Thorin Resources 1900 Main St. Unit 1 PO Box 1030 Ouray, CO 81427

May 19th, 2025

Mr. Lucas West Environmental Protection Specialist Colorado Division of Reclamation Mining and Safety 101 3rd Street Grand Junction, CO 81501

Subject: TR-17 Adequacy Review Response – Stormwater Pond & GW Wells

DRMS Permit No. M-2012-032

Revenue Mine, Ouray County, Colorado

Dear Mr. West,

Please find attached the final documentation verifying that the Stormwater Settling Pond and Groundwater Monitoring Wells 4A and 4B have been completed in accordance with applicable regulatory requirements.

Thank you for your attention to this additional data to our adequacy review response.

Sincerely,

Chris Skerik

Chief Operating Officer

Thorin Resources

cskerik@thorinresources.com

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Attachment A – Stormwater Pond

Retention Pond at Revenue Mine

Ouray, CO

Drainage Analysis of Retention Pond

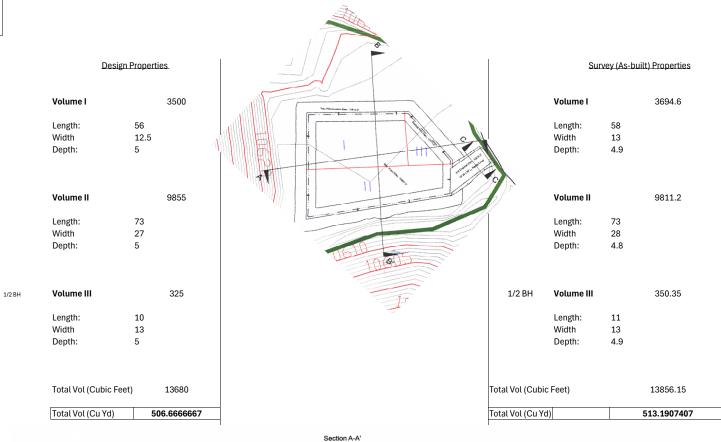
Sargon Engineering was tasked with comparing the volume of the retention pond at the Revenue Mine in Ouray, Colorado and to determine if the volume of the pond built was the same or larger than the retention pond designed. After analyzing the dimensions of the retention pond using the as-built survey and design data, it was determined that the volume of the as-built pond was larger than the designed pond. The designed pond has a volume of 507 cubic yards, while the volume of the as-built pond is 513 cubic yards. Using this data, further analysis was conducted to determine if the retention pond could handle a 100 year 24 hour rainfall event. Using the rational method, the peak discharge in the 2 acre watershed is 1.04 cubic feet per second. In 24 hours, this will lead to about 90,000 cubic feet of water in a continuous 100 year rainfall event. With a retention pond of volume close to 14,000 cubic feet, the pond will reach max volume after 3.7 hours in 100 year rainfall event. Furthermore, the time of concentration was found to be close to 7 minutes. This is the time needed for water to flow from the most remote point in a watershed to the watershed outlet.

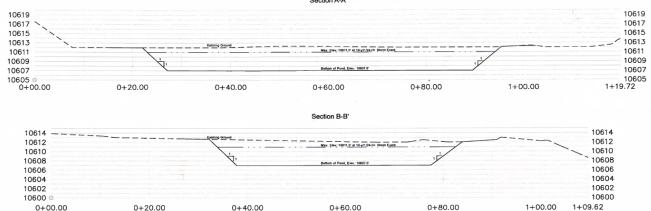


Approved by:

John T. Liu, PE CO License #: 54500 Retention Pond Revenue Mine 2/5/2025

Ouray Silver Mines, Inc. Ouray , Colorado





$$\boldsymbol{t}_c = \boldsymbol{t}_i + \boldsymbol{t}_t$$

where

 t_c = time of concentration (minutes)

 t_i = initial or overland travel time (minutes)

 $t_{t} = \text{channelized travel time in a swale, storm drain,} \\ \text{paved gutter, and channel (minutes)}.$

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L}}{5^{0.33}}$$

where

 t_i = overland or initial flow time (minutes)

 C_s = runoff coefficient for 5-year frequency from Table 600-6

L = length of overland flow (ft), 500 foot maximum for nonurban, 300 foot maximum for urban

S = average basin slope along the length of overland flow (ft/ft).

$$t_t = \frac{L_t}{60K\sqrt{S_0}} = \frac{L_t}{60V_t}$$

where

 t_t = channelized travel time (minutes)

 $L_t = \text{length of channel (ft)}$

K = conveyance coefficient from Table 600-1

 $S_0 = \text{channel slope (ft/ft)}$

 $V_t = \text{velocity (ft/sec)}.$

$$t_c = (18 - 15i) + \frac{L}{60(24i + 12)\sqrt{S_0}}$$

where

 $t_{c} = \text{maximum time of concentration for an urban watershed (minutes)}$

 $L_t =$ combined length of overland and channelized flow (ft)

i = imperviousness (expressed as a decimal)

 $S_0 = \text{slope of flow path (ft/ft)}.$

Input
$$x = \frac{\left\{0.395 \, (1.1 - 0.42) \, \sqrt{500} \,\right\}}{\left(\frac{10665}{10612}\right)^{0.33}}$$
 Result
$$x = \{5.99621\}$$

$$\frac{500}{600\sqrt{\frac{10665}{10612}}}$$

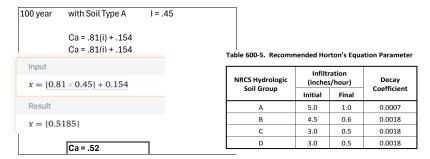
Decimal approximation

0.831260118364267

L=	500
j =	0.45
S0 =	10665/10612

Input
$$x = (18 - 15 \times 0.45) + \frac{500}{\left\{60 \left(24 \times 0.45\right) + 12 \sqrt{\frac{10665}{10612}}\right\}}$$
 Result
$$x = \{12.0075\}$$

NRCS	Storm Return Period									
Soil Type	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year				
Α	C _A = 0.89i	C _A = 0.93i	C _A = 0.94i	C _A = 0.944i	C _A = 0.95i	C _A = 0.81i + 0.154				
В	C _B = 0.89i	C _B = 0.93i	C _B = 0.81i + 0.125	C _B = 0.70i + 0.23	C _B = 0.59i + 0.364	C _B = 0.49i + 0.454				
C/D	C _{C/D} = 0.89i	C _{C/D} = 0.87i +0.052	C _{C/D} = 0.74i + 0.2	C _{C/D} = 0.64i + 0.31	C _{C/D} = 0.54i + 0.418	C _{C/D} = 0.45i + 0.508				

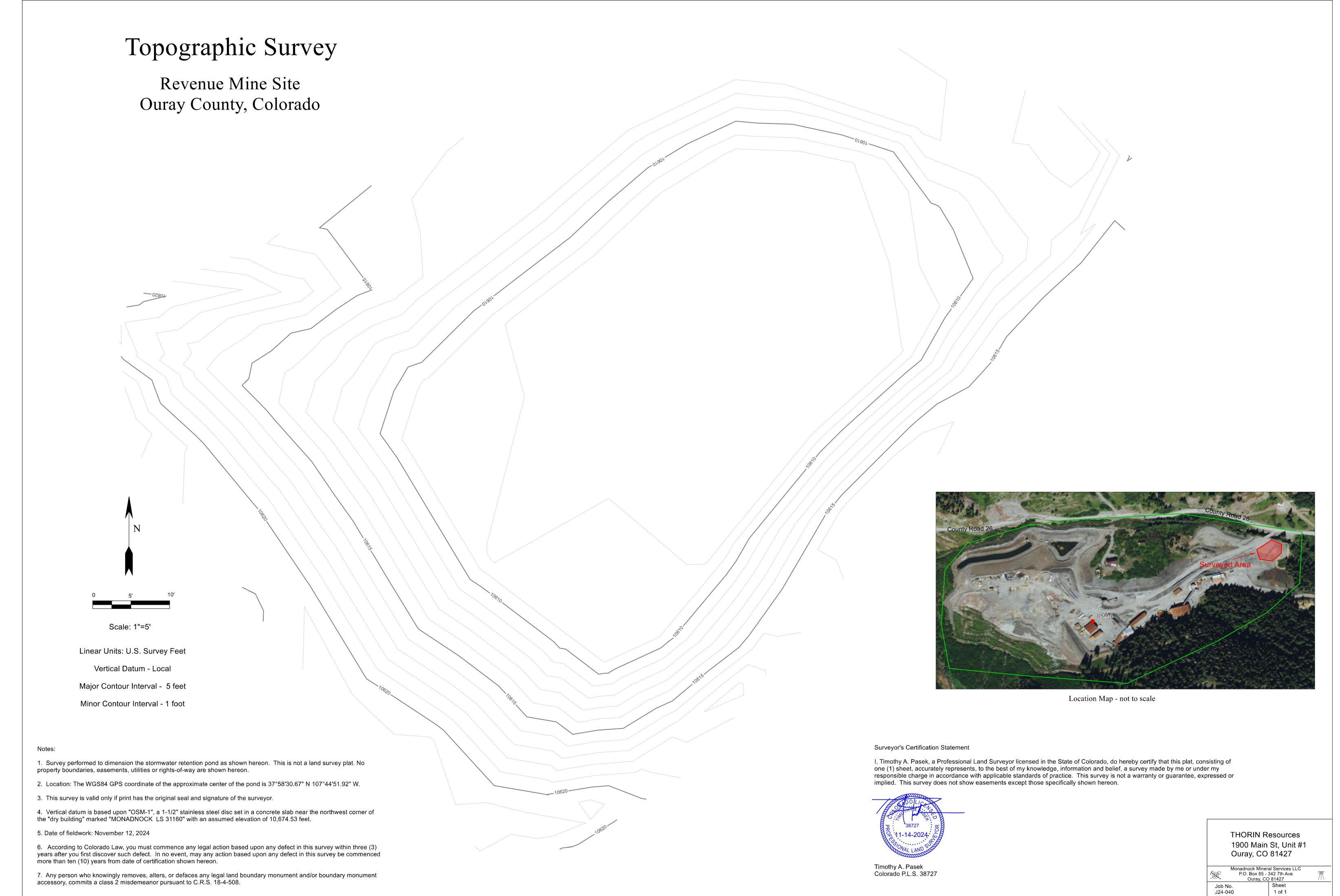


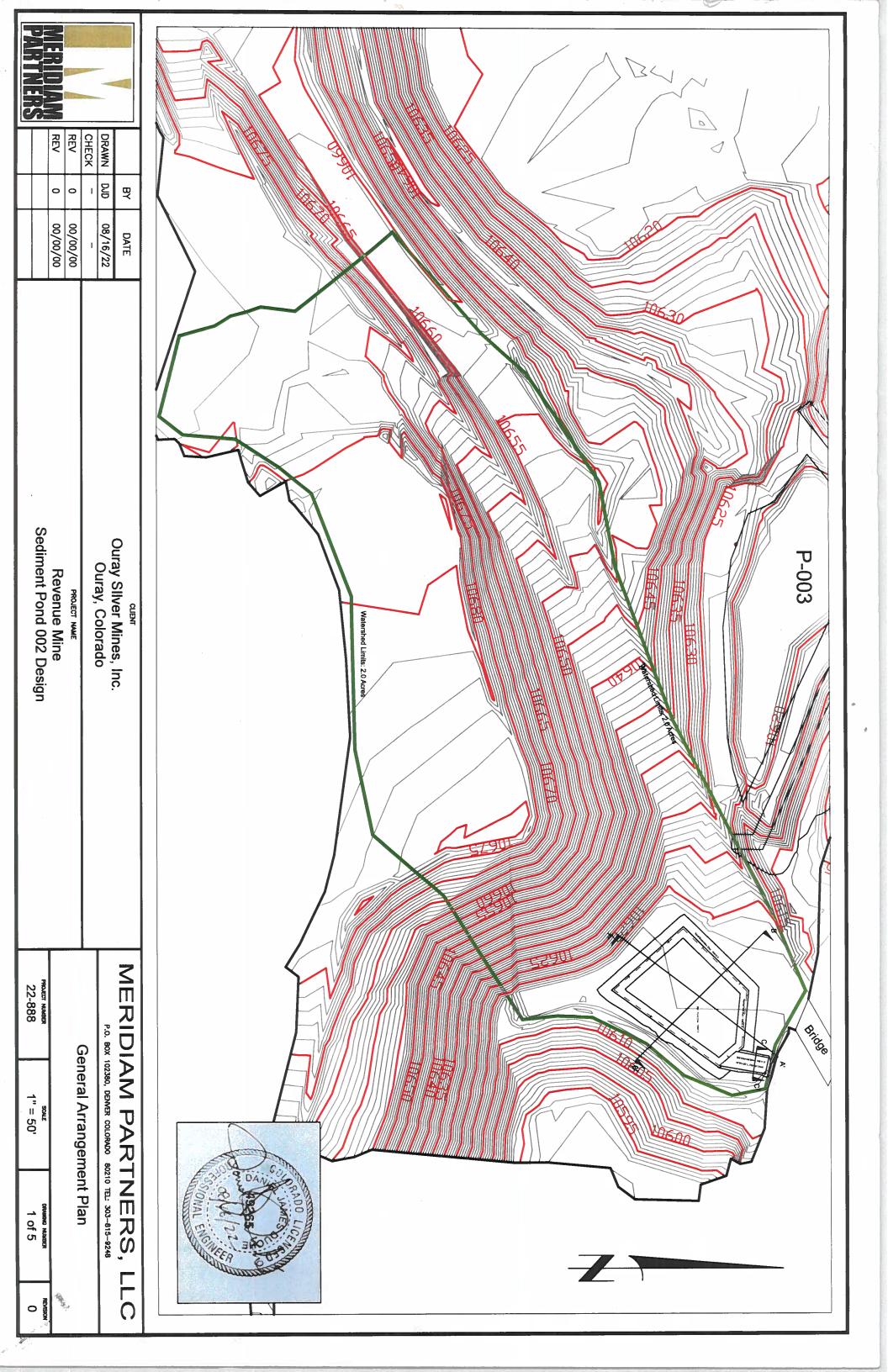
Pond Volume: 513 cu yd. = 13,851 cubic feet

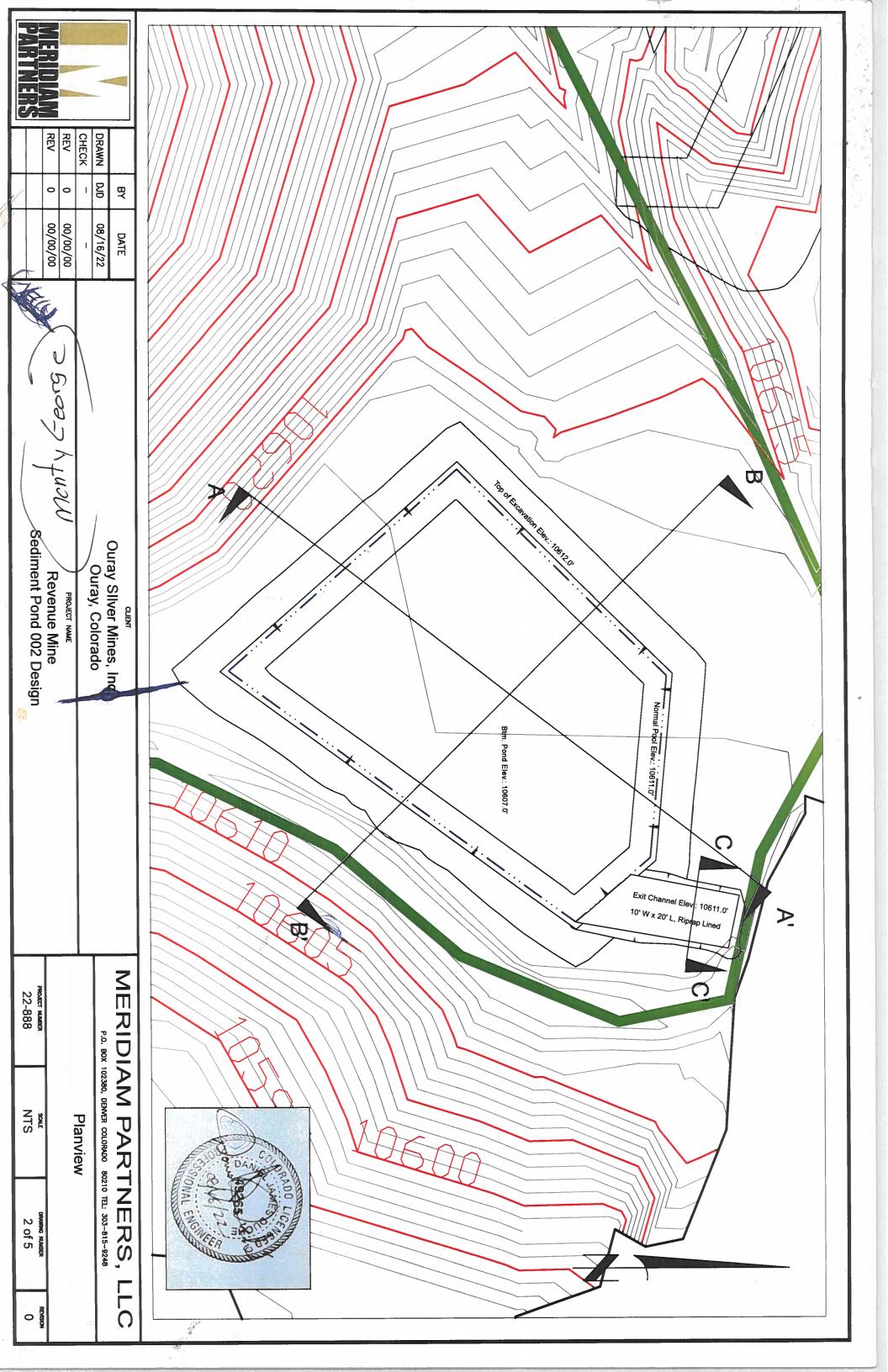
- Time = 24 hours = 86,400 seconds (since 1 hour = 3,600 seconds).
- Inflow volume = Flow rate × Time = 1.04 cfs × 86,400 seconds = 89,856 cubic feet.
- 3. Compare the Pond's Capacity and Inflow:
 - Pond volume = 13,500 cubic feet.
 - Inflow volume over 24 hours = 89,856 cubic feet.

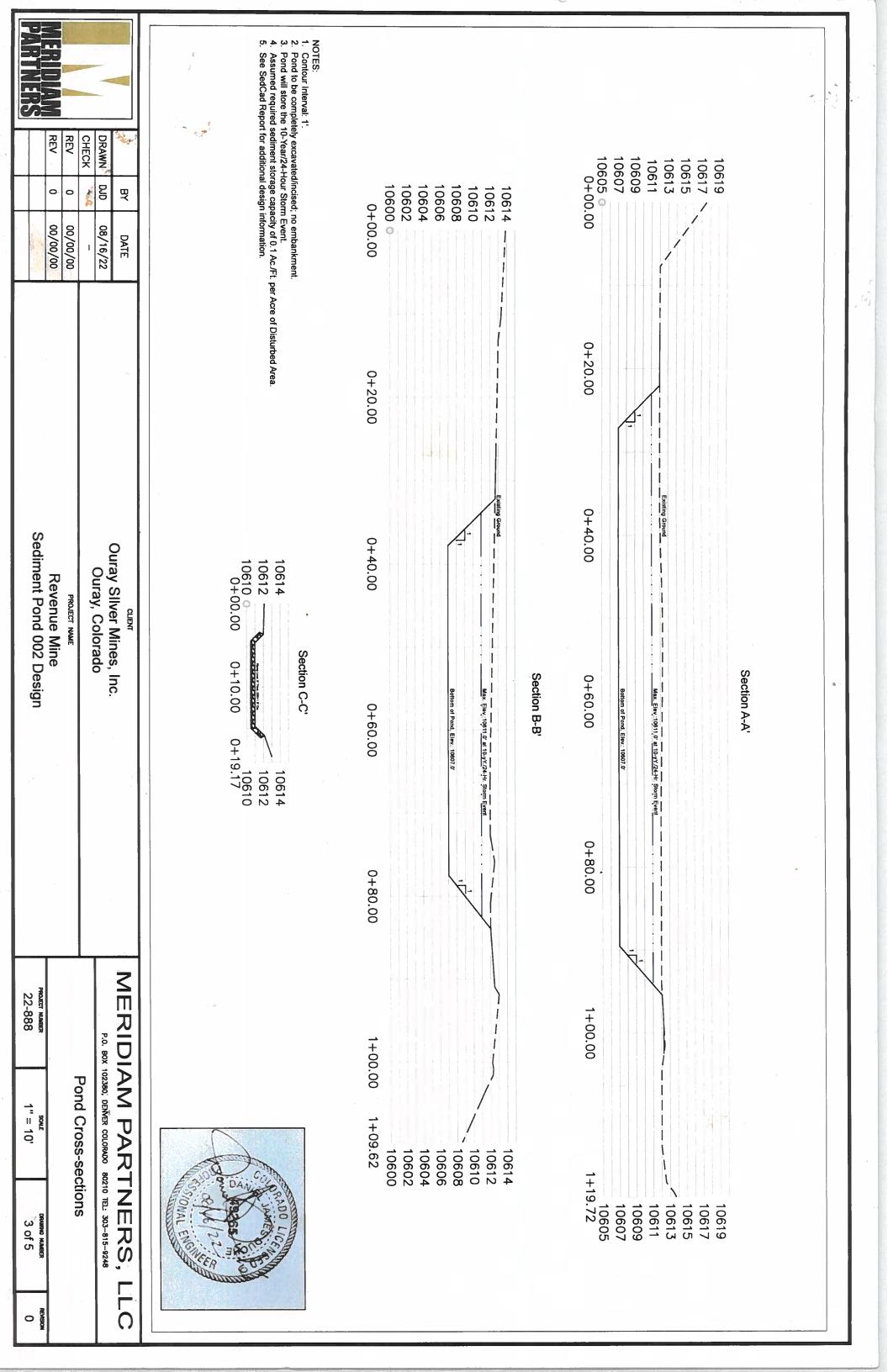
Rainfall	89,856 cu ft
Pond Vol	13,851 cu ft
Max Fill Time	3.69952 hours

Conclusion: Max Pond is close to 14,000 cubic Feet. A 100 year rainfall event will produce close to 90,000 cubic feet in a 24 hour period. Pond will reach max volume and discharge excess water through outfall. With a time of concentration close to 7 min, this is how long it will take rainwater from the furthest point in a watershed to reach the outlet. Pond will reach max volume at 3.7 hours. The current design pond can handle 100 years rain event in 3.5 hours









$Attachment \ B-Groundwater \ Monitoring \ Wells \ 4A \ \& \ 4B$

WELL PERMIT NUMBER 336488-RECEIPT NUMBER 10039132

ORIGINAL PERMIT APPLICANT(S)

THORIN RESOURCES LLC (CHRIS SKERIK)

APPROVED WELL LOCATION

Water Division: 4 Water District: 68

Designated Basin: N/A
Management District: N/A
County: OURAY
Parcel Name: N/A

Physical Address: 1416 CR 26 OURAY, CO 81427

NW 1/4 NE 1/4 Section 21 Township 43.0 N Range 8.0 W New Mexico

P.M.

UTM COORDINATES (Meters, Zone:13, NAD83)

Easting: 258676.0 Northing: 4206615.0

PERMIT TO USE AN EXISTING WELL

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

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(I) for uses as described in CRS 37-92-602(1)(f). Use of this well is limited to monitoring water levels and/or water quality sampling.
- 4) Approved for the use of an existing well known as GW-4A.
- 5) This well must be equipped with a locking cap or seal to prevent well contamination or possible hazards as an open well. The well must be kept capped and locked at all times except during sampling or measuring.
- 6) Records of water level measurements and water quality analyses shall be maintained by the well owner and submitted to the Division of Water Resources upon request.
- 7) Upon conclusion of the monitoring program the well owner shall plug this well in accordance with Rule 16 of the Water Well Construction Rules. A Well Abandonment Report e-Form available at: https://dwr.state.co.us/eforms must be completed and submitted to the Division of Water Resources within 60 days of plugging.
- 8) The owner shall mark the well in a conspicuous location with the well permit number and name of aquifer as appropriate, and shall take necessary means and precautions to preserve these markings.
- 9) This well must have been constructed by or under the supervision of a licensed well driller or other authorized individual according to the Water Well Construction Rules.
- 10) This well must be located not more than 200 feet from the location specified on this permit.

NOTE: Issuance of this permit does not guarantee that this well can be converted to a production well under a future permit. Additionally, pursuant to Rule 14.2 of the Water Well Construction Rules (2 CCR 402-2), monitoring holes constructed pursuant to a monitoring hole notice shall not be converted to a production well. (Upon obtaining a permit from the State Engineer, a monitoring hole may be converted to a monitoring well, recovery well for remediation of the aquifer, or a dewatering system for dewatering the aquifer.)

Seoff Davis	Date Issued:	11/8/2024
	Expiration Date:	N/A
Issued By GEOFFREY DAVIS	•	

WELL PERMIT NUMBER 336489-RECEIPT NUMBER 10039133

ORIGINAL PERMIT APPLICANT(S)

THORIN RESOURCES LLC (CHRIS SKERIK)

APPROVED WELL LOCATION

Water Division: 4 Water District: 68

Designated Basin: N/A
Management District: N/A
County: OURAY
Parcel Name: N/A

Physical Address: 1416 CR 26 OURAY, CO 81427

NW 1/4 NE 1/4 Section 21 Township 43.0 N Range 8.0 W New Mexico

P.M.

UTM COORDINATES (Meters, Zone:13, NAD83)

Easting: 258672.0 Northing: 4206613.0

PERMIT TO USE AN EXISTING WELL

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

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(I) for uses as described in CRS 37-92-602(1)(f). Use of this well is limited to monitoring water levels and/or water quality sampling.
- 4) Approved for the use of an existing well known as GW-4B.
- 5) This well must be equipped with a locking cap or seal to prevent well contamination or possible hazards as an open well. The well must be kept capped and locked at all times except during sampling or measuring.
- 6) Records of water level measurements and water quality analyses shall be maintained by the well owner and submitted to the Division of Water Resources upon request.
- 7) Upon conclusion of the monitoring program the well owner shall plug this well in accordance with Rule 16 of the Water Well Construction Rules. A Well Abandonment Report e-Form available at: https://dwr.state.co.us/eforms must be completed and submitted to the Division of Water Resources within 60 days of plugging.
- 8) The owner shall mark the well in a conspicuous location with the well permit number and name of aquifer as appropriate, and shall take necessary means and precautions to preserve these markings.
- 9) This well must have been constructed by or under the supervision of a licensed well driller or other authorized individual according to the Water Well Construction Rules.
- 10) This well must be located not more than 200 feet from the location specified on this permit.

NOTE: Issuance of this permit does not guarantee that this well can be converted to a production well under a future permit. Additionally, pursuant to Rule 14.2 of the Water Well Construction Rules (2 CCR 402-2), monitoring holes constructed pursuant to a monitoring hole notice shall not be converted to a production well. (Upon obtaining a permit from the State Engineer, a monitoring hole may be converted to a monitoring well, recovery well for remediation of the aquifer, or a dewatering system for dewatering the aquifer.)

Seoff Davis	Date Issued:	11/8/2024
	Expiration Date:	N/A
Issued By GEOFFREY DAVIS	,	

COLORADO DIVISION OF WATER RESOURCES DEPARTMENT OF NATURAL RESOURCES						Office Use Only Form GWS-46 (01/2020)				S-46 (01/2020)
1313 SHERMAN ST., Ste 821, DENVER CO 80203 Phone: (303) 866-3581 dwrpermitsonline@state.co.us										
	ORING/O	BSF								
Water Well Permit Application Review instructions on reverse side prior to completing form.										
Review instru	ctions on reve	rse side	e prior t	o compl						
1. Well Own	ner Informa	tion								
Name of well owner	ı					6. Use Of Well				
Mailing address						Use of this well and/or water qu			wate	er levels
						7. Well Data (pro	posed)			
City		State	Э	Zip code		Total depth	foot	Aquifer		
							feet			
Telephone #		<u> </u>	E-Mail (If t	filing online	it is required)	8. Consultant In	formation (i	f applicable)		
						Name of contact person				
	Application	•			· · · · · · · · · · · · · · · · · · ·	Company name				
☐ Use existing ☐ Construct n	-			for exist	ing monitoring well:	Company name				
Other:		Perm	it no.:			Mailing address				
3. Refer To	(if applicabl	e)						_		
Monitoring hole ack	knowledgment		Well name	or#		City		State	Zip Co	ode
MH-						Telephone #				
4. Location	Of Propose	ed We	II (Imp	ortant	See Instructions)	·				
				1/4 of	the 1/4	9. Proposed We	II Driller Lic	ense #(optio	nal):	
Section	Township N	or S	Range	E or W	Principal Meridian	10. Name of Wel				
						The making of false s				
		-				degree, which is puni				
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Distance of well from	m section lines (sect	ion lines ar	re typically		r lines) Ft. from ☐ E ☐ W	24-4-104 (13)(a). I had thereof and state that Sign or enter full name here	ave read the sta t they are true to	tements herein,		
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MONITORING/OBSERVATION WELL PERMIT APPLICATION INSTRUCTIONS

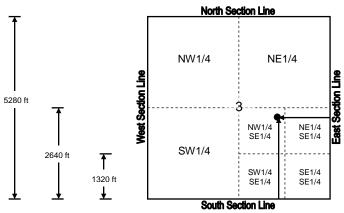
Applications must be computer generated on-line, typewritten or printed in BLACK or BLUE INK. ALL ITEMS in the application must be completed. Incomplete applications may be returned for more information. Applications are evaluated in chronological order. Please allow approximately six weeks for processing. This form may be reproduced by photocopying or computer generation. Reproductions must retain margins and print quality of the original form. If filing online, see online filing instructions for further information. You may also save, print, scan and email the completed form to: dwrpermitsonline@state.co.us

<u>FEES</u>: This application must be submitted with a \$100 filing fee. (The fee for an application to replace or deepen an existing permitted monitoring/observation well is \$100 for locations outside Designated Ground Water Basins, and \$60 inside Designated Ground Water Basins.) Fees are nonrefundable. Please visit our website (<u>dwr.colorado.gov</u>) for acceptable payment information or contact DWR at (303) 866-3581.

<u>USES</u>: This form (GWS-46) is to be used when applying for a permit where the only uses are monitoring of water levels and/or water quality sampling. For well construction criteria refer to the Colorado Water Well Construction Rules, 2CCR 402-2. A copy of the Rules may be obtained from any Division of Water Resources Office for a fee of \$5, or you may access them online on our website (dwr.colorado.gov)

<u>ITEM INSTRUCTIONS</u>: (numbers correspond with those on the front of this form)

- 1. Provide the name of the well owner and the mailing address where all correspondence will be sent.
- 2. Check and complete all boxes that apply.
- 3. Provide the MH number assigned by the Division of Water Resources in response to the notice of intent to construct a monitoring/observation well. Complete the well name if the structure has a name or identifying number.
- 4. If applying for a permit to **construct a new well**, you <u>must</u> provide the county, section #, township, range and principal meridian. You **do not** need to provide the ¼ of the ¼ section designation, distances from section lines or an optional GPS location (UTM coordinates). If a permit is issued and a well constructed, the authorized individual will be required to provide an accurate GPS location (UTM coordinates) of the "as-built" well location. If applying for a permit to **use an existing well** you <u>must</u> provide the well location information stated above, as well as either a GPS location (UTM coordinates) of the existing well site, or distances from section lines (**including the** ¼ **of the** ¼ **section designation**) as follows: In a typical case, a township is comprised of 36 sections, with each section ideally one mile square, or 5,280 feet on each side. Sections are further divided into quarter sections. Each ¼ Section is 2,640 feet by 2,640 feet and comprises 160 acres. Each ¼ section can be further divided into additional quarters. Each ¼ of the ¼ Section is 1,320 feet by 1,320 feet and comprises 40 acres. The distances are measured from the section lines. In the following example, the well is located 2,500 feet from the South Section line and 1,400 feet from the East Section line:



Well Location Example: NW1/4 of the SE1/4 of Section 3, being 2500 feet from the South Section Line and 1400 feet from the East Section Line.

If providing a GPS location (UTM coordinates), the required GPS unit settings must be as indicated on this form. Colorado contains two UTM zones (12 & 13). Zone 13 covers most of Colorado. The boundary between Zone 12 and Zone 13 is the 108th Meridian (longitude). West of the 108th Meridian is UTM Zone 12 and east of the 108th Meridian is uTM Zone 13. The 108th Meridian is approximately 57 miles east of the Colorado-Utah state line. On most GPS units, the UTM zone is given as part of the Easting measurement, e.g. 12T0123456. Check the appropriate box for the zone. Provide the property address of the well location if one exists. If it is the same as the mailing address, check the box next to the well location address.

- 5. Provide property owner information.
- 6. Use of this well is limited to monitoring water levels and/or water quality sampling only.
- 7. The actual or anticipated total depth must be provided. Provide the name of the aquifer in which the well will be completed.
- 8. Provide consultant information (if applicable). Note: A consultant may sign this application on behalf of their client.
- 9. Monitoring/observation wells must be constructed by a Colorado licensed well construction contractor or authorized individual, as defined in the Well Construction Rules, 2CCR 402-2. Only a licensed contractor may construct any monitoring/observation well that penetrates a confining layer, or, is to be converted into a future production well. The well must be constructed in compliance with the Well Construction Rules, unless a variance has been approved allowing an alternative construction design.
- 10. The individual signing the application or entering their name (and title if applicable) must be the applicant or an officer of the corporation/company/ agency identified as the applicant, their attorney or consultant. An authorized agent may also sign the application, if a letter signed by the applicant or their attorney is submitted with the application authorizing that agent to sign or enter their name on the applicant's behalf. Payment must be received via phone, fax or mail prior to processing the application. If filing online please call the Records Section at 303.866.3581 to pay via credit card.

 IF YOU HAVE ANY QUESTIONS regarding any item on the application form, please call the Division of Water Resources Ground Water Information Desk (303-866-3587), or the nearest Division of Water Resources Field Office located in Greeley (970-352-8712), Pueblo (719-542-3368), Alamosa (719-589-6683), Montrose (970-249-6622), Glenwood Springs (970-945-5665), Steamboat Springs (970-879-0272), or Durango (970-247-1845), or refer to the CDWR web site at dwr.colorado.gov for general information.

COLORADO DIVISION OF WATER RESOURCES DEPARTMENT OF NATURAL RESOURCES						Office Use Only Form GWS-46 (01/2020)				
1313 SHERMAN ST., Ste 821, DENVER CO 80203 Phone: (303) 866-3581 dwrpermitsonline@state.co.us								<u> </u>		
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Water W										
Review instru	ctions on rev	erse sid	e prior t	o compl						
1. Well Own		ation								
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Mailing address						Use of this well and/or water qu			ı wate	er levels
						7. Well Data (pro	pposed)			
City		Stat	te	Zip code		Total depth	foot	Aquifer		
							feet			
Telephone #			E-Mail (If	filing online	it is required)	8. Consultant In	formation (i	f applicable)		
		, .				Name of contact person				
2. Type Of					·	Company name				
☐ Use existing ☐ Construct n	-	_ '		t for exist	ing monitoring well:	Company name				
Other:	ion non	Perm	nit no.:			Mailing address				
3. Refer To	(if applicat	ole)								
Monitoring hole ack	nowledgment		Well name	e or #		City		State	Zip C	ode
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4. Location	Of Propos	sed We	ell (Imp	ortant	! See Instructions)	·				
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MONITORING/OBSERVATION WELL PERMIT APPLICATION INSTRUCTIONS

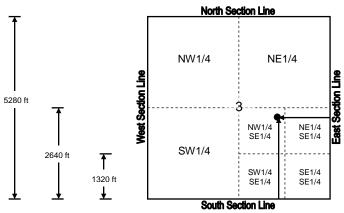
Applications must be computer generated on-line, typewritten or printed in BLACK or BLUE INK. ALL ITEMS in the application must be completed. Incomplete applications may be returned for more information. Applications are evaluated in chronological order. Please allow approximately six weeks for processing. This form may be reproduced by photocopying or computer generation. Reproductions must retain margins and print quality of the original form. If filing online, see online filing instructions for further information. You may also save, print, scan and email the completed form to: dwrpermitsonline@state.co.us

<u>FEES</u>: This application must be submitted with a \$100 filing fee. (The fee for an application to replace or deepen an existing permitted monitoring/observation well is \$100 for locations outside Designated Ground Water Basins, and \$60 inside Designated Ground Water Basins.) Fees are nonrefundable. Please visit our website (<u>dwr.colorado.gov</u>) for acceptable payment information or contact DWR at (303) 866-3581.

<u>USES</u>: This form (GWS-46) is to be used when applying for a permit where the only uses are monitoring of water levels and/or water quality sampling. For well construction criteria refer to the Colorado Water Well Construction Rules, 2CCR 402-2. A copy of the Rules may be obtained from any Division of Water Resources Office for a fee of \$5, or you may access them online on our website (dwr.colorado.gov)

<u>ITEM INSTRUCTIONS</u>: (numbers correspond with those on the front of this form)

- 1. Provide the name of the well owner and the mailing address where all correspondence will be sent.
- 2. Check and complete all boxes that apply.
- 3. Provide the MH number assigned by the Division of Water Resources in response to the notice of intent to construct a monitoring/observation well. Complete the well name if the structure has a name or identifying number.
- 4. If applying for a permit to **construct a new well**, you <u>must</u> provide the county, section #, township, range and principal meridian. You **do not** need to provide the ¼ of the ¼ section designation, distances from section lines or an optional GPS location (UTM coordinates). If a permit is issued and a well constructed, the authorized individual will be required to provide an accurate GPS location (UTM coordinates) of the "as-built" well location. If applying for a permit to **use an existing well** you <u>must</u> provide the well location information stated above, as well as either a GPS location (UTM coordinates) of the existing well site, or distances from section lines (**including the** ¼ **of the** ¼ **section designation**) as follows: In a typical case, a township is comprised of 36 sections, with each section ideally one mile square, or 5,280 feet on each side. Sections are further divided into quarter sections. Each ¼ Section is 2,640 feet by 2,640 feet and comprises 160 acres. Each ¼ section can be further divided into additional quarters. Each ¼ of the ¼ Section is 1,320 feet by 1,320 feet and comprises 40 acres. The distances are measured from the section lines. In the following example, the well is located 2,500 feet from the South Section line and 1,400 feet from the East Section line:



Well Location Example: NW1/4 of the SE1/4 of Section 3, being 2500 feet from the South Section Line and 1400 feet from the East Section Line.

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- 6. Use of this well is limited to monitoring water levels and/or water quality sampling only.
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- 8. Provide consultant information (if applicable). Note: A consultant may sign this application on behalf of their client.
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- 10. The individual signing the application or entering their name (and title if applicable) must be the applicant or an officer of the corporation/company/ agency identified as the applicant, their attorney or consultant. An authorized agent may also sign the application, if a letter signed by the applicant or their attorney is submitted with the application authorizing that agent to sign or enter their name on the applicant's behalf. Payment must be received via phone, fax or mail prior to processing the application. If filing online please call the Records Section at 303.866.3581 to pay via credit card.

 IF YOU HAVE ANY QUESTIONS regarding any item on the application form, please call the Division of Water Resources Ground Water Information Desk (303-866-3587), or the nearest Division of Water Resources Field Office located in Greeley (970-352-8712), Pueblo (719-542-3368), Alamosa (719-589-6683), Montrose (970-249-6622), Glenwood Springs (970-945-5665), Steamboat Springs (970-879-0272), or Durango (970-247-1845), or refer to the CDWR web site at dwr.colorado.gov for general information.

For Office Use Only WELL CONSTRUCTION AND YIELD ESTIMATE REPORT Form No. State of Colorado, Office of the State Engineer **GWS-31** 1313 Sherman St., Room 818, Denver, CO 80203 303.866.3581 02/2024 dwr.colorado.gov and dwrpermitsonline@state.co.us 1. Well Permit Number: Receipt Number: 2. Owner's Well Designation: 3. Well Owner Name: 4. Well Location Street Address: 5. 5g 6i] hGPS Well Location ffYei]fYXŁ: ___ Zone 12 ___ Zone 13 Easting: Northing: 6. Legal Well Location: ____ 1/4, ____ 1/4, Sec., ____ Twp.___, ___ N or S ___, Range ____, ___ E or W ___, ___ P.M. County: Subdivision: ______, Lot ______, Block _______, Filing (Unit) ____ 7. Ground Surface Elevation:______ feet Date Completed: ____ _____ Drilling Method: 8. Completed Aquifer Name: Total Depth: feet feet Depth Completed: **9. Advance Notification:** Was Notification Required Prior to Construction? Yes No, Date Notification Given: Laramie-Fox Hills Type I (Multiple Confining Layers) 10. Aquifer Type: Type I (One Confining Layer) Type III (alluvial/colluvial) (Check one) Type II (Not overlain by Type III) Type II (Overlain by Type III) 11. Geologic Log: 12. Hole Diameter (in.) From (ft) To (ft) Depth Type Grain Size Color Water Loc. 13. Plain Casing To (ft) OD (in) Kind Wall Size (in) From (ft) Perforated Casing Screen Slot Size (in): Kind Wall Size (in) To (ft) OD (in) From (ft) 14. Filter Pack: 15. Packer Placement: Material Type Size Depth Interval 16. Grouting Record Material Amount Density Interval Method Remarks: 17. Disinfection: Type Amt. Used Check box if Test Data is submitted on Form Number GWS-39, Well Yield Test Report 18. Well Yield Estimate Data: Well Yield Estimate Method: __ Static Level: _ Estimated Yield (gpm) ____ Dry Hole, Keep Permit Active Date/Time measured: Estimate Length (hrs) Dry Hole, Mark "Well Constructed" Remarks: 19. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402 2. The filing of a document that contains false statements is a violation of section 37 91 108(1)(e), C.R.S., and is punishable by fines up to \$1,000 and/or revocation of the contracting license. If filing online the State Engineer considers the entry of the licensed contractor's name to be compliance with Rule 17.4. Email: Company Name: Phone w/area code: License Number: Mailing Address: Sign (or enter name if filing online) Print Name and Title Date: Chris Skrik

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

This report must be computer generated online, typed or printed in <u>BLACK OR BLUE INK</u> and may be reproduced by photocopy or computer generation. Photocopy reproductions must retain margins and print quality. Attach additional sheets if more space is required. Each additional sheet must be identified at the top by the well owner's name, the permit number, form name/number and a sequential page number. Report depths in feet below ground surface. If filing online please see the <u>Form Submittal</u>, <u>Payment Options</u>, <u>& Fee Schedule</u>. You may also save, print and email the completed form to: dwrpermitsonline@state.co.us

The form must be submitted to the State Engineer's Office within 60 days after completing the well or 7 days after the permit expiration date, whichever is earlier. A copy of the form must be provided to the well owner.

Item Instructions: (numbers correspond with those on the front of this form)

- 1. Complete the well permit and receipt number.
- 2. Provide the identification (owner's well designation) for the well.
- 3. Fill in well owner name.
- 4. Provide the street address where the well is located.
- 5. Provide the GPS location where the well was drilled (required field).

Colorado contains two (2) UTM zones. Zone 13 covers most of Colorado. The boundary between Zone 12 and Zone 13 is the 108th Meridian (longitude). West of the 108th Meridian is UTM Zone 12 and east of the 108th Meridian is UTM Zone 13. The 108th Meridian is approximately 57 miles east of the Colorado-Utah state line. On most GPS units, the UTM zone is given as part of the Easting measurement, e.g. 12T0123456. Check the appropriate box for the zone.

- 6. Complete the legal description location of the well and county. For wells located in subdivisions, the name, lot, block, and filing, must be provided.
- 7. Report the ground surface elevation in feet above sea level if available. This value may be obtained from a topographic map. Provide the date the well was completed and describe the drilling method used to construct the well.
- 8. Indicate the aguifer in which the well was completed, the total depth drilled, and the actual completed depth of the well.
- 9. Indicate whether or not the well inspection team was required to be notified prior to construction. If required, provide the date notification was given. See https://dwr.colorado.gov/services/well-construction-inspection for more information on Notifications.
- 10. Check the box indicating the type aguifer in which the well is completed (See Rule 5.2.2 Well Construction Rules).
- 11. Fully describe the materials encountered in drilling. Do not use formation names unless they are in conjunction with a description of materials. Examples of descriptive terms include:

Type - sandstone, sand, etc.

Grain size - Boulders, gravel, sand, silt, clay, etc.

Color - Denote for all materials, most critical in sedimentary rock

Water Location - Depth where water is encountered (if it can be determined)

- 12. Provide the diameters of the drilled borehole.
- 13. The outside diameter, type, wall thickness, and interval of plain and perforated casing lengths must be indicated. For perforated casing, the screen size must be indicated.
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- 15. Indicate the type and setting depth for any packers installed.
- 16. The material, amount, and interval of the grout slurry must be reported. Density may be indicated as pounds per gallon, gallons of water per sack, total gallons of water used, or number of sacks used, etc. Specify the grout placement method, i.e. tremie pipe or positive placement. The percentage of additives mixed with the grout should be reported under remarks.
- 17. Record the type and the amount of disinfection used, how placed, and the length of time left in the hole.
- 18. Report Well Yield Estimate data as required by Rule 17.1.1. Spaces are provided to report all estimates made during the assessment. The report should show that the estimate complied with the provisions of the rules. If available, report clock time when measurements were taken. If an estimate was not performed, explain when it will be done. A full Well Yield Test may be performed instead of an estimate; if so, check the appropriate box and submit the data on form GWS-39. If this is to report the construction of a dry hole, check the appropriate box regarding the permit status.
- 19. Fill in Company Name, Email, and Address and License Number (or PE/PG) of the Individual who is responsible for the well construction. The licensed contractor or authorized individual responsible for the construction of the well must sign or if filing online, enter his/her name on the report. If filing online the State Engineer considers the entering of the licensed contractors name on the form to be a certification of accuracy and truthfulness in compliance with Rule 17.4 of the Water Well Construction Rules and Regulations, 2 CCR 402-2.
 - Rule 17.4 Certification Work reports must be signed and certified as to accuracy and truthfulness of the information on the report by the well construction or pump installation contractors or authorized individuals responsible for the work performed by them or under their direction or supervision, or by the private driller or private pump installer if the work was performed by them. Such reports are deemed to be completed, signed and certified under oath.

Submit completed report to: State of Colorado, Office of the State Engineer, 1313 Sherman St, Room 818, Denver, CO 80203. You may also save, print, scan and email the completed form to dwrpermitsonline@state.co.us

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