT 4, EL PASO COUNTY, COLORADO, AND VACATED BY RESOLUTION 82-147 AS RECORDED IN BOOK 5235 AT PAGE 295 OF THE EL PASO COUNTY RECORDS.

CONTAINING 10.12 ACRES, MORE OR LESS.

OWNERS CERTIFICATE:

NICOLE T. TELLE, BEING THE OWNER, MORTGAGEES, BENEFICIARIES OF DEEDS OF TRUST AND HOLDERS OF OTHER INTERESTS IN THE LAND DESCRIBED HEREIN, HAVE LAID OUT, SUBDIVIDED AND PLATTED SAID LANDS INTO LOTS AND EASEMENTS AS SHOWN HEREON UNDER THE NAME AND SUBDIVISION OF BRIDLE BIT RANCH SUBDIVISION FILING NO. 1A. ALL PUBLIC IMPROVEMENTS SO PLATTED ARE HEREBY DEDICATED TO PUBLIC USE AND SAID OWNER DOES HEREBY COVENANT AND AGREE THAT THE PUBLIC IMPROVEMENTS WILL BE CONSTRUCTED TO EL PASO COUNTY STANDARDS AND THAT PROPER DRAINAGE AND EROSION CONTROL FOR THE SAME WILL BE PROVIDED AT SAID OWNER'S EXPENSE, ALL TO THE SATISFACTION OF THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO. UPON ACCEPTANCE BY RESOLUTION, ALL PUBLIC IMPROVEMENTS SO DEDICATED WILL BECOME MATTERS OF MAINTENANCE BY EL PASO COUNTY, COLORADO. THE UTILITY EASEMENTS SHOWN HEREON ARE HEREBY DEDICATED FOR PUBLIC UTILITIES, COMMUNICATION SYSTEMS AND OTHER PURPOSES AS SHOWN HEREON. THE ENTITIES RESPONSIBLE FOR PROVIDING THE SERVICES FOR WHICH THE EASEMENTS ARE ESTABLISHED ARE HEREBY GRANTED THE PERPETUAL RIGHT OF INGRESS AND EGRESS FROM AND TO ADJACENT PROPERTIES FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF UTILITY LINES AND RELATED FACILITIES.

IN WITNESS WHEREOF:

THE AFOREMENTIONED NICOLE T. TELLE, HAS EXECUTED THIS INSTRUMENT THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2019.

NICOLE T. TELLE

NOTARIAL:

STATE OF COLORADO)  
COUNTY OF EL PASO) SS  
THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2019 BY NICOLE T. TELLE.

MY COMMISSION EXPIRES: \_\_\_\_\_ NOTARY PUBLIC

EASEMENTS:

SIDE AND REAR LOT LINES ARE HEREBY PLATTED WITH A TEN (10) FOOT EASEMENT FOR DRAINAGE AND PUBLIC UTILITIES ONLY, WITH THE SOLE RESPONSIBILITY FOR MAINTENANCE BEING VESTED WITH THE PROPERTY OWNERS.

SURVEYOR'S CERTIFICATION:

I, KEVIN M. O'LEARY, A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT TRULY AND CORRECTLY REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE OF THE SURVEY, BY ME OR UNDER MY DIRECT SUPERVISION AND THAT ALL MONUMENTS EXIST AS SHOWN HEREON, THAT MATHEMATICAL CLOSURE ERRORS ARE LESS THAN 1:10,000, AND THAT SAID PLAT HAS BEEN PREPARED IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS OF THE STATE OF COLORADO DEALING WITH MONUMENTS, SUBDIVISION, OR SURVEYING OF LAND AND ALL APPLICABLE PROVISIONS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE.

I ATTEST THE ABOVE ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2019.

KEVIN M. O'LEARY \_\_\_\_\_ DATE \_\_\_\_\_  
COLORADO REGISTERED PLS #28658  
FOR AND ON BEHALF OF  
LWA LAND SURVEYING, INC.

RECORDING:

STATE OF COLORADO) SS  
COUNTY OF EL PASO)

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD AT MY OFFICE AT \_\_\_\_ O'CLOCK \_\_\_\_ M., THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2019, AND IS DULY RECORDED AT RECEPTION NO. \_\_\_\_\_ OF THE RECORDS OF EL PASO COUNTY, COLORADO.

CHUCK BROERMAN \_\_\_\_\_ FEE: \_\_\_\_\_  
BY: \_\_\_\_\_ SURCHARGE: \_\_\_\_\_  
COUNTY CLERK AND RECORDER

FEES:

DRAINAGE FEES: \_\_\_\_\_  
BRIDGE FEES: \_\_\_\_\_  
SCHOOL FEES: \_\_\_\_\_  
PARK FEES: \_\_\_\_\_

PREPARED BY  
**LWA LAND SURVEYING, INC.**  
953 EAST FILLMORE STREET  
COLORADO SPRINGS, COLORADO 80907  
Phone (719) 636-5179  
BRIDLE BIT.DWG  
MARCH 11, 2019  
PROJECT 18034  
SHEET 1 OF 1

SF-19-\_\_\_\_



FIGURE 3  
WATER SAMPLE LOCATION



#### Legend

 County

#### Location



#### Notes

USGS  
Sec 10 T12S R65W

2,339 0 1,169 2,339 Feet

1: 14,032



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Date Prepared: 1/1/2021 8:08:30 PM

## EXHIBIT A

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

EXHIBIT C - Water Quality Denver Well

LIC

WELL PERMIT NUMBER	61195	-F	-
DIV. 2	WD 10	DES. BASIN	MD

APPLICANTMARK & CATHY MARCHESANI  
19150 BRETON PL  
MONUMENT, CO 80132-

(719) 488-8268

Lot: 10 Block: Filing: 1 Subdiv: NEW BREED RANCH

APPROVED WELL LOCATION

EL PASO COUNTY

SE 1/4 SW 1/4 Section 10  
Township 12 S Range 66 W Sixth P.M.DISTANCES FROM SECTION LINES

1250 Ft. from South Section Line

1625 Ft. from West Section Line

UTM COORDINATES

Northing: Easting:

PERMIT TO CONSTRUCT A WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

Page 1 of 2

CONDITIONS OF APPROVAL

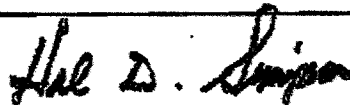
- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court 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 37-90-137(4) on the condition that this well is operated in accordance with the Frank A. Lee and New Breed Ranch, Inc. Augmentation Plan approved by the Division 2 Water Court in case no. 98CW58 and amended in case no. 99CW79. If this well is not operated in accordance with the terms of said decree, it will be subject to administration including orders to cease diverting water.
- 4) Approved for a well on a residential site of 4.5 acre(s) described as lot 10, filing 1, New Breed Ranch Subdivision, El Paso County.
- 5) The use of ground water from this well is limited to ordinary household purposes inside one (1) single family dwelling, and the irrigation of not more than 4,000 square feet of home gardens and lawns.
- 6) Production from this well is restricted to the Denver aquifer, which corresponds to the interval between 280 feet and 1,040 feet below the ground surface. Plain casing shall be installed and grouted to prevent production from other zones.
- 7) The maximum pumping rate of this well shall not exceed 15 GPM.
- 8) The annual withdrawal of ground water from this well shall not exceed 0.46 acre-feet (149,891 gallons).
- 9) 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.
- 10) The entire length of the hole shall be geophysically logged as required by Rule 9 of the Statewide Nontributary Ground Water Rules prior to installing casing.
- 11) The owner shall mark the well in a conspicuous place with well permit number(s), name of the aquifer, and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.
- 12) A totalizing flow meter must be installed on this well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.
- 13) This well shall be constructed at least 600 feet from any existing well, completed in the same aquifer, that is not covered by this augmentation plan and for which 600-foot spacing waivers have not been obtained.

June 7, 2004

MPS

APPROVED  
MPS

State Engineer



By

Receipt No. 0524556

DATE ISSUED 06-07-2004

EXPIRATION DATE 06-07-2005

Receipt No. 0524556

WELL PERMIT NUMBER 61195 -F- -

Page 2

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT  
CONDITIONS OF APPROVAL

- 14) This well shall be constructed not more than 200 feet from the location specified on this permit and the well shall be constructed at least 200 feet from every other well on the property.

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.

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.

NOTICE: This permit has been approved subject to the following changes: The quarter/quarter section was changed based on the distances given from section lines. You are hereby notified that you have the right to appeal the issuance of this permit, by filing a written request with this office within sixty (60) days of the date of issuance, pursuant to the State Administrative Procedures Act. (See Section 24-4-104 through 106, C.R.)

June 7, 2004

APJ

## Analytical Results

**TASK NO: 201103046**

**Report To:** Julia M. Murphy

**Company:** Groundwater Investigations LLC  
11590 Black Forest Road, Suite 15  
Colorado Springs CO 80908

**Bill To:** Julia M. Murphy

**Company:** Groundwater Investigations LLC  
11590 Black Forest Road, Suite 15  
Colorado Springs CO 80908

**Task No.:** 201103046

**Client PO:**

**Client Project:** Telle Sub

**Date Received:** 11/3/20

**Date Reported:** 11/12/20

**Matrix:** Water - Drinking

Lab Number	Customer Sample ID	Sample Date/Time	Test	Result	Method	Date Analyzed
201103046-01C	T1102	11/2/20 11:30 AM	Total Coliform	Absent	SM 9223	11/4/20
			E-Coli	Absent	SM 9223	11/4/20

**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

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

### Chain of Custody Form



**Commerce City Lab**  
10411 Heinz Way  
Commerce City CO 80640

**Lakewood Service Center**  
12860 W. Cedar Dr, Suite 100A  
Lakewood CO 80228

**Phone: 303-659-2313**

**www.coloradolab.com**

[illegible]

## Analytical Results

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**Matrix:** Water - Drinking

**Customer Sample ID** T1102

**Sample Date/Time:** 11/2/20 11:30 AM

**Lab Number:** 201103046-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
Nitrate/ Nitrite Nitrogen	< 0.05 mg/L	Calculation	0.05 mg/L	11/4/20	MAT	
Chloride	3.1 mg/L	EPA 300.0	0.1 mg/L	11/3/20	MAT	
Fluoride	0.88 mg/L	EPA 300.0	0.09 mg/L	11/3/20	MAT	4
Nitrate Nitrogen	< 0.05 mg/L	EPA 300.0	0.05 mg/L	11/3/20	MAT	10
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	11/3/20	MAT	1
Sulfate	129.1 mg/L	EPA 300.0	0.1 mg/L	11/3/20	MAT	
Cyanide-Total	< 0.005 mg/L	EPA 335.4	0.005 mg/L	11/5/20	JTF	0.02
<b>Total</b>						
Iron	1.199 mg/L	EPA 200.7	0.005 mg/L	11/5/20	MBN	0.3
Aluminum	0.001 mg/L	EPA 200.8	0.001 mg/L	11/3/20	IPC	0.05
Antimony	< 0.0012 mg/L	EPA 200.8	0.0012 mg/L	11/3/20	IPC	0.006
Arsenic	< 0.0006 mg/L	EPA 200.8	0.0006 mg/L	11/3/20	IPC	0.01
Barium	0.0354 mg/L	EPA 200.8	0.0007 mg/L	11/3/20	IPC	2
Beryllium	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	11/3/20	IPC	0.004
Cadmium	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	11/3/20	IPC	0.005
Chromium	< 0.0015 mg/L	EPA 200.8	0.0015 mg/L	11/3/20	IPC	0.1
Manganese	0.1313 mg/L	EPA 200.8	0.0008 mg/L	11/3/20	IPC	0.05
Mercury	< 0.0001 mg/L	EPA 200.8	0.0001 mg/L	11/3/20	IPC	0.002
Selenium	< 0.0008 mg/L	EPA 200.8	0.0008 mg/L	11/3/20	IPC	0.05

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL

MCL = Maximum Contaminant Level per The EPA

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



DATA APPROVED FOR RELEASE BY

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

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**Matrix:** Water - Drinking

**Customer Sample ID** T1102

**Sample Date/Time:** 11/2/20 11:30 AM

**Lab Number:** 201103046-01

Test	Result	Method	ML	Date Analyzed	Analyzed By	MCL
<u>Total</u>						
Silver	< 0.0005 mg/L	EPA 200.8	0.0005 mg/L	11/3/20	IPC	
Thallium	0.0006 mg/L	EPA 200.8	0.0002 mg/L	11/3/20	IPC	0.002
Zinc	0.605 mg/L	EPA 200.8	0.001 mg/L	11/3/20	IPC	5

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL

MCL = Maximum Contaminant Level per The EPA

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



DATA APPROVED FOR RELEASE BY

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

## Chain of Custody Form



**Commerce City Lab**  
10411 Heinz Way  
Commerce City CO 80640

**Lakewood Service Center**  
12860 W. Cedar Dr, Suite 100A  
Lakewood CO 80228

**Phone: 303-659-2313**

**[www.coloradolab.com](http://www.coloradolab.com)**

Sample Matrix (Select One Only)				Tests Requested	
Waste Water <input type="checkbox"/>	Ground Water <input checked="" type="checkbox"/>	Surface Water <input type="checkbox"/>	Soil <input type="checkbox"/>	Sludge <input type="checkbox"/>	Drinking Water <input type="checkbox"/>
Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	
11-2-20	1130	1102	5		NITRATE / NITRITE
					Fluoride
					Sulfate
					Chloride
					TDS
					pH
					Long Term Index
					ALKALINITY
					METALS TOTAL
					Coliform
					Cyanide
					Copper + Pb
					Radium 226
					Radium 228

Instructions: *See B3020660094*

Relinquished By: *[Signature]* Date/Time: *11/2/20 11:50am*

Received By: *[Signature]* Date/Time: *11/3/20 9:45*

Deliver Via: *Fed Ex* Page *3* Relinquished By: *[Signature]*

C/S Charge: ☒ Date/Time: *11/4/20*

Temp. *1.4* °C/F *✓* Sample Pres. Yes ☒ No ☐

Date/Time: *11/4/20*

C/S Info: *(a)*

Seals Present Yes ☐ No ☒

## Analytical Results

**TASK NO: 201103046**

**Report To:** Julia M. Murphy

**Company:** Groundwater Investigations LLC  
11590 Black Forest Road, Suite 15  
Colorado Springs CO 80908

**Bill To:** Julia M. Murphy

**Company:** Groundwater Investigations LLC  
11590 Black Forest Road, Suite 15  
Colorado Springs CO 80908

**Task No.:** 201103046  
**Client PO:**  
**Client Project:** Telle Sub

**Date Received:** 11/3/20  
**Date Reported:** 11/12/20  
**Matrix:** Water - Drinking

**Customer Sample ID** T1102

**Sample Date/Time:** 11/2/20 11:30 AM

**Lab Number:** 201103046-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Bicarbonate	110.4 mg/L as CaCO <sub>3</sub>	SM 2320-B	4	11/4/20	ECM
Calcium as CaCO <sub>3</sub>	144.3 mg/L	EPA 200.7	0.1	11/5/20	MBN
Carbonate	< 4 mg/L as CaCO <sub>3</sub>	SM 2320-B	4	11/4/20	ECM
Hydroxide	< 4 mg/L as CaCO <sub>3</sub>	SM 2320-B	4	11/4/20	ECM
Langelier Index	-0.02 units	SM 2330-B		11/12/20	SAN
pH	7.62 units	SM 4500-H-B	0.01	11/3/20	MLT
Temperature	20 °C	SM 4500-H-B	1	11/3/20	MLT
Total Alkalinity	110.4 mg/L as CaCO <sub>3</sub>	SM 2320-B	4	11/4/20	ECM
Total Dissolved Solids	336 mg/L	SM 2540-C	5	11/9/20	ISG

**Abbreviations/ References:**

ML = Minimum Level = LRL = RL

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



DATA APPROVED FOR RELEASE BY

### Chain of Custody Form



**Commerce City Lab**  
10411 Heinz Way  
Commerce City CO 80640

**Lakewood Service Center**  
12860 W. Cedar Dr, Suite 100A  
Lakewood CO 80228

**Phone: 303-659-2313**

**[www.coloradolab.com](http://www.coloradolab.com)**

Sample Matrix (Select One Only)				Tests Requested	
Waste Water <input type="checkbox"/>	Ground Water <input checked="" type="checkbox"/>	Surface Water <input type="checkbox"/>	Soil <input type="checkbox"/>	Sludge <input type="checkbox"/>	Drinking Water <input type="checkbox"/>
Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	
11-2-20	1130	T1102	5		NITRATE / NITRITE
					Fluoride
					Sulfate
					Chloride
					TDS
					pH
					Long Term Index
					ALKALINITY
					METALS TOTAL
					Coliform
					Cyanide
					Copper + Pb
					Radium 226
					Radium 228

Instructions: *See B3020660094*

Relinquished By: *[Signature]* Date/Time: *11/6/20* Received By: *[Signature]* Date/Time: *11/3/20 9:45*

C/S Info: *(9)*

Deliver Via: *Fed Ex*

C/S Charge: *X*

Temp: *1.4* °C/F *X*

Seals Present Yes ☐ No ☒

Sample Pres. Yes ☒ No ☐



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

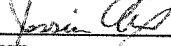
Customer ID: 20040H  
Account ID: Z01034

Lab Control ID: 20M03077  
Received: Nov 04, 2020  
Reported: Dec 01, 2020  
Purchase Order No.  
None Received

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

## ANALYTICAL REPORT

*Report may only be copied in its entirety.  
Results reported herein relate only to discrete samples  
submitted by the client. Hazen Research, Inc. does not warrant  
that the results are representative of anything other than the  
samples that were received in the laboratory*

By:   
Jessica Axen  
Analytical Laboratories Director



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

Lab Control ID: 20M03077  
Received: Nov 04, 2020  
Reported: Dec 01, 2020  
Purchase Order No.  
None Received

Customer ID: 20040H  
Account ID: Z01034

## ANALYTICAL REPORT

Stuart Nielson  
Colorado Analytical Laboratories, Inc.

Lab Sample ID		20M03077-001						
Customer Sample ID		201103048-01 - T1102						
		sampled on 11/02/20 @ 1130						
		Precision* Detection						
Parameter	Units	Code	Result	+/-	Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	pCi/L	T	4.4	3.2	0.1	SM 7110 B	11/11/20 @ 0854	KT
Gross Beta	pCi/L	T	6.5	2.5	3.6	SM 7110 B	11/11/20 @ 0854	KT
Radium-226	pCi/L	T	NR	-	-	SM 7500-Ra B	-	-
Radium-228	pCi/L	T	NR	-	-	EPA Ra-05	-	-

NR - Not Requested - Analysis not requested on this sample.

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; MI 9070; NJ CO008;  
NYSELAP (NELAC Certified) 11417; RI LAO00284; WI 998376610, TX T104704256-15-6

\*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: 20M03077  
Received: Nov 04, 2020  
Reported: Dec 01, 2020  
Purchase Order No.  
None Received

Customer ID: 20040H  
Account ID: Z01034

## ANALYTICAL REPORT

Stuart Nielson  
Colorado Analytical Laboratories, Inc.

Lab Sample ID		20M03077-002						
Customer Sample ID		201103048-01A - T1102						
		sampled on 11/02/20 @ 1130						
		Precision* Detection					Analysis	
Parameter	Units	Code	Result	+/-	Limit	Method	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	0.9	0.3	0.1	SM 7500-Ra B	11/23/20 @ 1554	AS
Radium-228	pCi/L	T	4.1	1.0	0.3	EPA Ra-05	11/13/20 @ 1324	JR

NR - Not Requested - Analysis not requested on this sample.

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; MI 9070; NJ CO008;  
NYSELAP (NELAC Certified) 11417; RI LAO00284; WI 998376610, TX T104704256-15-6

\*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: 11/11/2020

**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\*

Calculation: 
$$\frac{(62.1) - (1.000) - (0.1)}{57.4} \times 100 = 108\%$$

**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  
☐ 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 evaluated in this report.

**Batch Listing by Lab Control Number:**

20M03069	_____
20M03074	_____
20M03077	_____
20M03091	_____
20M03120	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**Evaluator:**

*Gynna Rockwell* \_\_\_\_\_

11/13/2020

Date

HAZEN RESEARCH, INC.  
RADIOCHEMISTRY LABORATORY

Date: 11/11/2020

**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\*

$$\text{Calculation: } \frac{(38.7) (1.000) - (0.0) (0.200)}{44} \times 100 = 88\%$$

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 evaluated in this report.

Batch Listing by Lab Control Number:

20M03069	_____
20M03074	_____
20M03077	_____
20M03091	_____
20M03120	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Evaluator:

*Gynnea Rockwell* \_\_\_\_\_

Date 11/13/2020

HAZEN RESEARCH, INC.  
RADIOCHEMISTRY LABORATORY

Date: 11/24/2020

Batch QC Summary Form

Analyte: Radium-226

Control Standard/LFB: ID: NBL-6A pCi/mL: 23 (use 2 diluted)

Spike Solution: ID: NBL-6A pCi/mL: 23 (use 2 mL)

Spike Recovery Calculation: Sample: 20M03193-1b

Calculation:  $\frac{(47.0) (1.000) - (0.2) (1.000)}{46} \times 100 = 102\%$

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 evaluated in this report.

Batch Listing by Lab Control Number:

20M03193	20M03068
20M03021	20M03069
20M03022	20M03070
20M03023	20M03071
20M03024	20M03074
20M03025	20M03077
20M03035	20M02399
20M03036	_____
20M03037	_____
20M03038	_____

Evaluator:

*Lynnea Portwell* \_\_\_\_\_

Date: 11/30/2020

HAZEN RESEARCH, INC.  
RADIOCHEMISTRY LABORATORY

Date: 11/13/2020

Batch QC Summary Form

Analyte: Radium-228

Control Standard/LFB: ID: NBL-7a pCi/mL: 13.2 (use 10 diluted)

Spike Solution: ID: NBL-7A pCi/mL: 13.2 (use 10 mL)

Spike Recovery Calculation: Sample: 20M03088-002d

$$\text{Calculation: } \frac{(142.6) - (1.000)}{132} \times 100 = 105\%$$

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 evaluated in this report.

Batch Listing by Lab Control Number:

20M03071	_____
20M03074	_____
20M03077	_____
20M03087	_____
20M03088	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Evaluator:

*Lynnea Rockwell* \_\_\_\_\_

11/19/2020

Date



Ship To: Hazen Research

Sub-Lab Chain of Custody Form

<b>Report To Information</b> Company Name: Colorado Analytical Laboratory Report To: Stuart Nelson E-Mail: stuartnelson@coloradolab.com	<b>Bill To Information (If different from report to)</b>	<b>Project Name</b> Telle Sub
<b>Address:</b> 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	<b>Address:</b> CAL TASK 201103048 ARF	<b>Compliance Samples:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <b>Submit Data to CDPHE:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

20 and 3077

Tests Requested

Sample Date/Time	Sample ID	Matrix	Radium 228 (Sub)	Gross Alpha/Beta (Sub)	Radium 226 (Sub)	Container Type
11/2/20 11:30 AM	201103048-01 - T1102	Water - Drinking		X	X	1L Cylinder - HNO3
11/2/20 11:30 AM	201103048-01A - T1102	Water - Drinking		X	X	3 - 1L Cylinder - HNO3

Comment:

<b>Relinquished by:</b> (Signature) <i>Stuart Nelson</i>	<b>Date:</b> 11/4/20 <b>Time:</b> 11:30	<b>Received by:</b> (Signature) <i>Sydney Redwood</i>	<b>Date:</b> 11/4/20 <b>Time:</b> 14:16	<b>Relinquished by:</b> (Signature)	<b>Date:</b>	<b>Time:</b>
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Redwood