

MONARCH DENM GRAVEL MINE

GROUNDWATER MONITORING AND ANALYSIS PLAN

PREPARED FOR:

Monarch Mountain Minerals and Aggregates, LLC
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PREPARED BY:

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DATE PREPARED: MARCH, 2024

ADEQUACY REVIEW COMMENTS: MAY, 2024



CIVIL RESOURCES, LLC
ENGINEERS & PLANNERS

1.0 INTRODUCTION

The Monarch DENM Gravel Mine (Site) is located west of State Highway 60 with Weld County Road 40.5 to the south and is bounded by the South Platte River to the west and north. More specifically, the Site is comprised of portions of Section 18, Section 19, and Section 30, Township 4 North, Range 66 West of the 6th Principal Meridian.

The Site is permitted through the Colorado Division of Reclamation, Mining, and Safety as a construction aggregate material mine. The approved mine plan calls for five (5) soil bentonite slurry walled cells that will encompass most of the Site excluding approximately 15 acres along the eastern side of the Site along Highway 60 which will wet mined and backfilled with wash fines and waste material. Historically, the Site has been utilized for pivot irrigated and dry land farming.

This Groundwater Monitoring Plan has been created referencing the “Groundwater Monitoring: Sampling and Analysis Plan Guidance Construction Materials and Hard Rock Sites” document from the Colorado Division of Reclamation, Mining, and Safety (DRMS). This plan is intended to replace the “Groundwater Monitoring Plan” letter that was submitted to DRMS during Adequacy Review and dated June 1st, 2022 and is being submitted as a Technical Revision (TR) to the DRMS 112 permit.

From the date of TR approval, this document will supersede any groundwater monitoring or sampling plans submitted prior to this final document.

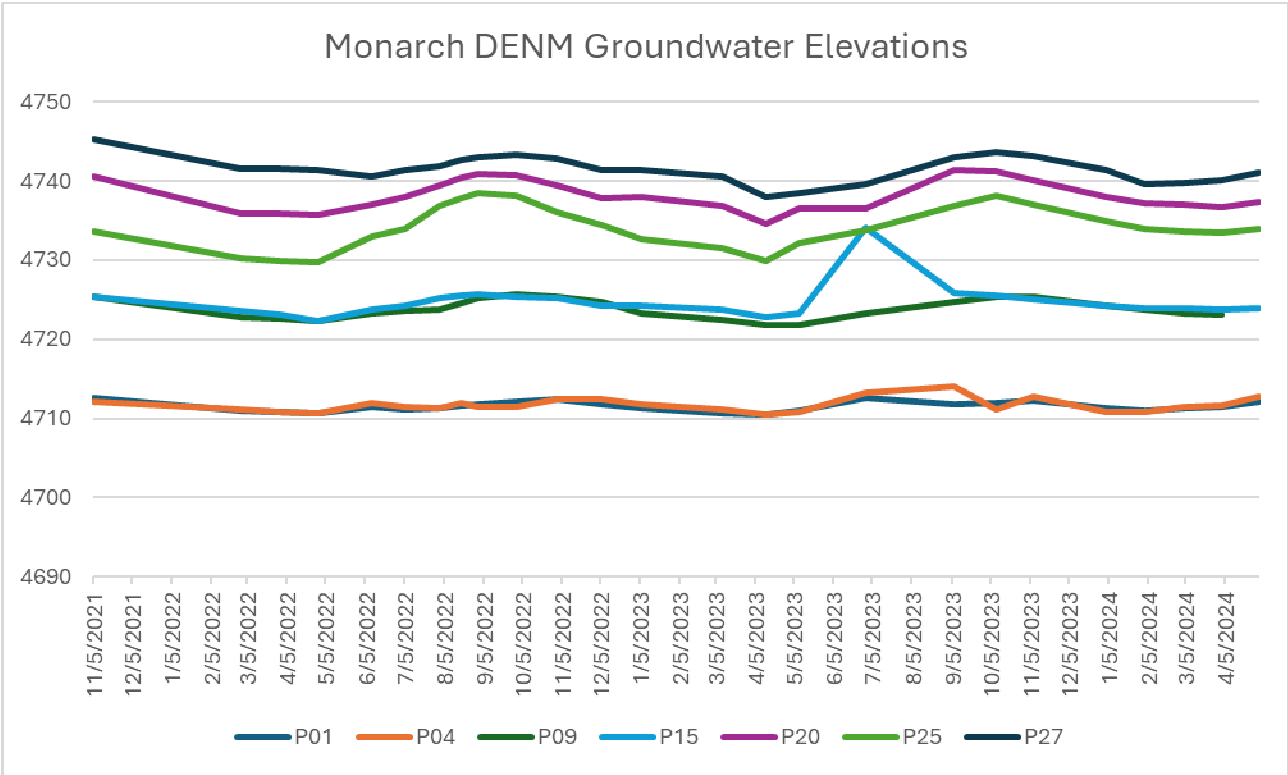
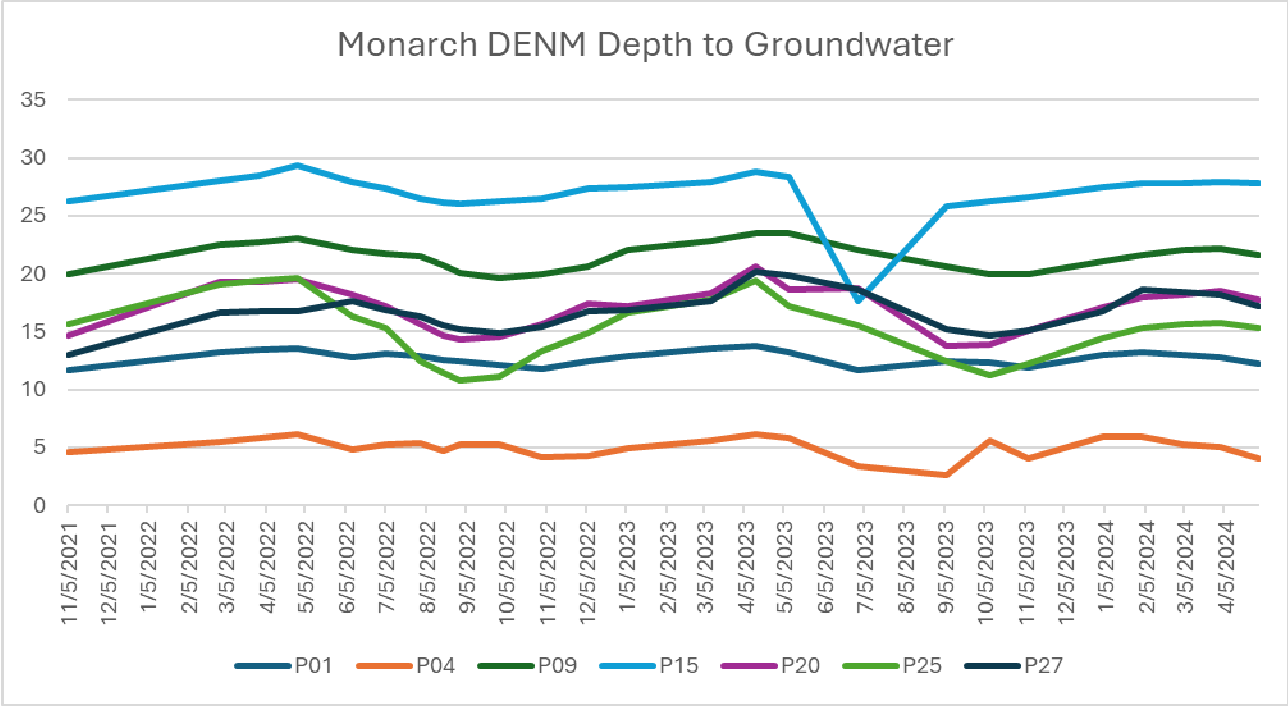
2.0 EXISTING GROUNDWATER CONDITIONS

Groundwater is measured in seven (7) piezometers that were drilled at the Site in October 2021 by Universal Drilling. The piezometers were constructed with 20 feet of 2-inch slotted PVC pipe at bedrock with 2-inch PVC solid pipe above continuing to 2.5 feet above surface. As the sonic drill pipe was removed, the borehole annulus was allowed to collapse with native sand. The remaining open hole was filled with drill cuttings to approximately 5 feet below surface. The top 5 feet of the annulus was filled with bentonite chips. The piezometers were completed with steel monuments to protect the well casing. Well Construction Reports as well as the Well Permits are compiled in Appendix A and piezometer locations are shown in Figure 1.

Monthly groundwater elevations have been measured at the Site starting in November 2021 and typically occur at depths usually ranging from 4.6' to 29.3' feet below surface with shallower groundwater to the north and west of the Site (see Figure 1). The prevailing groundwater flow direction is subparallel to the South Platte River, north-northwest reflecting the Site topography. Groundwater in the area is tributary to the South Platte River located west and north of the Site. The observed hydraulic gradient across the Site was approximately 0.4%.

The depth to groundwater during the initial measurement period varied from season to season and annually. These variations are typical for alluvial aquifers and are due to a multitude of factors including river conditions, precipitation, and irrigation. The hydrographs presented below depict the monthly changes in groundwater elevation from 2021 to the end of 2023. During the monitoring period groundwater elevations were lower in the late winter/early spring and peaked in later summer/early fall which is typical for the area.

Higher groundwater elevations than those observed during this monitoring period would have been expected as a result of historic agricultural irrigation in the area.



3.0 PREDICTED IMPACTS TO HYDROLOGIC BALANCE

The Site is approved for a sequence of soil bentonite slurry wall (slurry wall) lined cells that will encompass the majority of the Site. The slurry walls will be constructed in stages starting in the south and progressing to the north. The slurry walls will be constructed of low permeability soil and bentonite three (3) feet thick and keyed into bedrock approximately four (4) feet. Slurry walls typically cause a rise in groundwater elevation on the upgradient side (mound) and a drop in groundwater elevation on the downgradient side (shadow).

The impacts of the Site on the hydraulic balance are discussed in detail in the “Gilcrest Area Alluvial Groundwater Model” Report by Civil Resources dated January 2023 (Groundwater Model Report). The model demonstrated that upgradient of the Site, the groundwater table is expected to rise up to 5.7 feet above the baseline level of the model at PZ-20, without any mitigation. Based on piezometer measurements at PZ-20 from February 2022 to May 2024, depth to groundwater has varied in this location between 13.8 to 20.6 feet below the ground surface. The 13.8 foot measurement was taken on September 6, 2023 which was an especially wet year that caused flood damage to the area and is likely on the higher end of natural variability.

The modeled groundwater rise at this location was minimized to 1.3 feet by the addition of an underdrain south of Cell 3, to be constructed concurrently with the Cell 3 slurry wall. This rise would put the depth to groundwater at PZ-20 at 12.5 feet below grade. There are five (5) houses south of PZ-20, each of them having basements. The closest structure being the Moran house at 19801 County Road 25.5 approximately 250 feet south of PZ-20.

There is one (1) well on the north side (downgradient) side of the site between the South Platte River and the slurry walls. The drop in groundwater elevation at this well with all slurry walls in place is expected to be 2.5 feet below the baseline period of the model. The modest shadow effect on the downgradient side of the Site is likely mitigated by the Site’s close proximity to the South Platte River.

4.0 PREDICTED IMPACTS TO WATER QUALITY

The majority of mining at the Site will occur inside slurry walls keyed into low permeability bedrock. Groundwater will not be exposed in these cells prior to construction of the slurry walls. After construction of the slurry walls a sump will be dug and trapped groundwater will be pumped from the cell to one of the permitted discharge points. A leak test will be performed once the water level inside of the pit is ten (10) feet below the water table outside of the slurry wall creating a gradient where any slurry wall leakage will be into the pit. Comingled discharge from the lined pits will be made under a NPDES discharge permit from CDPHE and the Site will operate in accordance with a Stormwater Management Plan. This combination of factors will significantly decrease the likelihood of groundwater contamination to the area surrounding the slurry wall lined cells.

There will be three (3) unlined cells located on northeastern side of the Site, parallel to Highway 60. These cells will act as both a freshwater source and siltation ponds. Groundwater will be pumped from the Freshwater Pond to the plant where the aggregate will be washed. This water will then be collected and pumped back to the Siltation Pond where the suspended silt will be allowed to settle out.

No hazardous chemicals are used in Site operations or processing. Fuel or other fluids used in mining equipment could be a potential source of chemical contaminants. The risk associated with the mining operation are similar to any operation utilizing heavy equipment such as farming or construction. There is a potential of accumulating existing contaminants during the wash process and as such, the area with the highest risk of potential contamination is the plant and unlined pond areas.

5.0 GROUNDWATER QUALITY BASELINE MONITORING

Baseline Groundwater Quality Sampling will be conducted for five (5) quarters starting in January 2024 and ending in the second quarter of 2025. One (1) upgradient well (PZ-20) and three (3) downgradient wells (PZ-01, PZ-04 and PZ-09)

were selected for chemical analysis. PZ-01 was not sampled in the first quarter of 2024 and will thus require additional sampling in the second quarter of 2025 to obtain five (5) quarters baseline data.

5.1 *Sample Collection Methods*

Samples will be collected starting in the upgradient well and progressing towards the downgradient well. PZ-20 will be sampled first followed by PZ-09 and then PZ-04. Samples will be collected on the same day. Depth to water will be determined using a water level indicator probe and volume of water inside the well will be calculated and recorded.

The initial sampling will purge six (6) well volumes of water prior to sampling to remove residue left over from the drilling process. Subsequent sampling events will require three (3) volumes of water purged prior to sampling. Field parameters of pH, temperature, conductivity, and dissolved oxygen will be sampled before and after each volume of water inside the well is purged. The meter for sampling field parameters will be cleaned and calibrated prior to use. If field parameters vary more than 10% between purges, then purging should continue until six (6) volumes have been purged. The static volume of water in the well will be calculated using the following equation:

$$V = r^2h(0.163)$$

Where

V = static volume of water in well (in gallons)

r = inner radius of well casing (in inches)

h = length of water column (in feet) which is equal to the total well depth minus depth to water.

0.163 = a constant conversion factor that compensates for the conversion of the casing radius from inches to feet for 2-inch diameter wells and the conversion of cubic feet to gallons, and pi (A). This factor would change for different diameter wells.

Samples will be collected in a manner described by the laboratory and in the bottles they provide. The Groundwater will be retrieved using disposable polyethylene bailers and poured into a clean pitcher to be distributed to the appropriate sample bottle. Samples will be stored inside a cooler packed with ice and will be delivered to the laboratory within twenty-four (24) hours.

A chain of custody form will be completed indicating the analysis to be performed on each sample and will accompany the samples to the lab. Duplicate samples will be collected for quality assurance.

5.2 *Analytes To Be Sampled*

MMMA will sample the analytes listed in Appendix B of the "Groundwater Monitoring: Sampling and Analysis Plan Guidance" September 2023. The full list of analytes is shown in Appendix B.

5.3 *Report and Release*

The analytical results will be reviewed and a summary compiled comparing the results to the regulatory limits established by the Colorado Water Quality Control Commission (WQCC) and listed in Tables 1-4 of Regulation 41. MMMA will submit a report of the results of the groundwater analysis along the following schedule:

- First quarter 2024 report due by May 30th 2024.
- Second quarter 2024 report due by August 1st 2024.
- Third quarter 2024 report due by November 1st 2024.
- Fourth quarter 2024 report due by February 1st 2025.

- First quarter 2025 report due by May 1st 2025.
- Second quarter 2025 report due by August 1st 2025 (Only PZ-01 will be sampled during this period)

If any analytes exceed the reference values listed in Regulation 41 Tables 1-4, then MMMA will request a variance for that specific analyte and propose a numerical reference value for the Site. MMMA will sample the four (4) wells after final reclamation and provide the results in a report to the DRMS to determine whether or not the Site had a negative effect on groundwater quality.

If there is evidence of groundwater discharges exceeding applicable groundwater standards or permit conditions imposed to protect groundwater quality, the Miner will submit a written report to the Division within five (5) working days.

6.0 GROUNDWATER ELEVATION MONITORING AND MITIGATION

This section supplements the Groundwater Model Report which recommends an underdrain mitigation structure south of Cell 3 and is described in the Groundwater Model Report. For more detail on the proposed underdrain, see the recommendations section of the Groundwater Model Report.

The Site monitoring wells will be measured monthly to identify potential changes in alluvial groundwater elevation associated with mining and reclamation activities. Baseline data collected from the monitoring program will provide a range and measure of variability of relative water levels associated with pre-mining groundwater conditions. Experience at other mines in similar geologic settings has found that groundwater levels tend to fluctuate being highest in the summer irrigation season and lowest in the winter and early spring.

If, during mining or reclamation, the relative seasonal groundwater elevation at the upgradient monitoring wells (PZ-20, PZ-25, and PZ-27) differs from maximum conditions by more than three (3) feet, and the condition was not observed during baseline monitoring, or if the miner receives a complaint from a well or property owner, then the Miner will evaluate the cause and take action within seven (7) days and notify the DRMS.

After the DRMS has been notified, the Miner will review the data and available information and submit a report to the DRMS within 30 days. The evaluation will include discussions with the well owner who has contacted the miner regarding a concern and review of baseline data from the well and vicinity to evaluate whether changes may be due to seasonal variations, climate, mining, slurry wall lining or other factors. The report will identify the extent of potential or actual impacts associated with the changes. If the extent of groundwater changes due to mining or reclamation activities is determined to be a significant contributing factor that has or may create adverse impacts, the mining associated impacts will be addressed.

The Miner will begin implementing one or more mitigation measures if mining and reclamation activity is determined to be a significant factor to groundwater changes requiring mitigation. Mitigation measures may include, but are not limited to:

- Placing water in a recharge pond to raise groundwater levels around the well.
- Constructing a local clay liner at the edge of the mine Cell (i.e. between the dewatering point and the well) in order to raise water levels on the well side of the liner and mitigate dewatering effects.
- Cleaning the well to improve efficiency.
- Providing an alternative source of water or purchasing additional water to support historic well use in terms of water quantity and quality. If needed, water quality parameters will be checked in affected wells to ensure alternative sources support historic use.

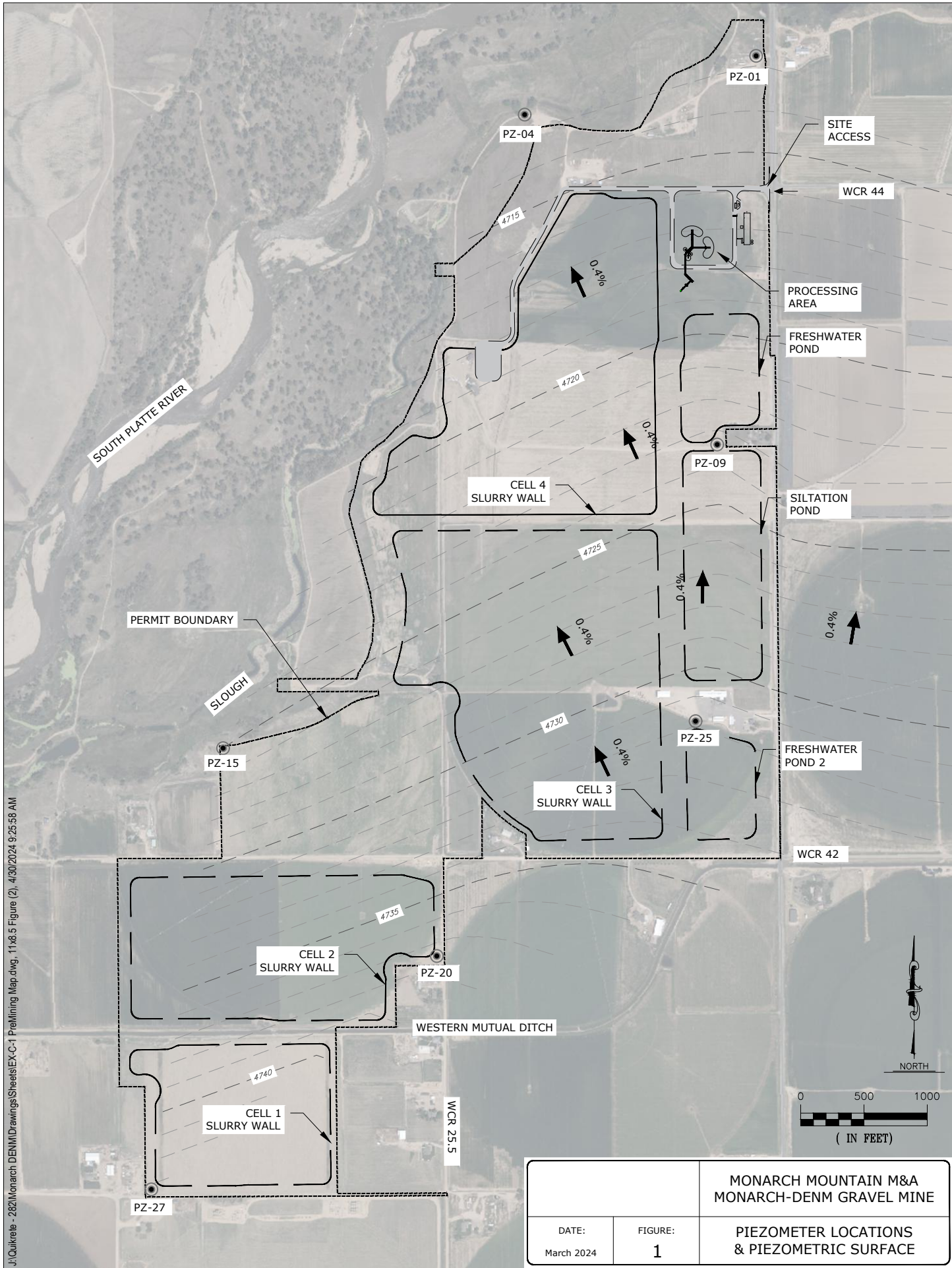
- Modifying a well to operate under lower groundwater conditions. This could include deepening the well or lowering pumps. All work would be done at the miner's expense with the exception of replacing equipment that was non-functional prior to mining.

7.0 REFERENCES

Anderson, Mary P., "Applied Groundwater Modelling, Academic Press Inc., San Diego CA, 1992.

Colton, 1978, "*Geological Map of the Boulder, Fort Collins, and Greeley Area, Colorado*," U.S.G.S. Map I-855-G.

Figures



J:\Quikreb - 282\Monarch DENM\Drawings\Sheets\EX-C-1 PreMining Map.dwg, 11x8.5 Figure (2), 4/30/2024 9:25:58 AM

		MONARCH MOUNTAIN M&A MONARCH-DENM GRAVEL MINE
DATE: March 2024	FIGURE: 1	PIEZOMETER LOCATIONS & PIEZOMETRIC SURFACE

TABLES

Table 1																								
Groundwater Elevation																								
	PZ-01						PZ-04			PZ-09			PZ-15			PZ-20			PZ-25			PZ-27		
SURFACE EL:	4724.23						4716.69			4745.33			4751.66			4755.17			4749.3			4758.23		
TOP OF CASING EL:	4727.73						4720.49			4749.23			4754.86			4758.97			4752.8			4762.03		
	DEPTH	DEPTH		DEPTH	DEPTH		DEPTH	DEPTH		DEPTH	DEPTH		DEPTH	DEPTH		DEPTH	DEPTH		DEPTH	DEPTH		DEPTH	DEPTH	
	FROM	FROM		FROM	FROM		FROM	FROM		FROM	FROM		FROM	FROM		FROM	FROM		FROM	FROM		FROM	FROM	FROM
Date	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION	CASING	GROUND	ELEVATION
11/5/2021	15.2	11.7	4712.53	8.4	4.6	4712.09	23.8	19.9	4725.43	29.5	26.3	4725.36	18.4	14.6	4740.57	19.1	15.6	4733.7	16.8	13	4745.23			
2/28/2022	16.7	13.2	4711.03	9.3	5.5	4711.19	26.4	22.5	4722.83	31.2	28	4723.66	23.1	19.3	4735.87	22.6	19.1	4730.2	20.4	16.6	4741.63			
3/31/2022	16.9	13.4	4710.83	9.6	5.8	4710.89	26.6	22.7	4722.63	31.7	28.5	4723.16	23.1	19.3	4735.87	22.9	19.4	4729.9	20.5	16.7	4741.53			
4/29/2022	17	13.5	4710.73	9.9	6.1	4710.59	27	23.1	4722.23	32.5	29.3	4722.36	23.3	19.5	4735.67	23.1	19.6	4729.7	20.6	16.8	4741.43			
6/10/2022	16.3	12.8	4711.43	8.6	4.8	4711.89	26	22.1	4723.23	31.1	27.9	4723.76	22	18.2	4736.97	19.8	16.3	4733	21.4	17.6	4740.63			
7/5/2022	16.6	13.1	4711.13	9.1	5.3	4711.39	25.6	21.7	4723.63	30.6	27.4	4724.26	21	17.2	4737.97	18.8	15.3	4734	20.7	16.9	4741.33			
8/1/2022	16.4	12.9	4711.33	9.2	5.4	4711.29	25.4	21.5	4723.83	29.7	26.5	4725.16	19.5	15.7	4739.47	16	12.5	4736.8	20.1	16.3	4741.93			
8/18/2022	16.1	12.6	4711.63	8.5	4.7	4711.99	24.6	20.7	4724.63	29.3	26.1	4725.56	18.5	14.7	4740.47	14.9	11.4	4737.9	19.3	15.5	4742.73			
8/31/2022	16	12.5	4711.73	9.1	5.3	4711.39	24	20.1	4725.23	29.2	26	4725.66	18.1	14.3	4740.87	14.3	10.8	4738.5	19	15.2	4743.03			
9/30/2022	15.6	12.1	4712.13	9.1	5.3	4711.39	23.5	19.6	4725.73	29.5	26.3	4725.36	18.3	14.5	4740.67	14.6	11.1	4738.2	18.7	14.9	4743.33			
11/1/2022	15.3	11.8	4712.43	8	4.2	4712.49	23.8	19.9	4725.43	29.7	26.5	4725.16	19.5	15.7	4739.47	16.8	13.3	4736	19.2	15.4	4742.83			
12/6/2022	15.9	12.4	4711.83	8.1	4.3	4712.39	24.5	20.6	4724.73	30.6	27.4	4724.26	21.2	17.4	4737.77	18.4	14.9	4734.4	20.6	16.8	4741.43			
1/6/2023	16.4	12.9	4711.33	8.7	4.9	4711.79	26	22.1	4723.23	30.7	27.5	4724.16	21	17.2	4737.97	20.1	16.6	4732.7	20.7	16.9	4741.33			
3/10/2023	17	13.5	4710.73	9.4	5.6	4711.09	26.7	22.8	4722.53	31.1	27.9	4723.76	22.1	18.3	4736.87	21.3	17.8	4731.5	21.4	17.6	4740.63			
4/13/2023	17.3	13.8	4710.43	10	6.2	4710.49	27.4	23.5	4721.83	32	28.8	4722.86	24.4	20.6	4734.57	22.9	19.4	4729.9	24	20.2	4738.03			
5/9/2023	16.7	13.2	4711.03	9.6	5.8	4710.89	27.4	23.5	4721.83	31.6	28.4	4723.26	22.4	18.6	4736.57	20.7	17.2	4732.1	23.6	19.8	4738.43			
6/30/2023	15.2	11.7	4712.53	7.2	3.4	4713.29	26	22.1	4723.23	20.8	17.6	4734.06	22.5	18.7	4736.47	19	15.5	4733.8	22.4	18.6	4739.63			
9/6/2023	16	12.5	4711.73	6.4	2.6	4714.09	24.5	20.6	4724.73	29	25.8	4725.86	17.6	13.8	4741.37	16	12.5	4736.8	19	15.2	4743.03			
10/9/2023	15.8	12.3	4711.93	9.4	5.6	4711.09	23.9	20	4725.33	29.4	26.2	4725.46	17.7	13.9	4741.27	14.7	11.2	4738.1	18.4	14.6	4743.63			
11/7/2023	15.4	11.9	4712.33	7.8	4	4712.69	23.9	20	4725.33	29.8	26.6	4725.06	18.9	15.1	4740.07	15.7	12.2	4737.1	18.9	15.1	4743.13			
1/3/2024	16.5	13	4711.23	9.7	5.9	4710.79	25	21.1	4724.23	30.7	27.5	4724.16	20.9	17.1	4738.07	17.9	14.4	4734.9	20.6	16.8	4741.43			
2/2/2024	16.7	13.2	4711.03	9.7	5.9	4710.79	25.5	21.6	4723.73	31	27.8	4723.86	21.8	18	4737.17	18.8	15.3	4734	22.4	18.6	4739.63			
3/4/2024	16.5	13	4711.23	9.1	5.3	4711.39	25.9	22	4723.33	31	27.8	4723.86	22	18.2	4736.97	19.1	15.6	4733.7	22.2	18.4	4739.83			
4/2/2024	16.3	12.8	4711.43	8.8	5	4711.69	26.1	22.2	4723.13	31.1	27.9	4723.76	22.3	18.5	4736.67	19.3	15.8	4733.5	22	18.2	4740.03			
5/1/2024	15.7	12.2	4712.03	7.8	4	4712.69	25.5	21.6	4723.73	31	27.8	4723.86	21.6	17.8	4737.37	18.8	15.3	4734	21	17.2	4741.03			

Table 2 - Groundwater Baseline Data (Q1 2024)

Analyte	Compliance Standard		PZ-01	PZ-04	PZ-15	PZ-20	Method Used	Detection Limit(ug/L)	Notes
Aluminum (Al)	5	mg/L		34.7	36.6	21.4	EPA 200.8	0.001	PZ-01 was not sampled in Q1 of 2024
Antimony(Sb)	0.006	mg/L		ND	ND	ND	EPA 200.8	0.0012	
Arsenic (As)	0.01	mg/L		0.0168	0.0157	0.009	EPA 200.8	0.0006	
Barium(Ba)	2	mg/L		0.4975	0.6974	0.702	EPA 200.8	0.0007	
Beryllium (Be)	0.004	mg/L		0.0022	0.0029	0.0015	EPA 200.8	0.0001	
Boron (B)	0.75	mg/L		0.12	0.17	0.17	EPA 200.8	0.05	
Cadmium(Cd)	0.005	mg/L		0.0003	0.0005	0.0002	EPA 200.8	0.0001	
Chloride (Cl)	250	mg/L		133	162	144	EPA 300.0	0.5	
Chromium(Cr)	0.1	mg/L		0.0488	0.0855	0.0412	EPA 200.8	0.0015	
Cobalt (Co)	0.05	mg/L		0.0133	0.0191	0.0098	EPA 200.8	0.0002	
Copper (Cu)	0.2	mg/L		0.0378	0.0598	0.0289	EPA 200.8	0.0008	
Cyanide [Free](CN)	0.2	mg/L		ND	ND	ND	EPA 335.4	0.005	
Fluoride(F)	2	mg/L		0.72	0.82	1.08	EPA 300.0	0.5	
Iron (Fe)	0.3	mg/L		48.8	60	25.7	EPA 200.8	0.005	
Lead(Pb)	0.05	mg/L		0.0317	0.0485	0.0282	EPA 200.8	0.0001	
Lithium(Li)	2.5	mg/L		ND	ND	ND	EPA 200.7	0.1	
Nickel (Ni)	0.1	mg/L		0.0252	0.0351	0.0184	EPA 200.8	0.0009	
Nitrate(NO3)	10	mg/L		6.01	5.96	6.61	EPA 300.0	0.25	
Nitrite (NO2)	1	mg/L		ND	ND	ND	EPA 300.0	0.15	
Nitrite & Nitrate (NO2+NO3)	10	mg/L		6.01	5.96	6.61	EPA 300.0	0.05	
Manganese (Mn)	0.05	mg/L		1.09	0.7978	0.685	EPA 200.8	0.0008	
Mercury (Hg)	0.01	mg/L		ND	ND	ND	EPA 245.1	0.0001	
Molybdenum(Mo)	0.21	mg/L		0.0017	0.0024	0.0039	EPA 200.8	0.0005	
Selenium(Se)	0.05	mg/L		0.0084	0.0087	0.0056	EPA 200.8	0.0008	
Silver(Ag)	0.05	mg/L		ND	ND	ND	EPA 200.8	0.0005	
Sulfate (SO 4)	250	mg/L		185	224	174	EPA 300.0	0.5	
Thallium(Tl)	0.002	mg/L		0.0003	0.0006	0.0003	EPA 200.8	0.0002	
Uranium(U)	0.0168	mg/L		0.0095	0.0351	0.0175	EPA 200.8	0.0002	
Vanadium (V)	0.1	mg/L		0.054	0.078	0.04	EPA 200.8	0.001	
Zinc (Zn)	2	mg/L		0.146	0.194	0.117	EPA 200.8	0.001	
Foaming Agents	0.5	mg/L		ND	ND	ND	SM 5540C	0.1	
pH	-	6.5-8.5		6.69	6.85	6.83	SM4500	NA	
TDS		(1.25 x the background value)		717	787	737	SM2540C	10 mg/L	

*ND = Non Detect

Appendix A



COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324577-
RECEIPT NUMBER 10016821

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

SE 1/4 SE 1/4 Section 18 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 515989.4 Northing: 4461870.0

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.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 acknowledged for construction under monitoring hole notice 62487-MH, and known as PZ-01.
- 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 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.)

Issued By ANITIA ARCHULETA

Date Issued: 11/18/2021

Expiration Date: N/A

[illegible]

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

This report must be computer generated online, typed or printed in **BLACK OR BLUE INK** 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 [Form Submittal, Payment Options, & Fee Schedule](#). 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 aquifer 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 aquifer 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.
14. Indicate the material and size of filter pack (e.g. sand, gravel, etc.) and the interval where placed.
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.
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 821, Denver, CO 80203. You may also save, print, scan and email the completed form to dwrpermitsonline@state.co.us

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COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324578-
RECEIPT NUMBER 10016822

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

SW 1/4 SE 1/4 Section 18 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 515448.9 Northing: 4461729.8

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.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 acknowledged for construction under monitoring hole notice 62487-MH, and known as PZ-04.
- 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 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.)

Issued By ANITIA ARCHULETA

Date Issued: 11/18/2021

Expiration Date: N/A

Form No. GWS-31 02/2017	WELL CONSTRUCTION AND YIELD ESTIMATE REPORT State of Colorado, Office of the State Engineer 1313 Sherman St., Room 821, Denver, CO 80203 303.866.3581 dwr.colorado.gov and dwrpermitsonline@state.co.us						For Office Use Only		
1. Well Permit Number:		Receipt Number:							
2. Owner's Well Designation:									
3. Well Owner Name:									
4. Well Location Street Address:									
5. GPS Well Location: Zone 12 <input type="checkbox"/> Zone 13 <input type="checkbox"/> 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 Depth Completed: _____ feet									
9. Advance Notification: Was Notification Required Prior to Construction? <input type="checkbox"/> Yes <input type="checkbox"/> No, Date Notification Given: _____									
10. Aquifer Type: <input type="checkbox"/> Type I (One Confining Layer) <input type="checkbox"/> Type I (Multiple Confining Layers) <input type="checkbox"/> Laramie-Fox Hills (Check one) <input type="checkbox"/> Type II (Not overlain by Type III) <input type="checkbox"/> Type II (Overlain by Type III) <input type="checkbox"/> Type III (alluvial/colluvial)									
11. Geologic Log:					12. Hole Diameter (in.) From (ft) To (ft)				
Depth	Type	Grain Size	Color	Water Loc.					
Remarks:					13. Plain Casing				
					OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
					Perforated Casing Screen Slot Size (in): _____				
					OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
					14. Filter Pack:		15. Packer Placement:		
					Material	_____	Type	_____	
					Size	_____	Depth	_____	
					16. Grouting Record				
					Material	Amount	Density	Interval	Method
17. Disinfection: Type _____ Amt. Used _____									
18. Well Yield Estimate Data: <input type="checkbox"/> Check box if Test Data is submitted on Form Number GWS-39, Well Yield Test Report									
Well Yield Estimate Method: _____									
Static Level: _____				Estimated Yield (gpm) _____					
Date/Time measured: _____				Estimate Length (hrs) _____					
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.									
Company Name:			Email:			Phone w/area code:		License Number:	
Mailing Address:									
Sign (or enter name if filing online)				Print Name and Title				Date:	

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

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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 aquifer 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 aquifer 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.
14. Indicate the material and size of filter pack (e.g. sand, gravel, etc.) and the interval where placed.
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.
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 821, Denver, CO 80203. You may also save, print, scan and email the completed form to dwrpermitsonline@state.co.us

IF YOU HAVE ANY QUESTIONS regarding any item on this 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 our web site at dwr.colorado.gov for general information, forms, online filing instructions and access to state rules and statutes.



COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324579-
RECEIPT NUMBER 10016823

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

SE 1/4 NE 1/4 Section 19 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 515898.8 Northing: 4460950.7

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.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 PZ-09.
- 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 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.)

NOTICE - Construction of this well may have occurred without proper notice or permit, as required by the Water Well Construction Rules (2 CCR 402-2). Issuance of this permit does not relieve the well owner and/or their well construction contractor of responsibility or liability for any violations that may have occurred. The well owner and/or their well construction contractor may be contacted by the Chief Well Inspector regarding alleged violations.

NOTICE: This permit has been approved subject to the following changes: The 62487-MH was not referenced on this permit as the well was constructed in Section 19, Twp. 4N, Rng. 66W, 6th P.M. and 62487-MH was issued for Section 18, Twp. 4N, Rng. 66W, 6th P.M. You are hereby notified that you have the right to appeal the issuance of this permit, by filing a written request with this office within sixty (60) days of the date of issuance, pursuant to the State Administrative Procedures Act. (See Section 24-4-104 through 106, C.R.S.)

WELL PERMIT NUMBER 324579-

RECEIPT NUMBER 10016823



Issued By ANITIA ARCHULETA

Date Issued: 11/18/2021

Expiration Date: N/A

[illegible]

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

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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 aquifer 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.
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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.
14. Indicate the material and size of filter pack (e.g. sand, gravel, etc.) and the interval where placed.
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COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324580-
RECEIPT NUMBER 10016824

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

SW 1/4 SW 1/4 Section 19 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 514723.1 Northing: 4460226.3

PERMIT TO USE AN EXISTING WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

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- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 PZ-15.
- 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 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.)

NOTICE - Construction of this well may have occurred without proper notice or permit, as required by the Water Well Construction Rules (2 CCR 402-2). Issuance of this permit does not relieve the well owner and/or their well construction contractor of responsibility or liability for any violations that may have occurred. The well owner and/or their well construction contractor may be contacted by the Chief Well Inspector regarding alleged violations.

NOTICE: This permit has been approved subject to the following changes: The 62487-MH was not referenced on this permit as the well was constructed in Section 19, Twp. 4N, Rng. 66W, 6th P.M. and 62487-MH was issued for Section 18, Twp. 4N, Rng. 66W, 6th P.M. You are hereby notified that you have the right to appeal the issuance of this permit, by filing a written request with this office within sixty (60) days of the date of issuance, pursuant to the State Administrative Procedures Act. (See Section 24-4-104 through 106, C.R.S.)

WELL PERMIT NUMBER 324580-

RECEIPT NUMBER 10016824



Issued By ANITIA ARCHULETA

Date Issued: 11/18/2021

Expiration Date: N/A

Form No. GWS-31 02/2017	WELL CONSTRUCTION AND YIELD ESTIMATE REPORT State of Colorado, Office of the State Engineer 1313 Sherman St., Room 821, Denver, CO 80203 303.866.3581 dwr.colorado.gov and dwrpermitsonline@state.co.us	For Office Use Only																																																																																																														
1. Well Permit Number: _____ Receipt Number: _____																																																																																																																
2. Owner's Well Designation: _____																																																																																																																
3. Well Owner Name: _____																																																																																																																
4. Well Location Street Address: _____																																																																																																																
5. GPS Well Location: Zone <input type="checkbox"/> 12 <input type="checkbox"/> 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 Depth Completed: _____ feet																																																																																																																
9. Advance Notification: Was Notification Required Prior to Construction? <input type="checkbox"/> Yes <input type="checkbox"/> No, Date Notification Given: _____																																																																																																																
10. Aquifer Type: <input type="checkbox"/> Type I (One Confining Layer) <input type="checkbox"/> Type I (Multiple Confining Layers) <input type="checkbox"/> Laramie-Fox Hills (Check one) <input type="checkbox"/> Type II (Not overlain by Type III) <input type="checkbox"/> Type II (Overlain by Type III) <input type="checkbox"/> Type III (alluvial/colluvial)																																																																																																																
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<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 15%;">Depth</th><th style="width: 15%;">Type</th><th style="width: 15%;">Grain Size</th><th style="width: 15%;">Color</th><th style="width: 15%;">Water Loc.</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>			Depth	Type	Grain Size	Color	Water Loc.																																																																																																									
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Mailing Address: Sign (or enter name if filing online) _____ Print Name and Title _____ Date: _____																																																																																																																

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

This report must be computer generated online, typed or printed in **BLACK OR BLUE INK** 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 [Form Submittal, Payment Options, & Fee Schedule](#). 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 aquifer 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 aquifer 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.
14. Indicate the material and size of filter pack (e.g. sand, gravel, etc.) and the interval where placed.
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.
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 821, Denver, CO 80203. You may also save, print, scan and email the completed form to dwrpermitsonline@state.co.us

IF YOU HAVE ANY QUESTIONS regarding any item on this 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 our web site at dwr.colorado.gov for general information, forms, online filing instructions and access to state rules and statutes.



COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324581-
RECEIPT NUMBER 10016825

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

NE 1/4 NW 1/4 Section 30 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 515234.8 Northing: 4459733.0

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.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 acknowledged for construction under monitoring hole notice 62488-MH, and known as PZ-20.
- 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 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.)

Issued By ANITIA ARCHULETA

Date Issued: 11/18/2021

Expiration Date: N/A

Form No. GWS-31 02/2017		WELL CONSTRUCTION AND YIELD ESTIMATE REPORT State of Colorado, Office of the State Engineer 1313 Sherman St., Room 821, Denver, CO 80203 303.866.3581 dwr.colorado.gov and dwrpermitsonline@state.co.us			For Office Use Only	
1. Well Permit Number:		Receipt Number:				
2. Owner's Well Designation:						
3. Well Owner Name:						
4. Well Location Street Address:						
5. GPS Well Location <input type="checkbox"/> Zone 12 <input type="checkbox"/> 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 Depth Completed: _____ feet						
9. Advance Notification: Was Notification Required Prior to Construction? <input type="checkbox"/> Yes <input type="checkbox"/> No, Date Notification Given: _____						
10. Aquifer Type: <input type="checkbox"/> Type I (One Confining Layer) <input type="checkbox"/> Type I (Multiple Confining Layers) <input type="checkbox"/> Laramie-Fox Hills (Check one) <input type="checkbox"/> Type II (Not overlain by Type III) <input type="checkbox"/> Type II (Overlain by Type III) <input type="checkbox"/> Type III (alluvial/colluvial)						
11. Geologic Log:					12. Hole Diameter (in.) From (ft) To (ft)	
Depth	Type	Grain Size	Color	Water Loc.		
Remarks:					13. Plain Casing OD (in) Kind Wall Size (in) From (ft) To (ft) _____ _____	
					Perforated Casing Screen Slot Size (in): _____ OD (in) Kind Wall Size (in) From (ft) To (ft) _____ _____	
					14. Filter Pack: Material _____ Size _____ Interval _____	
					15. Packer Placement: Type _____ Depth _____	
					16. Grouting Record Material Amount Density Interval Method _____ _____	
17. Disinfection: Type _____ Amt. Used _____						
18. Well Yield Estimate Data: <input type="checkbox"/> Check box if Test Data is submitted on Form Number GWS-39, Well Yield Test Report Well Yield Estimate Method: _____ Static Level: _____ Estimated Yield (gpm) _____ Date/Time measured: _____ Estimate Length (hrs) _____						
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.						
Company Name:		Email:		Phone w/area code:	License Number:	
Mailing Address:						
Sign (or enter name if filing online)		Print Name and Title			Date:	

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

This report must be computer generated online, typed or printed in **BLACK OR BLUE INK** 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 [Form Submittal, Payment Options, & Fee Schedule](#). 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 aquifer 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 aquifer 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.
14. Indicate the material and size of filter pack (e.g. sand, gravel, etc.) and the interval where placed.
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.
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 821, Denver, CO 80203. You may also save, print, scan and email the completed form to dwrpermitsonline@state.co.us

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COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324582-
RECEIPT NUMBER 10016826

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

SE 1/4 SE 1/4 Section 19 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 515855.8 Northing: 4460287.4

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.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 PZ-25.
- 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 must be completed and submitted to the Division of Water Resources within 60 days of plugging.
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NOTICE: This permit has been approved subject to the following changes: The 62487-MH was not referenced on this permit as the well was constructed in Section 19, Twp. 4N, Rng. 66W, 6th P.M. and 62487-MH was issued for Section 18, Twp. 4N, Rng. 66W, 6th P.M. You are hereby notified that you have the right to appeal the issuance of this permit, by filing a written request with this office within sixty (60) days of the date of issuance, pursuant to the State Administrative Procedures Act. (See Section 24-4-104 through 106, C.R.S.)

WELL PERMIT NUMBER 324582-

RECEIPT NUMBER 10016826



Issued By ANITIA ARCHULETA

Date Issued: 11/18/2021

Expiration Date: N/A

[illegible]

INSTRUCTIONS FOR WELL CONSTRUCTION AND YIELD ESTIMATE REPORT

This report must be computer generated online, typed or printed in **BLACK OR BLUE INK** 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 [Form Submittal, Payment Options, & Fee Schedule](#). 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 aquifer 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 aquifer 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.
14. Indicate the material and size of filter pack (e.g. sand, gravel, etc.) and the interval where placed.
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.
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 821, Denver, CO 80203. You may also save, print, scan and email the completed form to dwrpermitsonline@state.co.us

IF YOU HAVE ANY QUESTIONS regarding any item on this 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 our web site at dwr.colorado.gov for general information, forms, online filing instructions and access to state rules and statutes.



COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 324583-
RECEIPT NUMBER 10016827

ORIGINAL PERMIT APPLICANT(S)

MONARCH MOUNTAIN MINERALS AND AGG

APPROVED WELL LOCATION

Water Division: 1 Water District: 2
Designated Basin: N/A
Management District: N/A
County: WELD
Parcel Name: N/A
Physical Address: N/A

AUTHORIZED AGENT

CIVIL RESOURCES (REGAN, KYLE S.)

SW 1/4 NW 1/4 Section 30 Township 4.0 N Range 66.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 514538.5 Northing: 4459152.0

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.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(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 acknowledged for construction under monitoring hole notice 62488-MH, and known as PZ-27.
- 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 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.)

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APPENDIX B

Appendix B		
Full List of Analytes to be Samples		
Analyte	Compliance Standard	
Aluminum (Al)	5	mg/L
Antimony(Sb)	0.006	mg/L
Arsenic (As)	0.01	mg/L
Barium(Ba)	2	mg/L
Beryllium (Be)	0.004	mg/L
Boron (B)	0.75	mg/L
Cadmium(Cd)	0.005	mg/L
Chloride (Cl)	250	mg/L
Chromium(Cr)	0.1	mg/L
Cobalt (Co)	0.05	mg/L
Copper (Cu)	0.2	mg/L
Cyanide [Free](CN)	0.2	mg/L
Fluoride(F)	2	mg/L
Iron (Fe)	0.3	mg/L
Lead(Pb)	0.05	mg/L
Lithium(Li)	2.5	mg/L
Nickel (Ni)	0.1	mg/L
Nitrate(NO3)	10	mg/L
Nitrite (NO2)	1	mg/L
Nitrite & Nitrate (NO2+NO3)	10	mg/L
Manganese (Mn)	0.05	mg/L
Mercury (Hg)	0.01	mg/L
Molybdenum(Mo)	0.21	mg/L
Selenium(Se)	0.05	mg/L
Silver(Ag)	0.05	mg/L
Sulfate (SO 4)	250	mg/L
Thallium(Tl)	0.002	mg/L
Uranium(U)	0.0168	mg/L
Vanadium (V)	0.1	mg/L
Zinc (Zn)	2	mg/L
Foaming Agents	0.5	mg/L
pH	-	6.5-8.5
Phenols	0.3	mg/L
Color	-	
Corrosivity	-	
Total Coliforms(MPL/100ML)		23org/100ml
TDS		(1.25 x the background value)