Black Squirrel
Minor Subdivision

PRELIMINARY WATER RESOURCES REPORT

For
Black Squirrel
Minor Subdivision

October 2, 2024

Prepared By:

MONSON, CUMMINS, SHOHET & FARR, LLC
WWW.COWATERLAW.COM

13511 Northgate Estates Dr., Ste. 250, Colorado Springs, Colorado 80921

Executive Summary:

Preliminary Water Resources Report – Black Squirrel Minor Subdivision

W. James Tilton and Ryan W. Farr of Monson, Cummins, Shohet & Farr, LLC, on behalf of the Applicant, Chris Team Living Trust, c/o Christine Tschamler ("Owner"), provide the following Water Resources/Wastewater Disposal Report in support of the Black Squirrel Minor Subdivision. The attorneys at Monson, Cummins, Shohet & Farr, LLC ("MCSF") have extensive experience in water related matters, with Mr. Farr having practiced water law almost exclusively for nearly 11 years. MCSF has substantial experience with Denver Basin groundwater resources, augmentation plans, designated basin replacement plans, subdivision proceedings, and rural water usage. Given his experience, Mr. Farr should be considered a "qualified professional" as concerns water resources, as discussed at Section 8.4.7(B)(1)(c) of the El Paso County Land Development Code. This Report, overseen by Mr. Farr and prepared in conjunction with other professionals, is intended to demonstrate to the El Paso County Planning Commission and the Board of County Commissioners the sufficiency in terms of quantity and dependability, of the water rights and resources to be utilized in the proposed Black Squirrel Minor Subdivision (the "Subdivision"), in El Paso County, Colorado.

The Property consists of approximately 19.39 acres located in the N½ NW¼ NE¼ of Section 14, Township 11 South, Range 65 West of the 6th P.M; El Paso County, Colorado, designated as Parel No. 5114000019. Each of the potential three (3) lots in the Subdivision are to be provided water and sewer/septic services by means of on-site individual wells and Individual Septic Disposal Systems ("ISDS"). The proposed minor subdivision has one existing well on Lot 2, which is 6.39 acres in size. The remaining 13 acres of land that makes up Lots 1 and 3 is currently unimproved. Lot 1 and Lot 3 will each have an individual well and ISDS and are approximately 6.38 and 6.4 acres in size, respectively.

It is expected that the existing well on Lot 2 will remain exempt and continue to pump the permitted one (1) annual acre-foot of water. Lots 1 and 3 in the Minor Subdivision will each pump up to 0.5 annual acre-feet of water, for a total of 2.0 annual acre-feet being withdrawn from the not-nontributary Dawson aquifer annually by means of three individual wells constructed to the not-nontributary Dawson aquifer, consistent with a subsequently applied for and issued Replacement Plan by the Colorado Ground Water Commission. Such water supply demand is similar to other rural residential homes' historical demand. The proposed Replacement Plan will provide for a 300-year water supply for each lot within the Subdivision, with each lot utilizing a non-evaporative ISDS. This 300-year water supply is sustainable based on initial estimates of Dawson aquifer supplies.

The water resources to be utilized on the residential lots in the Subdivision are typical of rural residential development in this area of El Paso County, Colorado. Estimates of availability of water supplies demonstrate a sufficient quantity and reliability of water to support compliance with El Paso County's 300-year water supply rules for

subdivisions of this nature.

I. INTRODUCTION

The purpose of this report is to provide a preliminary outline of the water resources and associated wastewater requirements necessary for approval of the Black Squirrel Minor Subdivision, as proposed.

1.1 New Development Description: The Subdivision consists of 19.39 acres located in the N½ NW¼ NE¼ of Section 14, Township 11 South, Range 65 West of the 6th P.M; El Paso County, Colorado. The Property will be subdivided into up to three lots. **Exhibit A**, attached hereto, is the plan for the Subdivision as proposed, prepared by APEX Land Surveying and Mapping, LLC. This analysis accounts for water reserved for an existing, exempt well, and the 300-year supply necessary for two additional augmented wells.

II. PROJECTION OF WATER NEEDS

2.1 Analysis of Water Demands: It is expected that the three residential lots in the Subdivision will utilize three individual wells (one well per lot) drilled to the Dawson aquifer for domestic-type uses, including in-house, landscape/irrigation of lawn and gardens, watering of domestic animals and stock, and fire protection. An existing well with Permit No. 73654 will provide water supply to Lot 2 of the proposed subdivision. This is an exempt well pursuant to C.R.S. § 37-90-105 and will remain exempt. It is anticipated that the residence on Lot 2 will utilize a minimum of 0.26 acre-feet and up to 1.0 acre-feet annually for in-house residential purposes, irrigation of lawn and garden, and watering of livestock. Additionally, Lots 1 and 3 will utilize individual wells to be subject of a replacement plan. It is anticipated that the residences on Lots 1 and 3 will each utilize a minimum of 0.26 acre-feet and up to 0.5 acre-feet annually. The existing well, permitted under Permit No. 73654, is constructed to and will produce from the not-nontributary Dawson aquifer at a flow rate of 10 to 15 gallons per minute, based upon past production. The two wells to be constructed will also produce from the not-nontributary Dawson aquifer at similar flow rates.

There are no other wells currently constructed on the property. Based on past experience with the numerous Dawson aquifer wells serving rural residential properties throughout El Paso County, this rate of production should be more than sufficient to meet demand for in-house use.

III. PROPOSED WATER RIGHTS AND FACILITIES

3.1 Water Rights: A Replacement Plan utilizing the underlying Dawson aquifer will be sought from the Colorado Ground Water Commission. The proposed Replacement Plan will likely be consistent with the following estimated quantities of water supplies that will meet both legal and physical needs on a 300-year basis:

AQUIFER	Saturated Thickness (ft)	Total Water Adjudicated (Acre Feet)	Annual Average Withdrawal – 100 Years (Acre Feet)	Annual Average Withdrawal – 300 Years (Acre Feet)
Dawson (NNT)	444.2	1,727	17.27	5.75
Denver (NT)	349.4	1,155	11.55	N/A
Arapahoe (NT)	269.3	886	8.86	N/A
Laramie Fox Hills (NT)	189.3	549	5.49	N/A

All depletions will be augmented in time, place and amount through septic return flows during pumping. Being within a designated basin, there is no need to reserve water resources to provide for post-pumping replacement.

3.2 Source of Supply: Rural residential water supply demand will be met using an existing not-nontributary Dawson aquifer formation well and two additional not-nontributary wells to be constructed to the Dawson aquifer, in accordance with any issued Replacement Plan. Consistent with El Paso County Land Development Code Section 8.4.7(B)(3)(c)(v), a minor subdivision utilizing individual wells need not make a further showing as to source of supply.

3.3 Pumping Rates for Service: The Dawson aquifer in the location of the Subdivision is generally known to produce approximately 10-15 gallons per minute, more than sufficient for single family residential and accessory uses.

IV. WASTEWATER AND WASTEWATER TREATMENT – While soils, geology and geotechnical analysis will be provided by other consultants hired by the Owners, the Owners provide a summary of ISDS to be utilized herein, as relates to water usage and resulting return flows which support the approved Augmentation Plan.

4.1 Septic/Wastewater Loads: Septic projections are based on similar Denver Basin residential uses on rural residential lots. Average daily wastewater loads are expected to be approximately 232 gallons per day per single-family residence assuming residential in-house use at the conservative 0.26 acre-feet per year rate for augmentation supplies based on the El paso County Land Development Code residential demand standard of 0.26 acre-feet per year.

4.2 On-Site Wastewater Treatment Systems: The three residential lots within the Subdivision will be served by on-site non-evaporative ISDS. The on-site non-evaporative ISDS have and will be installed according to El Paso County Guidelines and properly maintained to prevent contamination of surface and subsurface water resources.

Respectfully submitted this 2nd day of October, 2024.

MONSON, CUMMINS, SHOHET & FARR, LLC

/s/ W. James Tilton

W. James Tilton
Ryan W. Farr

Exhibits:
A – Plat of the Property
B – Replacement Plan (Pending)
C – Basin Determinations (Pending)

September 26, 2024

Ryan Howser
El Paso County – Planning and Community Development Department
2880 International Circle, Suite 110
Colorado Springs, CO 80910

Dear Mr. Howser:

RE: 4-Lot Development for property at 18412 Black Squirrel Road
El Paso County Parcel #5114000019
Finding of Sufficient Water Quality According to Section 8.4.7.B.10)(a) of the Amended El Paso County Land Development Code (LDC-19-007)

FINDING OF SUFFICIENT WATER QUALITY

Team Chris Living Trust owns approximately 19.39 acres on the above-described property, located at 18412 Black Squirrel Road, Colorado Springs, CO, 80908 (EPC Receipt No.: 5114000019). Team Chris Living Trust wishes to subdivide the 19.39 acres into four (4) residential lots through the El Paso County Land Development and Planning process. As part of the subdivision process Team Chris Living Trust's water resources attorney has prepared a Water Resources report to support sufficient water quantity over a 300-year evaluation period. The water resources report supports sufficient quantity but not sufficient quality according to Section 8.4.7.B.10)(a) of the Amended El Paso County Land Development Code. Team Chris Living Trust subsequently reached out to RESPEC Company, LLC to complete water quality sufficiency sampling and analysis according to the aforementioned section of the Code and provide an engineering opinion of the analysis.

Section 8.4.7.B.10)(a) in the Amended El Paso County Land Development Code (EPC-LDC) requires that the applicant obtain analyses results for twenty-one (21) Volatile Organic Chemical (VOC) Contaminants, twenty-nine (29) Synthetic Organic Chemical Contaminants (SOC), fourteen (14) Inorganic Chemicals, ten (10) Secondary Maximum Contaminants, indicators of bacteriological pathogens (i.e. E. coli), inorganic anions, and two (2) radionuclides. According to Case No. 01CW21, which is included in the Water Resources Report, the proposed four (4) lot subdivision will be supplied with water from the underlying not-non tributary Dawson formations, both of which are considered confined Denver Basin Aquifers. Therefore, according to paragraph two (2) from Section 8.4.7.B.10)(a) VOCs and SOCs are not required as part of the stipulated chemical analysis.

On August 27, 2024, representatives with RESPEC Company, LLC sampled an existing Dawson aquifer well located adjacent to the existing property (18412 Black Squirrel Road). The representative Dawson well is located directly north of the existing property at address 18550 Black Squirrel Rd and is permitted under Permit No. 185216 (see attached). Representative aquifer water samples for the well was taken on the 27^{h} of August and overnighted to Colorado Analytical Laboratories to meet specified holding times for certain constituents. Results from all chemical analyses were received by RESPEC via email on September 25, 2024. Results were tabulated and compared vs. primary and secondary Maximum Contaminant Limits as established by the Colorado Department of Public Health and Environment's (CDPHE) latest drinking water standards. From the evaluation, the well was

2700 GAMBELL STREET
SUITE 500
ANCHORAGE, AK 99503
907.743.3200

found to have a low Langelier Index (LI) of -0.88, elevated manganese which is just over the 0.05 mg/L MCL at 0.0614 mg/L, and high in radionuclides. Combined Gross Alpha/Beta was measured at 16.2 PCi/L and Combined Radium 226+228 at11.1 PCi/L, which were above the MCLs of 15 PCi/L and 5 PCi/L, respectively (please see tabulated results and associated analytical results from Colorado Analytical Laboratories in the enclosure). All other constituents were found to be below respective primary and secondary drinking standards.

As mentioned above, the raw water sampled in the representative Dawson Well was found to have a low LI in the range between -0.5 and -1.0, which can indicate mild corrosion. The LI is calculated using pH, temperature, total dissolved solids, alkalinity, and total hardness. The LI is a measure of the balance between pH and calcium carbonate ($CaCO_3$). As the LI value becomes more negative, the water is increasingly under-saturated with $CaCO_3$ and therefore has increased corrosion potential. The well was also found to be high in Manganese. The EPA has a non-enforceable health advisory (HA) limit of 0.3 mg/L for infants younger than 6 months old and a secondary MCL of 0.05 mg/L. Exposure to manganese in drinking water can cause neurological issues in infants and children, such as changes in behavior, lower IQ, speech and memory difficulties, and lack of coordination and movement control. Manganese in drinking water can also cause aesthetic issues such as metallic-tasting water and black stains on tubs/showers, toilets, plumbing fixtures, and laundry. The aquifer water in this location also contains high radionuclides, specifically combined Gross Alpha/Beta and Combined Radium 226+228, which exceeded the Primary Maximum Contaminant Limits (MCL) of the State of Colorado's Drinking Water Standards. Radionuclides can be a byproduct of the presence of uranium, and can be considered a chronic contaminant. This means that it is unlikely that there will be immediate harm to individuals who are immediately exposed to the presence of radium. However, over time, continued exposure to uranium can have detrimental impacts on humans, including the occurrence of certain forms of cancer (especially bone cancer), anemia, cataracts, and fractured teeth.

Given the LI level, RESPEC Company, LLC recommends that the homeowner(s) install PEX piping for the water plumbing to reduce corrosion potential. Regarding manganese removal, it is recommended that a whole house carbon filter, cartridge filter, or reverse osmosis unit is installed for the removal of manganese. That said, given the Combined Gross Alpha/Beta and Combined Radium observed in the well, the RESPEC Company, LLC would recommend the installation of a whole house Reverse Osmosis unit in each residence to remove the elevated levels of radium from the source water. It should be noted that the reverse osmosis unit will generate a concentrated backflow that can be wasted to a septic system. Given the relatively small amounts of concentrated constituents generated by a single residence reverse osmosis unit, on-site septic systems for each household should have the capacity to sufficiently treat the generated wastewater loadings. Therefore, given the manganese and radionuclide amounts, a whole-house reverse osmosis unit is recommended to be installed in each residence.

After reviewing the analytical results, RESPEC Company, LLC does not find cause for concern in utilizing the underlying Dawson Aquifer for public consumption or irrigation uses within the proposed subdivision. However, RESPEC would also recommend that the developer and home builder use PEX piping for protection from corrosion and provide a whole-house reverse osmosis unit for each household to remove observed Manganese and Radionuclides from the source water. The above opinions are RESPEC's recommendations for additional treatment within the proposed residences to bring the source water into compliance with established Colorado Drinking Water Standards.

Should the El Paso County Planning and Development Department have any additional comments, questions, or concerns please do not hesitate to contact Brian "BJ" Elkins, P.E. with RESPEC Company, LLC at 719-283-7674 or at brian.elkins@respec.com.

Sincerely,

Brian L. Elkins Jr., P.E.
Project Engineer

BLE
Enclosure: El Paso County Parcel #5114000019 with vicinity map.
DWR Permit No. 185216
Tabulated Water Quality Sufficiency Results from August 27, 2024 Sample Trip to 18550 Black Squirrel Rd
Analytical Results from Colorado Analytical, Task No.: 240828085 – Langoliers
Analytical Results from Colorado Analytical, Task No.: 240828085 – Chemical Constituents
Analytical Report from Haxen, Task No.: 240828086 – Radiological

cc: Project Central File: W0265.24029.001 — Category: External Letter

EL PASO COUNTY - COLORADO

5114000019
BLACK SQUIRREL RD

Total Market Value
$448,600

OVERVIEW

Owner:	**CHRIS TEAM LIVING TRUST**
Mailing Address:	**6275 MONTARBOR DR COLORADO SPRINGS CO, 80918-4874**
Location:	**BLACK SQUIRREL RD**
Tax Status:	**Taxable**
Zoning:	**RR-5**
Plat No:	**-**
Legal Description:	**N2NW4NE4, EX PT TO CO BY BK 2636-733 SUBJ TO R/W EASEMENT AS DES IN BK 2454-753 SEC 14-11-65**

MARKET & ASSESSMENT DETAILS

	Market Value	Assessed Value
Land	**$448,600**	**$125,160**
Improvement	**$0**	**$0**
Total	**$448,600**	**$125,160**

No buildings to show.

LAND DETAILS

Sequence Number	Land Use	Assessment Rate	Area	Market Value
1	VACANT LAND, 10.0 TO 34.99	27.900	19.39 Acres	$448,600

SALES HISTORY

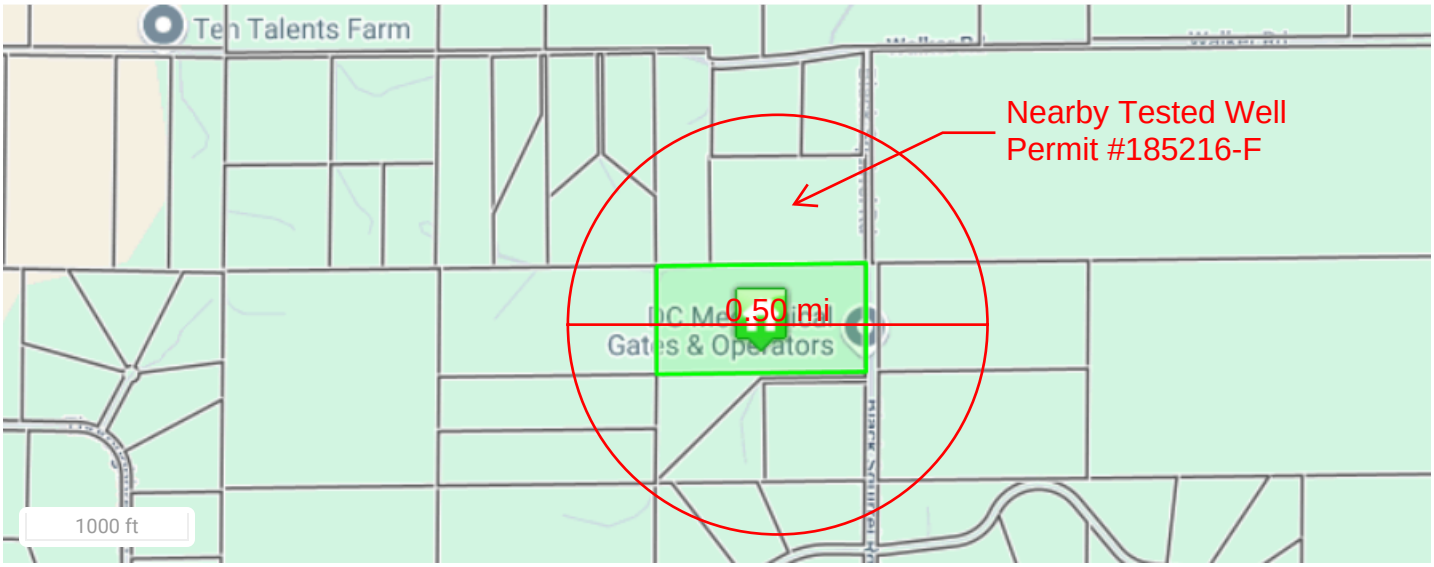
	Sale Date	Sale Price	Sale Type	Reception
+	04/19/2018	$0	-	218044100
+	04/19/2018	$0	-	218044022
+	04/19/2018	$0	-	218044006
	07/01/1973	$0	-	-

TAX ENTITY AND LEVY INFORMATION

County Treasurer Tax Information

Tax Area Code: **SCW** Levy Year: **2023** Mill Levy: **70.716**

Taxing Entity	Levy	Contact Name/Organization	Contact Phone
EL PASO COUNTY	6.862	FINANCIAL SERVICES	(719)520-6400
EPC ROAD & BRIDGE (UNSHARED)	0.330	-	(719)520-6498
EL PASO COUNTY SCHOOL DISTRICT #49	45.577	DAVID TRAUTENBERG	(719)495-1145
PIKES PEAK LIBRARY DISTRICT	3.061	RANDALL A GREEN	(719)531-6333
FALCON FIRE PROTECTION DISTRICT	14.886	TRENT HARWIG	(719)495-4050
KIOWA CONSERVATION DISTRICT	0.000	PAM BREWSTER	(303)621-2070



No Photo Available

Disclaimer

We have made a good-faith effort to provide you with the most recent and most accurate information available. However, if you need to use this information in any legal or official venue, you will need to obtain official copies from the Assessor's Office. Do be aware that this data is subject to change on a daily basis. If you believe that any of this information is incorrect, please call us at (719) 520-6600.

COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 185216-
RECEIPT NUMBER 0380142

ORIGINAL PERMIT APPLICANT(S)

NASBY DONALD & JEANETTE

APPROVED WELL LOCATION

Water Division: 1 Water District: 1
Designated Basin: KIOWA-BIJOU
Management District: N/A
County: EL PASO
Parcel Name: N/A
Physical Address: 18550 BLACK SQUIRREL ROAD
COLORADO SPRINGS, CO 80908

SW 1/4 SE 1/4 Section 11 Township 11.0 S Range 65.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone:13, NAD83)

Easting: 531768.9 Northing: 4328086.4

See the original well permit file for permit conditions of approval and additional details. The original permit file can be viewed using the Well Permit Search Tool at https://dwr.colorado.gov/

See Original Permit
Issued By

Date Issued: 3/6/1995
Expiration Date: 3/6/1997

PERMIT HISTORY

06-18-2024	CHANGE IN OWNER NAME/MAILING ADDRESS. CHANGED TO DANNIELLE VOTH
06-18-2024	CHANGE IN OWNER NAME/MAILING ADDRESS. CHANGED TO GEOFFREY PICKETT
08-18-1995	CHANGE IN OWNER NAME/MAILING ADDRESS

FORM NO. GWS-32 10/94

PUMP INSTALLATION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER

For Office Use only

RECEIVED

JAN 12 '96

WATER RESOURCES STATE ENGINEER

1. **WELL PERMIT NUMBER** 185216

2. OWNER NAME(S) Don Nassby
Mailing Address 4737 Daybreak Cir
City, St. Zip Co Springs Co 80917
Phone (719) 597-0417

3. WELL LOCATION AS DRILLED: SW 1/4 SE 1/4, Sec. 11 Twp. 11 S, Range 65 W.
DISTANCES FROM SEC. LINES:
430 ft. from South (north or south) Sec. line. and 1920 ft. from 1920 (east or west) Sec. line.
SUBDIVISION: _____ LOT ____ BLOCK ____ FILING(UNIT) ____
STREET ADDRESS AT WELL LOCATION: _____

4. PUMP DATA: Type Sub Installation Completed Jan 10 1996
Pump Manufacturer Red Jacket Pump Model No. 100CNS14 BC
Design GPM 10 at RPM 3450, HP 1, Volts 230, Full Load Amps 10
Pump Intake Depth 247 Feet, Drop/Column Pipe Size 1 Inches, Kind PVC

ADDITIONAL INFORMATION FOR PUMPS GREATER THAT 50 GPM:
TURBINE DRIVER TYPE: ☐ Electric ☐ Engine ☐ Other _____
Design Head _____ feet, Number of Stages _____, Shaft size _____ inches.

5. OTHER EQUIPMENT:
Airline Installed ☐ Yes ☐ No, Orifice Depth ft. _____. Monitor Tube Installed ☐ Yes ☐ No, Depth ft. _____
Flow Meter Mfg. _____ Meter Serial No. _____
Meter Readout ☐ Gallons, ☐ Thousand Gallons, ☐ Acre feet, ☐ Beginning Reading _____

6. TEST DATA: ☐ Check box if Test data is submitted on Supplemental Form.

		Date	Jan 10 1996
Total Well Depth	337	Time	
Static Level	130	Rate (GPM)	12
Date Measured	Aug 9 1995	Pumping Lvl.	220

7. DISINFECTION: Type HTH Amt. Used ½ CUP

8. Water Quality analysis available. ☐ Yes ☒ No

9. Remarks _____

10. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR Hamacher Well Works Inc Phone (719) 541-2460 Lic. No. 71
Mailing Address ~~Box 86 Simla Co 80835~~

Name/Title (Please type or print)	Signature	Date
T.R. Hamacher	T.R. Hamacher	Jan 1996

FORM NO. GWS-31 10/94

WELL CONSTRUCTION AND TEST REPORT
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER

For Office Use only

RECEIVED
AUG 14 '95
WATER RESOURCES
STATE ENGINEER
COLO

1. WELL PERMIT NUMBER 185216

2. OWNER NAME(S) Don Nassby
Mailing Address 4737 Daybreak Cir
City, St. Zip Co Springs Co 80917
Phone (719) 5970417

3. WELL LOCATION AS DRILLED: SW 1/4 SE 1/4, Sec. 11 Twp. 11 S, Range 65 W
DISTANCES FROM SEC. LINES:
430 ft. from South (north or south) Sec. line. and 1920 ft. from East (east or west) Sec. line. OR
SUBDIVISION: LOT BLOCK FILING(UNIT)
STREET ADDRESS AT WELL LOCATION:

4. GROUND SURFACE ELEVATION ft. DRILLING METHOD Rotary
DATE COMPLETED Aug 9 1995 . TOTAL DEPTH 337 ft. DEPTH COMPLETED 337 ft.

5. GEOLOGIC LOG:

Depth	Description of Material (Type, Size, Color, Water Location)
0-7	Brown Clay
7-21	Yellow Clay
21-41	Sand & Clay
41- 330	Sand & Gravel
330-337	Blue Clay

REMARKS:

6. HOLE DIAM.

(in.)	From (ft)	To (ft)
8 5/8	0	21
6¼	21	337

7. PLAIN CASING

OD (in)	Kind	Wall Size	From(ft)	To(ft)
6 5/8	Steel	188	+1	21
~~4½~~	~~PVC~~	~~⅛~~	17	217
~~4½~~	~~PVC~~	~~⅛~~	237	257
~~4½~~	~~PVC~~	~~⅛~~	277	297

PERF. CASING: Screen Slot Size: 20th

4½	PVC	⅛	217	237
4½	PVC	⅛	257	277
~~4½~~	~~PVC~~	~~⅛~~	~~297~~	~~337~~

8. FILTER PACK:
Material Silica Sand
Size 8-12
Interval 210-337

9. PACKER PLACEMENT:
Type
Depth

10. GROUTING RECORD:

Material	Amount	Density	Interval	Placement
Cemented	20 Gal	1.73	0-20	Poured
Cemented	20 Gal	1.73	190-210	Pumped
Global Vibrator			Tremmie Pipe	

11. DISINFECTION: Type HTH Amt. Used ½ Cup

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form No. GWS 39 Supplemental Well Test.
TESTING METHOD Aired and Bailed
Static Level 130 ft. Date/Time measured Aug 9 1995, Production Rate 15 gpm.
Pumping level 250 ft. Date/Time measured Aug 9 1995, Test length (hrs.) 4
Remarks

13. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR Hamacher Well Works Inc Phone (719) 541-2460 Lic. No. 71
Mailing Address Box 86 Simla Co 80835

Name/Title (Please type or print)	Signature	Date
T.R. Hamacher	T.R. Hamacher	Aug 10 1995

FORM NO. GWS-11 07/93

STATE OF COLORADO
OFFICE OF THE STATE ENGINEER
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

For Office Use only

PRIOR TO COMPLETING FORM, SEE INSTRUCTIONS ON REVERSE SIDE

CHANGE IN OWNERSHIP/ADDRESS / LOCATION

WELL PERMIT, LIVESTOCK TANK OR EROSION CONTROL DAM

RECEIVED
JUN 15 '95
WATER RESOURCES
STATE ENGINEER
COLO

1. NEW OWNER

NAME(S) DONALD & JEANETTE NASBY
Mailing Address 4737 DAYBREAK CIRCLE
City, St. Zip COLORADO SPRINGS, COLORADO 80917
Phone (719) 597-0417

2. THIS CHANGE IS FOR ONE OF THE FOLLOWING:

☑ WELL PERMIT NUMBER 185216
☐ LIVESTOCK WATER TANK NUMBER
☐ EROSION CONTROL DAM NUMBER

3. WELL LOCATION: COUNTY EL PASO OWNER'S WELL DESIGNATION ONLY WELL

10550 BLACK SQUIRREL RD (Address) COLORADO SPRINGS (City) CO. (State) 80917 (Zip)

SW 1/4 of the SE 1/4, Sec. 11 Twp. 11 ☐ N. or ☑ S., Range 65 ☐ E. or ☑ W. 6th P.M.

Distances from Section Lines 430 Ft. from ☐ N. or ☑ S. Line, 1920 Ft. from ☑ E. or ☐ W. Line.

Subdivision N/A Lot Block Filing (Unit)

4. LIVESTOCK TANK OR EROSION CONTROL DAM LOCATION: COUNTY

1/4, Sec. Twp. ☐ N. or ☐ S., Range ☐ E. or ☐ W. P.M.

5. *The above listed owner(s) say(s) that he (they) own the structure described herein.*
The existing record is being amended for the following reason(s):

☑ *Change in name of owner.* ☑ *Change in mailing address.* ☐ *Correction of location.*

6. *I (we) have read the statements made herein, know the contents thereof, and state that they are true* to my (our) knowledge.
[Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

Name/Title (Please type or print)	Signature	Date
	Donald Nasby Jeanette M. Nasby	June 14, 1995

FOR OFFICE USE ONLY

ACCEPTED AS A CHANGE IN OWNERSHIP
AND/OR MAILING ADDRESS.

Hal D. Simpson
State Engineer

Sandy Johnson
By

AUG 18 1995
Date

Court Case No. Div. 8 Co. 21 WD 01 Basin 02 MD Use

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 185216 - ____ - __

DIV. 8 CNTY. 21 WD 1 DES. BASIN 2 MD

Lot: Block: Filing: Subdiv:

APPLICANT

JANNIE YEE
% ANDY COOK RAWHIDE CO
5160 N UNION BLVD
COLO SPRINGS CO 80918

(719)599-0980

PERMIT TO CONSTRUCT A WELL

APPROVED WELL LOCATION
EL PASO COUNTY

SW 1/4 SE 1/4 Section 11
Twp 11 S RANGE 65 W 6th P.M.

DISTANCES FROM SECTION LINES
430 Ft. from South Section Line
1920 Ft. from East Section Line

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 the 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 and Pump Installation 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 17.
3) Approved pursuant to CRS 37-90-105.
4) Water from this well may be used for domestic purposes inside one (1) single family dwelling.
5) The maximum pumping rate shall not exceed 15 GPM.
6) The annual appropriation shall not exceed 3 acre-feet.
7) The irrigated area shall not exceed 1 acre of lawn and garden.
8) Production is limited to the Dawson aquifer. Plain casing must be installed and sealed from ground surface to minimum depth of 210 feet to prevent diversion of water from other zones. The depth of the well shall not exceed 1,090 feet, which is the estimated base of the Dawson aquifer.
9) This well must be constructed within 300 feet of the location specified on this permit.

JWB. 3/2/95

APPROVED
JWB

Hal D. Simpson
State Engineer

By

Receipt No. 0380142 DATE ISSUED MAR 0 6 1995 EXPIRATION DATE MAR 0 6 1997

11

WRJ-5-Rev. 76

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

RECEIVED FEB 15 '95 WATER RESOURCES STATE ENGINEER COLO

RECEIVED JAN 23 '95 WATER RESOURCES STATE ENGINEER COLO

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR:
(x) A PERMIT TO USE GROUND WATER
(x) A PERMIT TO CONSTRUCT A WELL
(x) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO.
( ) OTHER
WATER COURT CASE NO.

185716

7465

510

(1) APPLICANT - mailing address

NAME JANNIE YEE

STREET c/o ANDY COOK, RAWHIDE COMP. 5160 NORTH UNION BLVD

CITY Colo. Springs, Colo (State) 80918 (Zip)

TELEPHONE NO. (719) 599-0980

(2) LOCATION OF PROPOSED WELL

County EL PASO

SW ¼ of the SE ¼, Section 11

Twp. 11 S (N,S), Rng. 65 W (E,W), 6TH P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 15

Average annual amount of ground water to be appropriated (acre-feet): 3

Number of acres to be irrigated: 1

Proposed total depth (feet): 350

Aquifer ground water is to be obtained from: DAWSON AQUIFER

Owner's well designation -

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
(✓) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
( ) MUNICIPAL (8)
( ) OTHER (9)

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name LICENSED

Street

City (State) (Zip)

Telephone No. Lic. No.

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 380142 / JWB

Basin 02 Dist.

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the 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.

147957; 147960; 15... [illegible]

15 GPM

3 AF

1 AC IRR

A D J1 K6

Best Copy Available

APPLICATION APPROVED

PERMIT NUMBER

DATE ISSUED

EXPIRATION DATE

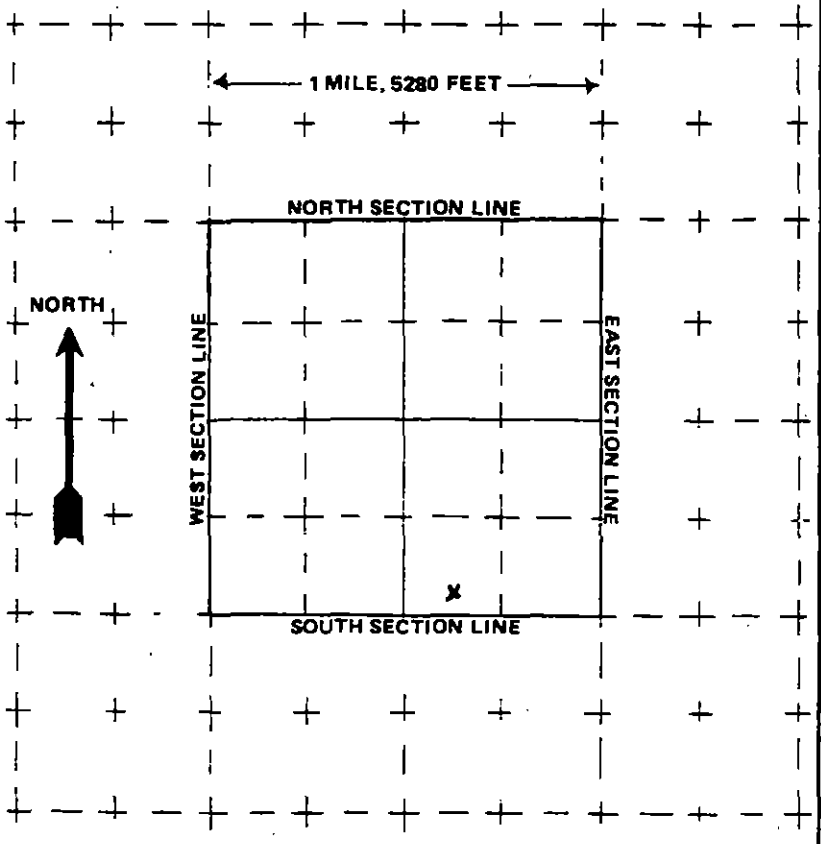
CHECKS TR#380142 012395 60.00
DIV OF WATER RESOURCES

(STATE ENGINEER)

BY

I.D. 8 COUNTY 21-01

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

430 ft. from South (north or south) sec. line

1920 ft. from EAST (east or west) sec. line

LOT — BLOCK — FILING # —

SUBDIVISION —

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: J. YEE

No. of acres 14.39 . Will this be the only well on this tract? YES

(8) PROPOSED CASING PROGRAM

Plain Casing

(IRON) 6 in. from +1 ft. to 20 ft.

5 in. from 10 ft. to 100 ft.

Perforated casing

5 in. from 100 ft. to 350 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

N/A

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): JANNIE YEE No. of acres: 14.39

Legal description: THE S½ OF THE SW¼ OF THE SE¼ OF SEC 11-11-65 EXCEPT THE W½ OF THE W½

(11) DETAILED DESCRIPTION of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

DOMESTIC USES FOR ONE SINGLE FAMILY DWELLING AND OUTBUIL
IRRIGATION OF UP TO ONE ACRE OF LAWN AND GARDEN WATERING OF OWNER'S NO
COMMERCIAL DOMESTIC ANIMALS. RETURN FLOW VIA CLOSED SEPTIC AND LEACH

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
N/A		

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

EXEMPT WELL DATA SHEET - DENVER BASIN, COLORADO

APPLICANT: YEE RECEIPT NO. 380142
LOCATION: SW1/4 OF SE1/4 OF SEC. 11, T.11S., R.65W. (430 SSL, 1920 ESL)
LOCATION IS WITHIN THE KIOWA BIJOU DESIGNATED GROUND WATER BASIN
PROPOSED AQUIFER:
SURFACE ELEVATION: 7465 NUMBER OF ACRES IN TRACT: 14.39

IS PROPERTY WITHIN SERVICE BOUNDARIES OF MUNICIPALITY S.B.5 CONSENT MAPS? NO____ YES____
IF SUBDIVISION IS UNDER AUGMENTATION PLAN, CASE NO. IS _____, DIV. ____
IF SUBDIVISION WAS RECOMMENDED FOR APPROVAL BY THE WATER MANAGEMENT BRANCH, DATE OF LETTER IS _____.
INFORMATION ON SUBDIVISION OR TRACT OF LAND/SPECIAL RESTRICTIONS:

evaluated by JWB on FEBRUARY 8, 1995

AQUIFER	ELEVATION BOT.	ELEVATION TOP	NET SAND	DEPTH TO BOT.	DEPTH TO TOP	ANNUAL APPROP A-F	STATUS
[illegible]R DAWSON	6374	7255	440	1091	210	12.663	NNT
LOWER DAWSON	----	----	----	----	----	----	---
DENVER	5505	6327	346	1960	1138	8.464	NT
UPPER ARAPAHOE	4942	5462	271	2523	2003	6.605	NT
LOWER ARAPAHOE	----	----	----	----	----	----	---
LARAMIE-FOX HILLS	4311	4648	191	3154	2817	4.101	NT

note: E indicates location is at aquifer boundary and values may be more approximate.
* indicates the proposed aquifer.

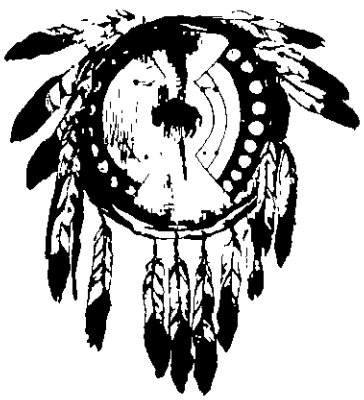
All values are interpolated from the S.B.5 data base assembled in November of 1986.

Rich

Thank you for all of the help on the well. Hope all of this information is what you need!

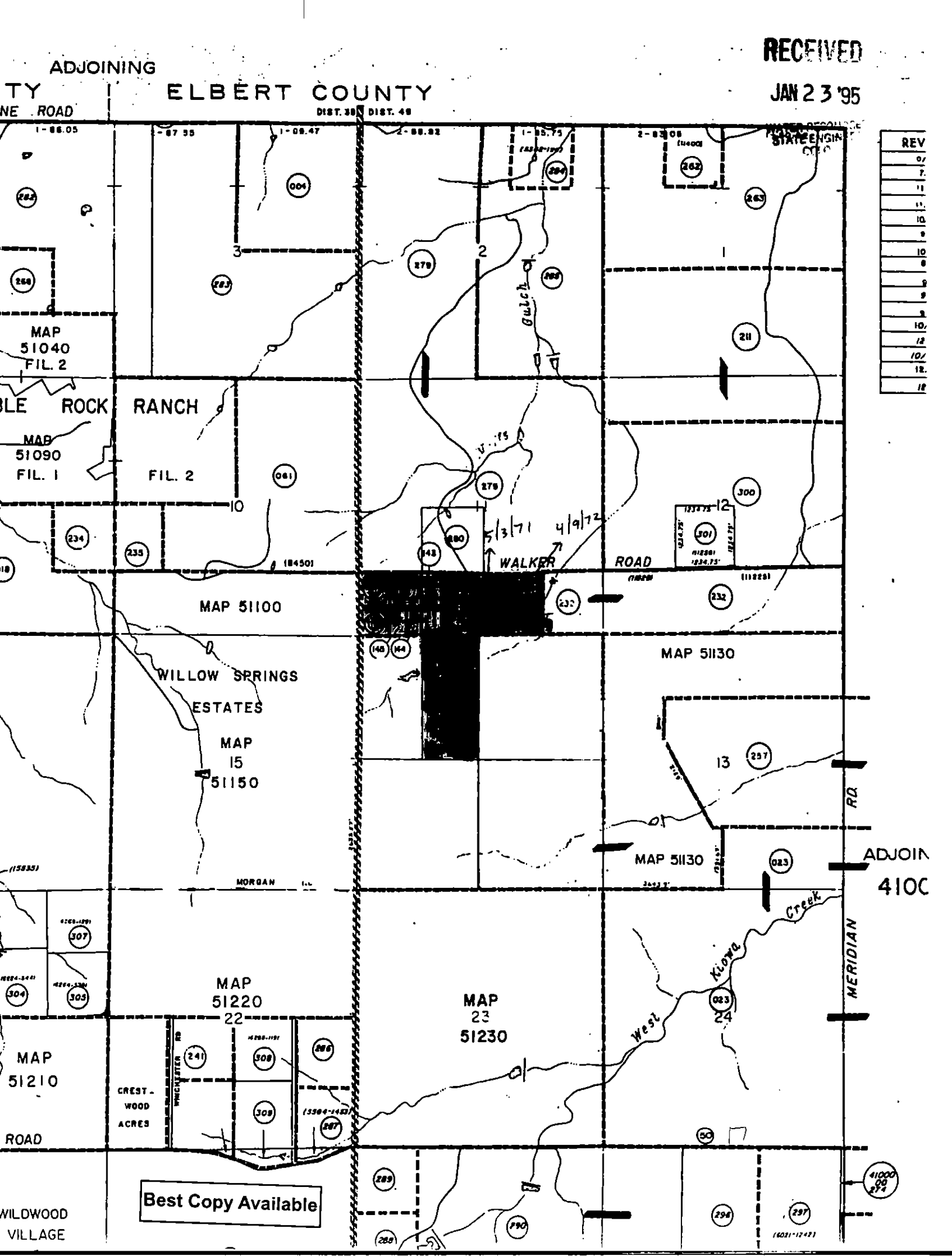
Nice talking to you —

Jeanette Nosby



The Rawhide Company REALTOR

5160 NORTH UNION BLVD., COLORADO SPRINGS, CO 80918-2046
PHONE: SALES (719) 598-3198
FINANCIAL SERVICES (719) 599-0900



Filed for record the ... day of FEB 23 1968 A. D. 19... at 8:28 o'clock A.M.
Reception No. 589321 ... RECORDER
BOOK 2224 PAGE 69

This Deed, Made this 23rd day of February in the year of our Lord one thousand nine hundred and sixty-eight between

EDGAR ELWOOD HIATT and DORIS MAY HIATT

of the County of El Paso and State of Colorado, of the first part, and

F. R. POTTER

of the County of El Paso and State of Colorado, of the second part:

Witnesseth, That the said parties of the first part, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration DOLLARS to the said parties of the first part in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, have granted, bargained, sold and conveyed, and by these presents do grant, bargain, sell, convey and confirm unto the said party of the second part, his heirs and assigns forever, all the following described lot or parcel of land, situate, lying and being in the County of El Paso and State of Colorado, to-wit:

An undivided one-half (1/2) interest in and to the East half of the Northwest quarter of Section 14; the South half of the Southwest quarter and the Southwest quarter of the Southeast quarter of Section 11, all in Township 11 South, Range 65 West of the 6th P.M.,

Subject to rights of way, easements and restrictions of record.

PROPERTY TRANSFERED BY THIS DEED IS HILIGHTED.

STATE DOCUMENTARY FEE
FEB 23 1968
$ 2.32

Together With all and singular the hereditaments and appurtenances thereto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever of the said parties of the first part, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

To Have and To Hold The said premises above bargained and described, with the appurtenances, unto the said party of the second part, his heirs and assigns forever. And the said parties of the first part, for themselves, their heirs, executors, and administrators, do covenant, grant, bargain and agree to and with the said party of the second part, his heirs and assigns, that at the time of the ensealing and delivery of these presents, they are well seized of the premises above conveyed, as of good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and have good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and encumbrances of whatever kind or nature soever except general taxes for the year 1968, which party of the second part hereby assumes and agrees to pay.

and the above bargained premises, in the quiet and peaceable possession of the said party of the second part his heirs and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said parties of the first part shall and will Warrant and Forever Defend.

In Witness Whereof, The said parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in Presence of

Edgar Elwood Hiatt (Seal)

(Seal)

Doris May Hiatt (Seal)

(Seal)

STATE OF COLORADO,
County of El Paso } ss.

The foregoing instrument was acknowledged before me this 23rd day of February, 19 68, by* Edgar Elwood Hiatt and Doris May Hiatt.

Witness my hand and official seal.

My commission expires My Commission Expires June 17, 1969

NOTARY PUBLIC

*If acting in representative or official capacity, insert name and capacity.

Best Copy Available

JUN 28 1971

Filed for record the ____ day of ____ A. D. 19__ at 8:10 o'clock A. M. BOOK 2418 PAGE 463

No. 810812 HARRIET BEALS RECORDER

Warranty Deed

RECEIVED
JAN 23 '95
WATER RESOURCES
STATE ENGINEER
COLO

Know all Men by these Presents, That F. R. POTTER

of the County of El Paso and State of Colorado for the consideration of One Dollar and other good and valuable considerations, in hand paid, hereby sell and convey to RANLANCO, INC., a Colorado Corporation

of the County of El Paso and State of Colorado, the following Real Property situate in the County of El Paso and State of Colorado, to-wit:

The Southeast ¼ of the Southwest ¼ of the Southwest ¼, and the Southeast ¼ of the Southwest ¼, and the West ½ of the West ½ of the Southwest ¼ of the Southeast ¼, all in Section 11; and the Northeast ¼ of the Northwest ¼ of Section 14, all in Township 11 South, Range 65 West of the 6th P.M.

PARCEL A

STATE DOCUMENTARY FEE
JUN 28 1971
5.70

with all its appurtenances and warrant(s) the title to the same, subject to covenants, reservations and restrictions of record.

Signed and delivered this 3rd day of May 19 71

F. R. Potter
F.R. POTTER

STATE OF COLORADO
County of EL PASO } ss. The foregoing instrument was acknowledged before me this 3rd day of May 19 71, by F.R. Potter.

Witness my hand and official seal.
My commission expires August 7, 1975

Pamela E. Waller
NOTARY PUBLIC

STATE OF _____
County of _____ } ss. The foregoing instrument was acknowledged before me this _____ day of _____ 19__, by _____ as _____ President and _____ as _____ Secretary of _____ a corporation.

Witness my hand and official seal.
My commission expires _____

_____
NOTARY PUBLIC

Best Copy Available

Filed for record the APR 11 1972 day of A. D. 19 at 10:05 o'clock A.M.
No. 872106 HARRIET BEALS Recorder

BOOK 2480 PAGE 813

Warranty Deed

RECEIVED
JAN 23 '95
WATER RESOURCES
STATE ENGINEER
COLO

Know all Men by these Presents, That F. R. Potter

of the County of El Paso and State of Colorado, for the consideration of One Dollar and other good and valuable considerations, in hand paid, hereby sell and convey to Paul Yee and Jannie Yee

"In Joint Tenancy",
of the County of and State of Colorado the following Real Property situate in the County of El Paso and State of

, to wit:

The North ½ of the Southwest ¼ of the Southeast ¼ of Section 11 in Township 11 South, Range 65 West of the 6th P.M., Except the West ½ of the West ¼ thereof

PARCEL B

STATE DOCUMENTARY
APR 11 1972
FEE $ .98

with all its appurtenances and warrant(s) the title to the same, subject to real property taxes for 1972, payable in 1973, and to covenant, conditions, restrictions, reservations, easements and rights of way of record.

Signed and delivered this 9th day of April 1972.

F. R. Potter F. R. Potter

STATE OF Colorado
County of El Paso } ss. The foregoing instrument was acknowledged before me this 9th day of April
by F. R. Potter

Witness my hand and official seal.
My commission expires July 19, 1975

Edmund J. Sh...
Notary Public

STATE OF
County of } ss The foregoing instrument was acknowledged before me this day of , 19
by as President
and as Secretary of
a corporation.

Witness my hand and official seal.
My commission expires

NOTARY PUBLIC

Best Copy Available

MAR 13 1973

Filed for record the ____ day of ____ A.D. 19__ at ____ o'clock ____ M. BOOK 2568 PAGE 810

No. 964934 HARRIET BEALS Recorder

Warranty Deed

RECEIVED
JAN 23 '95
WATER RESOURCES
STATE ENGINEER'S
OFFICE

Know all Men by these Presents, That F. R. Potter

of the County of El Paso and State of Colorado, for the consideration of One Dollar and other good and valuable considerations, in hand paid, hereby sell and convey to Paul Yee and Jannie Yee

"In Joint Tenancy",

of the County of ____ and State of Colorado

whose mailing address is ____

the following Real Property situate in the County of El Paso and State of Colorado, (Assessor's Schedule Number Portion of 51000-00-141) to-wit:

The South ½ of the Southwest ¼ of the Southeast ¼ of Section 11 in Township 11 South, Range 65 West of the 6th P.M., excepting therefrom the West ¼ of the West ¼ thereof.

SUBJECT

STATE DOCUMENTARY

MAR 13 1973

FEE $ .83

with all its appurtenances and warrant(s) the title to the same, subject to real property taxes for 1972, payable in 1973; also subject to covenants, conditions, restrictions, reservations, easements, rights and rights-of-way of record.

Signed and delivered this 8th day of October 19 72

F. R. Potter

F. R. Potter

STATE OF COLORADO
County of El Paso } ss. The foregoing instrument was acknowledged before me this 8th day of October 19 72 by F. R. Potter

Witness my hand and official seal.
My commission expires July 19, 1973

Edward J. [illegible]

NOTARY PUBLIC

STATE OF ____
County of ____ } ss The foregoing instrument was acknowledged before me this ____ day of ____ by ____ as ____ President and ____ as ____ Secretary of ____ a corporation.

Witness my hand and official seal.
My commission expires ____

NOTARY PUBLIC

Best Copy Available

STATE OF COLORADO

OFFICE OF THE STATE ENGINEER
Division of Water Resources
Department of Natural Resources
1313 Sherman Street, Room 818
Denver, Colorado 80203
Phone (303) 866-3581
FAX (303) 866-3589

TO: Jannie Yee c/o Andy Cook
RECEIPT NO.: 380142

FROM: John W. Bilisoly JWB
DATE: February 9, 1995

Your application for a permit to construct a well is being returned for the reason(s) listed below. The amendments and/or additional information or documentation requested is required before we can proceed with the evaluation of your application.

All amendments made to the application must be typed or printed in BLACK INK. **Please initial and date all amendments made then return the application and all attachments to this office.** If you have any questions, feel free to contact this office.

In reviewing our records, we find that a permit has already been issued and a well drilled on this parcel. The permit was issued on February 28, 1989, to Svend and Donna Lee *Nicolaisen under Permit No. 153518. A copy of the permit file is enclosed for your* reference. The well was actually constructed under Permit No. 147960, which expired *because evidence of beneficial use of the water was not received by this office before the* expiration date of the permit. Permit No. 153518 was then issued to validate the well.

If you wish to withdraw the application, please advised us in writing. The $60 filing fee is a processing fee, and is nonrefundable.

February 14, 1995

Mr. John Bilisoly
State of Colorado
Division of Water Resources
1313 Sherman Street Room 818
Denver, Colorado 80203

Re: Well Permit Application Form

Dear Mr. Bilisoly,

In regard to our phone conversation on February 13, 1995, the legal description for the land on which the existing well is located is correct. However, the measurement from the south section line is wrong. It should be at a minimum greater than 660 feet to reflect a location on the N 1/2 of the SW 1/4 of the SE 1/4 of Sec 11-11-65. The indicated tax schedule No.(51000-00-198) is also wrong, it should have been No.51000-00-199.

We are applying for a well permit on the S 1/2 of the SW 1/4 of the SE 1/4 of Sec 11-11-65. We appreciate your time and consideration on this matter and look forward to hearing from you shortly. Thank you.

Sincerely,
The Rawhide Company, REALTORS

Andy

Andy Cook
Sales Associate

The Rawhide Company REALTOR

5160 NORTH UNION BLVD., COLORADO SPRINGS, CO 80918-2046
PHONE: SALES (719) 598-3198
FINANCIAL SERVICES (719) 599-0900

NING

ELBERT COUNTY

DIST. 38 DIST. 48

REVISED
9/71
7/72
11/73
11, 77
10/75
9/76
10/77
8/78
9/80
9/81
9/82
10/83
12/84
10/85
12/86
12/87

RANCH

FIL. 2

Gulch

Per. # 153518

WALKER ROAD

MAP 51100

MAP 51130

WILLOW SPRINGS ESTATES

MAP 15 51150

MAP 51140

Yee parcel

13

RD.

MAP 51130

ADJOINING 41000

MORGAN

Kiowa Creek

West

MERIDIAN

MAP 51220 22

MAP 23 51230

24

CREST-WOOD ACRES

El Paso County Land Development Code
Water Quality Requirements and Results
Dawson Confined Aquifer
Tschamler Property
Well Permit No. 185216-F
18550 Black Squirrel Rd
Sampled - 8/27/24

No.	Compound	Units	MCL/SMCL	Result	Comment
1	Antimony	mg/l	0.006	0	ND
2	Arsenic	mg/l	0.01	0.001	
3	Barium	mg/l	2	0.0889	
4	Beryllium	mg/l	0.004	0	ND
5	Cadmium	mg/l	0.005	0	ND
6	Chromium	mg/l	0.1	0	ND
7	Cyanide (Total)	mg/l	0	0	ND
8	Fluoride	mg/l	4	0.31	
9	Mercury	mg/l	0.002	0	ND
10	Nitrate as N	mg/l	10	0	ND
11	Nitrite as N	mg/l	1	0	ND
12	Total Nitrate/Nitrite as N	mg/l	10	0.0889	
13	Selenium	mg/l	0.05	0	ND
14	Thallium	mg/l	0.002	0	ND
15	Aluminum	mg/l	0.05	0	ND
16	Chloride	mg/l	250	1.5	
17	Langelier Index			-0.88	Corrosion (<-0.5)
18	Iron	mg/l	0.3	0	ND
19	Manganese	mg/l	0.05	0.0614	
20	pH		6.5 - 8.5	7.36	
21	Silver	mg/l	0.1	0	ND
22	Sulfate	mg/l	250	8.7	
23	TDS	mg/l	500	150	
24	Zinc	mg/l	5	0.004	
25	Gross Alpha/Beta	pCi/l	15	16.2	α=10.0, β=6.2
26	Combined Radium 226+228	pCi/l	5	11.1	226=3.0, 228=8.1
27	Total Coliform	#/100 ml	Absent	Absent	

Green = Result below MCL - Acceptable Water Quality
Red = Result above MCL - Not acceptable Water Quality
ND = Not Detected

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240828085

Report To: Brian Elkins Jr.
Company: RESPEC Company, LLC
5540 Tech Center Drive
Suite 100
Colorado Springs CO 80919

Bill To: Accounts Payable
Company: RESPEC Company, LLC
5540 Tech Center Drive
Suite 100
Colorado Springs CO 80919

Task No.: 240828085
Client PO:
Client Project: Tschamler

Date Received: 8/28/24
Date Reported: 9/4/24
Matrix: Water - Drinking

Customer Sample ID Dawson Aquifer
Sample Date/Time: 8/27/24 9:50 AM
Lab Number: 240828085-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**74.5 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	8/29/24	-	KJP
Calcium as CaCO3	**61.0 mg/L**	EPA 200.7	0.1 mg/L	8/29/24	-	MBN
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	8/29/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	8/29/24	-	KJP
Langelier Index	**-0.88 units**	SM 2330-B	units	9/3/24	-	DPL
pH	**7.36 units**	SM 4500-H-B	0.01 units	8/28/24	-	Sampler
Temperature	**12 °C**	SM 4500-H-B	1 °C	8/28/24	-	Sampler
Total Alkalinity	**74.5 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	8/29/24	QC75872	KJP
Total Dissolved Solids	**150 mg/L**	SM 2540-C	5 mg/L	8/29/24	QC75851	KRI

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: 240828085

Report To: Brian Elkins Jr.
Company: RESPEC Company, LLC

Receive Date: 8/28/24
Project Name: Tschamler

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC75872	Blank	ND	SM 2320-B	8/29/24
Total Dissolved Solids	QC75851	Blank	ND	SM 2540-C	8/29/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC75872	Duplicate -240827047-01	0 - 20	-	1.7	SM 2320-B
		LCS	90 - 110	102.6	-	
		LCS-2	90 - 110	96.3	-	
Total Dissolved Solids	QC75851	Duplicate -240828131-01	0 - 10	-	3.5	SM 2540-C
		LCS	85 - 115	97.6	-	

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.

Drinking Water Chain of Custody

Colorado Analytical LABORATORIES, INC.

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
610 Garrison Street, Unit E
Lakewood CO 80215

Phone: 303-659-2313

www.coloradolab.com

Report To Information
Company Name: RESPEC
Contact Name: Peter Clarkson
Address: 5540 Tech Center Dr. Suite 100
City: Colorado Spring State: CO Zip: 80919
Phone: (708) 870-2519
Email: peter.clarkson@respec.com
Sample Collector: Peter Clarkson
Sample Collector Phone: (708) 870-2519

Bill To Information (If different from report to)
Company Name: RESPEC
Contact Name: Tisha Moffett
Address: 5540 Tech Center Dr Suite 100
City: Colorado Springs State: CO Zip: 80919
Phone: (719) 402-0003
Email: tisha.moffett@respec.com
PO Number:

Project Information
PWSID:
System Name: Tschamler
Compliance Samples: Yes ☐ No ☒
Send Results to CDPHE: Yes ☐ No ☒
Task Number (Lab Use Only)
CAL Task 240828085
CJF

PHASE I, II, V Drinking Water Analyses (check requested analysis) | **Subcontract Analyses**

Date	Time	Client Sample ID / Sample Pt ID	No. of Containers	Residual Chlorine (mg/L) P/A Samples Only	Total Coliform P/A	504.1 EDB/DBCP	505 Pests/PCBs	515.4 Herbicides	524.2 VOCs	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothall	549.2 Diquat	524.2 TTHMs	552.2 HAA5s	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index (Circle)	TOC, DOC (Circle)	SUVA, UV 254 (Circle)		Gross Alpha/Beta	Radium 226/228	Radon	Uranium
8/27/24		Dawson Aquifer																											
		pH = 7.36 Temp = 12.5																											
			10																										
		* 250 mL unpreserved container purged and not needed. CF 8/28/24																											

Instructions:
* collection time 950 Per bottles * KA 8/28

C/S Info:
Delivered Via: UPS
C/S Charge ☒ K

Seals Present Yes ☐ No ☐ Headspace Yes ☐ No ☐
Temp. 2 °C /Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
Peter Clarkson	8/27/24 10:53					KA	8/28/24

CAL Task
240828085

CJF

EPC Confined Aquifer Sampling Requirements

Field Measurements
pH
Temp

Radionuclides
Radium 226 and Radium 228
Gross alpha/Beta

Inorganics
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cyanide (Total)
Fluoride
Mercury
Nitrate
Nitrite
Selenium
Thallium

Secondary MCLs
Aluminum
Chloride
Corrosivity
Iron
Manganese
Silver
Sulfate
Zinc
TDS

Bacteriological:
Total Coliform

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240828085

Report To: Brian Elkins Jr.
Company: RESPEC Company, LLC
5540 Tech Center Drive
Suite 100
Colorado Springs CO 80919

Bill To: Accounts Payable
Company: RESPEC Company, LLC
5540 Tech Center Drive
Suite 100
Colorado Springs CO 80919

Task No.: 240828085
Client PO:
Client Project: Tschamler

Date Received: 8/28/24
Date Reported: 9/4/24
Matrix: Water - Drinking

Customer Sample ID Dawson Aquifer
Sample Date/Time: 8/27/24 9:50 AM
Lab Number: 240828085-01

Test	Result	Method	RL	MCL	Date Analyzed	QC Batch ID	Analyzed By
Total Coliform	**ND mpn/100ml**	Colilert	1 mpn/100ml		8/29/24	-	NRP
Chloride	**1.5 mg/L**	EPA 300.0	0.1 mg/L	250	8/28/24	QC75822	AMJ
Fluoride	**0.31 mg/L**	EPA 300.0	0.10 mg/L	4	8/28/24	QC75825	AMJ
Nitrate Nitrogen	**ND mg/L**	EPA 300.0	0.05 mg/L	10	8/28/24	QC75826	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03 mg/L	1	8/28/24	QC75827	AMJ
Sulfate	**8.7 mg/L**	EPA 300.0	0.1 mg/L	250	8/28/24	QC75829	AMJ
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005 mg/L		9/3/24	QC75895	DPL
Total							
Iron	**ND mg/L**	EPA 200.7	0.005 mg/L	0.3	8/29/24	QC75841	MBN
Aluminum	**ND mg/L**	EPA 200.8	0.001 mg/L	0.05	8/29/24	QC75844	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012 mg/L	0.006	8/29/24	QC75844	MBN
Arsenic	**0.0010 mg/L**	EPA 200.8	0.0006 mg/L	0.01	8/29/24	QC75844	MBN
Barium	**0.0889 mg/L**	EPA 200.8	0.0007 mg/L	2	8/29/24	QC75844	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001 mg/L	0.004	8/29/24	QC75844	MBN
Cadmium	**ND mg/L**	EPA 200.8	0.0001 mg/L	0.005	8/29/24	QC75844	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015 mg/L	0.1	8/29/24	QC75844	MBN
Manganese	**0.0614 mg/L**	EPA 200.8	0.0008 mg/L	0.05	8/29/24	QC75844	MBN
Mercury	**ND mg/L**	EPA 200.8	0.0001 mg/L	0.002	8/29/24	QC75844	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008 mg/L	0.05	8/29/24	QC75844	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005 mg/L	0.1	8/29/24	QC75844	MBN

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) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240828085

Report To: Brian Elkins Jr.
Company: RESPEC Company, LLC
5540 Tech Center Drive
Suite 100
Colorado Springs CO 80919

Bill To: Accounts Payable
Company: RESPEC Company, LLC
5540 Tech Center Drive
Suite 100
Colorado Springs CO 80919

Task No.: 240828085
Client PO:
Client Project: Tschamler

Date Received: 8/28/24
Date Reported: 9/4/24
Matrix: Water - Drinking

Customer Sample ID Dawson Aquifer
Sample Date/Time: 8/27/24 9:50 AM
Lab Number: 240828085-01

Test	Result	Method	RL	MCL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Thallium	**ND mg/L**	EPA 200.8	0.0002 mg/L	0.002	8/29/24	QC75844	MBN
Zinc	**0.004 mg/L**	EPA 200.8	0.001 mg/L	5	8/29/24	QC75844	MBN

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) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240828085

Report To: Brian Elkins Jr.
Company: RESPEC Company, LLC

Receive Date: 8/28/24
Project Name: Tschamler

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chloride	QC75822	Blank	ND	EPA 300.0	8/28/24
Cyanide-Total	QC75895	Blank	ND	EPA 335.4	9/3/24
Fluoride	QC75825	Blank	ND	EPA 300.0	8/28/24
Aluminum	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Antimony	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Arsenic	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Barium	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Beryllium	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Cadmium	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Chromium	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Manganese	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Mercury	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Selenium	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Silver	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Thallium	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Zinc	QC75844	Method Blank	ND	EPA 200.8	8/28/24
Iron	QC75841	Method Blank	ND	EPA 200.7	8/28/24
Nitrate Nitrogen	QC75826	Blank	ND	EPA 300.0	8/28/24
Nitrite Nitrogen	QC75827	Blank	ND	EPA 300.0	8/28/24
Sulfate	QC75829	Blank	ND	EPA 300.0	8/28/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chloride	QC75822	Duplicate -240827006-01	0 - 20	-	0.1	EPA 300.0
		LCS	90 - 110	103.4	-	
		MS -240827006-01	75 - 125	108.9	-	
Cyanide-Total	QC75895	Duplicate -240828053-03	0 - 20	-	0.0	EPA 335.4
		LCS	90 - 110	89.1	-	
		MS -240828053-03B	75 - 125	96.0	-	
Fluoride	QC75825	Duplicate -240827006-01	0 - 20	-	0.4	EPA 300.0
		LCS	90 - 110	94.4	-	
		MS -240827006-01	75 - 125	96.2	-	
Aluminum	QC75844	LCS	90 - 110	103.0	-	EPA 200.8
		MS -240828044-01	70 - 130	98.8	-	
		MSD -240828044-01	0 - 10	-	9.3	
Antimony	QC75844	LCS	90 - 110	109.0	-	EPA 200.8
		MS -240828044-01	70 - 130	111.0	-	
		MSD -240828044-01	0 - 10	-	1.4	
Arsenic	QC75844	LCS	90 - 110	103.3	-	EPA 200.8
		MS -240828044-01	70 - 130	118.2	-	
		MSD -240828044-01	0 - 10	-	4.3	
Barium	QC75844	LCS	90 - 110	105.6	-	EPA 200.8

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) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA
ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240828044-01	70 - 130	88.3	-	
		MSD -240828044-01	0 - 10	-	1.8	
Beryllium	QC75844	LCS	90 - 110	102.9	-	EPA 200.8
		MS -240828044-01	70 - 130	94.0	-	
		MSD -240828044-01	0 - 10	-	0.4	
Cadmium	QC75844	LCS	90 - 110	103.1	-	EPA 200.8
		MS -240828044-01	70 - 130	102.6	-	
		MSD -240828044-01	0 - 10	-	0.0	
Chromium	QC75844	LCS	90 - 110	107.4	-	EPA 200.8
		MS -240828044-01	70 - 130	101.4	-	
		MSD -240828044-01	0 - 10	-	1.0	
Manganese	QC75844	LCS	90 - 110	109.6	-	EPA 200.8
		MS -240828044-01	70 - 130	106.9	-	
		MSD -240828044-01	0 - 10	-	4.3	
Mercury	QC75844	LCS	90 - 110	98.2	-	EPA 200.8
		MS -240828044-01	70 - 130	92.3	-	
		MSD -240828044-01	0 - 10	-	0.3	
Selenium	QC75844	LCS	90 - 110	106.2	-	EPA 200.8
		MS -240828044-01	70 - 130	108.3	-	
		MSD -240828044-01	0 - 10	-	2.7	
Silver	QC75844	LCS	90 - 110	97.7	-	EPA 200.8
		MS -240828044-01	70 - 130	77.9	-	
		MSD -240828044-01	0 - 10	-	4.7	
Thallium	QC75844	LCS	90 - 110	102.0	-	EPA 200.8
		MS -240828044-01	70 - 130	92.3	-	
		MSD -240828044-01	0 - 10	-	1.9	
Zinc	QC75844	LCS	90 - 110	94.4	-	EPA 200.8
		MS -240828044-01	70 - 130	82.4	-	
		MSD -240828044-01	0 - 10	-	1.3	
Iron	QC75841	Duplicate -240828028-01	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	90.9	-	
		MS -240828085-01A	75 - 125	110.9	-	
Nitrate Nitrogen	QC75826	Duplicate -240827006-01	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	101.2	-	
		MS -240827006-01	75 - 125	97.1	-	
Nitrite Nitrogen	QC75827	Duplicate -240827006-01	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	97.9	-	
		MS -240827006-01	75 - 125	93.6	-	
Sulfate	QC75829	Duplicate -240827006-01	0 - 20	-	0.9	EPA 300.0
		LCS	90 - 110	101.4	-	
		MS -240827006-01	75 - 125	109.0	-	

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) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA
ND = Not Detected at Reporting Limit.

Drinking Water Chain of Custody

Colorado Analytical LABORATORIES, INC.

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
610 Garrison Street, Unit E
Lakewood CO 80215

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Information
Company Name: RESPEC	Company Name: RESPEC	PWSID:
Contact Name: Peter Clarkson	Contact Name: Tisha Moffett	System Name: Tschamler
Address: 5540 Tech Center Dr. Suite 100	Address: 5540 Tech Center Dr Suite 100	Compliance Samples: Yes ☐ No ☒
City: Colorado Spri State: CO Zip: 80919	City: Colorado Springs State: CO Zip: 80919	Send Results to CDPHE: Yes ☐ No ☒
Phone: (708) 870-2519	Phone: (719) 402-0003	Task Number (Lab Use Only) CAL Task 240828085
Email: peter.clarkson@respec.com	Email: tisha.moffett@respec.com	CJF
Sample Collector: Peter Clarkson		
Sample Collector Phone: (708) 870-2519	PO Number:	

Date	Time	Client Sample ID / Sample Pt ID	No. of Containers	Residual Chlorine (mg/L) P/A Samples Only	PHASE I, II, V Drinking Water Analyses (check requested analysis): Total Coliform P/A	504.1 EDB/DBCP	505 Pests/PCBs	515.4 Herbicides	524.2 VOCs	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothall	549.2 Diquat	524.2 TTHMs	552.2 HAA5s	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index (Circle)	TOC, DOC (Circle)	SUVA, UV 254 (Circle)		Subcontract Analyses: Gross Alpha/Beta	Radium 226/228	Radon	Uranium
8/27/24		Dawson Aquifer																											
		pH = 7.36 Temp = 12.5																											
			10																										
		* 250 mL unpreserved container pulled and not needed. CF 8/28/24																											

Page 5 of 6

Instructions:
* collection time 9:50 per bottles * KA 8/28

C/S Info:
Delivered Via: UPS
C/S Charge ☒

Seals Present Yes ☐ No ☐ Headspace Yes ☐ No ☐
Temp. 2 °C /Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
Peter Clarkson	8/27/24 10:53					KA	8/28/24

CAL Task
240828085

CJF

EPC Confined Aquifer Sampling Requirements

Field Measurements
pH
Temp

Radionuclides
Radium 226 and Radium 228
Gross alpha/Beta

Inorganics
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cyanide (Total)
Fluoride
Mercury
Nitrate
Nitrite
Selenium
Thallium

Secondary MCLs
Aluminum
Chloride
Corrosivity
Iron
Manganese
Silver
Sulfate
Zinc
TDS

Bacteriological:
Total Coliform

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

Lab Control ID: 24H02719
Received: Aug 29, 2030
Reported: Sep 24, 2024
Purchase Order No.
None Received

Customer ID: 05377Z
Account ID: Z01034

Rebecca Manzanares
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City, CO 80640

ANALYTICAL REPORT

Reviewed and approved by:

Haley Jones
Analytical QA Manager

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

Lab Control ID: 24H02719
Received: Aug 29, 2030
Reported: Sep 24, 2024
Purchase Order No.
None Received

Customer ID: 05377Z
Account ID: Z01034

ANALYTICAL REPORT

Rebecca Manzanares
Colorado Analytical Laboratories, Inc.

Lab Sample ID	24H02719-001							
Customer Sample ID	**240828086-01** - Tschamler - Dawson Aquifer sampled on 08/27/24 @ 0950							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	10.0	3.5	1.6	SM 7110 B	09/11/24 @ 0757	JR
Gross Beta	**pCi/L**	**T**	6.2	2.9	2.0	SM 7110 B	09/11/24 @ 0757	JR

Lab Sample ID	24H02719-002							
Customer Sample ID	**240828086-01A** - Tschamler - Dawson Aquifer sampled on 08/27/24 @ 0950							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Radium-226	**pCi/L**	**T**	3.0	0.6	0.2	SM 7500-Ra B	09/10/24 @ 0939	KT
Radium-228	**pCi/L**	**T**	8.1	1.0	0.2	EPA pg.19	09/16/24 @ 1231	KR

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) = Replicate Sample (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 09/09/2024

Batch QC Summary Form

Analyte: Radium-226

Control Standard/LFB: ID: C73-006 pCi/mL: 21.1 (use 2 diluted)

Spike Solution: ID: C73-006 pCi/mL: 21.1 (use 2 mL)

Spike Recovery Calculation: Sample: 24H02729-02d

$$\text{Calculation: } \frac{(42.4)\ (1.000) - (0.1)\ (1.000)}{42.2} \times 100 = 100\%$$

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:

24H02717	
24H02718	
24H02719	
24H02720	
24H02729	
24H02730	
24H02742	
24H02743	

Evaluator: 

09/13/2024
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 09/12/2024

Batch QC Summary Form

Analyte: Radium-228

Control Standard/LFB: ID: C6-008 pCi/mL: 14.1 (use 5 diluted)

Spike Solution: ID: C6-008 pCi/mL: 14.1 (use 5 mL)

Spike Recovery Calculation: Sample: 24H02720-2d

$$\text{Calculation: } \frac{(70.0)\ (1.000) - (1.3)\ (1.000)}{70.5} \times 100 = 97.4\%$$

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:

24H02698	
24H02705	
24H02716	
24H02717	
24H02718	
24H02719	
24H02720	
24H02729	

Evaluator: 

09/23/2024
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 09/11/2024

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C11-006 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C11-006 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap

$$\text{Calculation: } \frac{(305.4)(0.200) - (1.4)(0.200)}{57.4} \times 100 = 106\%$$

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:

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:

24H02633	24H02729
24H02700	24H02730
24H02701	24H02737
24H02705	24H02742
24H02717	24H02743
24H02718	24H02753
24H02719	
24H02720	
24H02721	
24H02722	

Evaluator: 

09/17/2024
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 09/11/2024

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C11-006 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C11-006 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap

$$\text{Calculation: } \frac{(197.4)\ (0.200) - (2.0)\ (0.200)}{44} \times 100 = 88.8\%$$

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:

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:

24H02633	24H02729
24H02700	24H02730
24H02701	24H02737
24H02705	24H02742
24H02717	24H02743
24H02718	24H02753
24H02719	
24H02720	
24H02721	
24H02722	

Evaluator: 

09/17/2024
Date

24H 02719

Colorado Analytical LABORATORIES, INC.

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

Report To Information	Bill To Information: (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Rebecca Manzanares E-Mail: rebeccamanzanares@coloradolab.com		Tschamler
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 240828086 CJF	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
8/27/24	9:50 AM	240828086-01 - Dawson Aquifer	Water - Drinking		X		1L - Unpreserved
8/27/24	9:50 AM	240828086-01A - Dawson Aquifer	Water - Drinking	X		X	4 - 1L - Unpreserved

Comment:

Hazen Preservation Checks
8/30/24 10:12 Intial pH 7
A 46 Lot Preservered by DE
____ ____ pH √ by ____
Final pH ____

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
Adam A	8/29/24 800		08/29/24 15:00				