ROCKY MOUNTAIN RESOURCES

Rocky Mountain Resources
4601 DTC Blvd. Suite 130
Denver, CO 80237

August 16, 2019

Larry Sandoval
2300 River Frontage Rd
Silt, CO 81652

RE: Request for authorization for hydrology baseline study

Dear Mr. Sandoval

Overview
Rocky Mountain Resources (RMR) is requesting permission from the Bureau of Land Management (BLM) to conduct a hydrology baseline study for the proposed expansion area around our Mid-Continent Quarry north of Glenwood Springs, Colorado. RMR is submitting this request so that we may have a better understanding of the potential for water bearing formations near the proposed quarry expansion and to gain information on existing groundwater elevations and quality. Below is an explanation of our plan to complete this work, including the description of the work, equipment, and testing procedures.

Location
RMR has selected five locations, on BLM land, in and around our current operation where we would like permission to drill and install hydrology baseline study wells. Five locations are shown on the attached Figure 1. We are requesting permission to drill within a 100-foot radius of the center points summarized in Figure 1. Locations were selected close to existing roadways or the current quarry area to minimize disturbance to vegetation. If vegetation is disturbed during drilling operations, these areas will be reclaimed to BLM standards using a BLM approved seed mix and mulch upon completion of hydrology baseline well installation. RMR does not intend on building drilling pads or moving significant amounts of earthen material to install the wells. Instead, the drilling pads will either be existing roads or flatter, low vegetation areas next to existing roads. If tree limbs or bushes are obstructing access to the drill pads, RMR plans to clear limbs or branches across the road but will not be removing full trees or bushes.

All hydrology baseline wells will be advanced through any alluvial overburden into the Leadville Limestone and terminated just below the base of the Leadville Limestone in the Chafee Group. We have estimated between 0 and 50 feet of overburden may exist at each location and approximately 200 feet of Leadville Limestone. The coordinates and mapped locations for the hydrology baseline wells are shown on Figure 1.

Drilling Schedule
Drilling and well installation will take place between the hours of 7am and 7pm. The crew on site will likely consist of one senior driller, one to two driller helper(s), and a geologist or geological engineer.

The schedule of the drilling operations is expected to consist of a "10-on, 4-off" rotation (i.e. 10 days of drilling, followed by 4 days of non-drilling), or a "15-on, 6-off" rotation.

Drill Hole Quantity and Dimensions

RMR is requesting permission to drill with a HQ sized core bit with a 63.5 mm (2-1/2 inch) diameter core (96 mm (3-3/4 inch) outside diameter hole) or a rotary bit of similar diameter for the five wells. The total depths of the wells would range between an estimated 125 to 250 feet. Each hole will be drilled through the entirety of the Leadville Limestone and terminated in the upper boundary of Chaffee Group. The holes will be drilled with a combination of reverse circulation and core drilling techniques. The primary intent of the drilling is to install hydrology baseline study wells; however, we are also requesting permission to keep any core from the five test holes for exploration purposes. We have estimated the maximum weight of the core to be approximately 5,500 lbs.

Drill Pad Construction and Site Reclamation

To minimize vegetation and surface disturbance, each of the well locations will be located directly adjacent to either existing roads or RMR's existing quarry operations. The exact locations of these hydrology baseline wells will be positioned in wider areas of the road to allow for continued public access during and after drilling. The only exceptions to this will be Groundwater Well #2 (MH-2) and Well #5 (MH-5). During the drilling of Well #2 and Well #5, the single lane access road across the face of the slope above the existing quarry will be blocked at the drilling site. RMR anticipates this block will exist for 2-3 weeks. The blocked road is not a part of Transfer Trail and will not affect access up or down Transfer Trail. Signs will be placed at both ends of the blocked road during the drilling of Wells #2 and #5 to alert recreational users of the closure. Reflective cones will be used to mark the drilling site when drilling equipment is present. After the well is completed, full access to and use of the road will be restored.

Signage will also be used around Groundwater Wells #1 (MH-1), #3 (MH-3), #4 (MH-4) and #5 (MH-5) to alert users of the roads near the drilling sites to the equipment on site. Reflective cones will be used to mark the drilling sites while drilling equipment is present.

Depending on the surrounding topography and available space, drill pad dimensions are planned to range from 20 feet wide by 40 feet long (flatter topography), to 12 feet wide by 65 feet long (steeper topography). The size and layout of the drill pads will vary between well locations to accommodate for the natural topography and to minimize surface disturbance. The layout of a typical 20 feet wide by 40 feet long pad is shown in Figure 2. Significant surface grading or earthwork is not expected at any of the five well locations. Minor grading within 10 feet of the drill hole collar may be done to create a flat spot for the top of the well. This will be completed with a small excavator if needed. Small vegetation at the well locations will be driven over (flattened) using the drill rig and the truck. During drilling, each drill site will be sign posted and cordoned off from the public using road cones and/or flagging.

If snowpack or new snowfall is encountered on the upper elevations of the access road for wells MH-1 and MH-5, a small bulldozer or front-end loader will be used to clear the snow from the roadway and the pad location. Snow clearing will be accomplished without significant disturbance of the underlying road or the vegetation next to the road. The need for snow clearing is only expected to be a possibility on the upper portions of the access roads. Snow clearing operations would occur well before the start of

the snowmobile recreation season, and would occur when the lower parts of Transfer Trail are still fully clear of snowpack.

Once drilling activities are completed and the hydrology baseline wells and surface completions (steel protective surface casing and painted steel bollards) are installed, the site will be reclaimed. Site reclamation will include minor surface grading and roughening. Surface disturbance will be reclaimed using BLM approved seed mix and/or mulch.

Equipment and Coring Technique
RMR plans to use either a rubber tire truck mounted drill, a trailer mounted drill, or a small track mounted drill to drill the hydrology baseline wells. Other equipment on-site at the time of the drilling would include a 4x4 support truck, an air compressor, up to six 250-1000 gallon water tanks, and a 100-300 gallon fuel tank with the drill.

Drilling would be accomplished using two methods: Air/rotary drilling and/or coring techniques using wireline tooling and HQ coring tools. Air/rotary drilling will be used primarily in areas where overburden exists or where core data is not of interest. Core drilling will occur primarily within the Leadville Limestone. Core drilling would be performed using fresh water delivered to the site.

Fuel and Lubricants
Fuel will be stored in individual tanks on either the truck or drill rig. Equipment lubricants will be contained within the equipment they are lubricating. Any grease or small lubricant containers will be contained within the truck or secured on the drill rig. The drilling contractor will be equipped with a spill kit kept by the drill rig at all times.

In the case of a fuel or lubricant spill, the spill will be contained with an earthen berm or absorbent booms and absorbed using absorbent pads, powders, or dry earthen material. Contaminated products and soiled earth will be disposed of at an authorized facility in accordance with local, state, and federal regulations. Garfield County Landfill is one such authorized facility.

Water, Cuttings Management, and Erosion Control
Drilling operations will be conducted using both wet and dry drilling techniques. Dry techniques (air and rotary) will produce cuttings at the collar of the drill hole. These cuttings will be kept at the collar or shoveled a few feet away from the collar. Cuttings will spread over the drill pad area after well completion. Wet coring will employ the use of water to lubricate and cool the core drilling bit. Prior to the coring of a hole, a steel casing sleeve will be installed in the top section of the drill hole. The casing will extend down into the hole a few feet and will extend several feet above the hole as well. The casing above the surface will have an outlet on one side to allow returned water and cuttings to flow out of the casing in a controlled manner. The flow of returned water and cuttings will be directed into a settling tank. The water and cuttings will be allowed to settle in this tank and fill it up to the level of an outlet in the side of the tank. Once the water level reaches the tank outlet, it will either be pumped from the tank and recirculated down the drill hole as clean water for the coring process or it will flow into a second settling tank, where the water and cutting fines will have additional time to settle and separate. Water directed to the second settling tank will be pumped out of the upper portion of the tank and recirculated down the drill hole as clean water for the coring process. Water remaining in the settling

tanks after the drilling process will be allowed to settle further and will then be pumped back into the drilling water storage tanks on site or allowed to drain slowly onto the ground. Settling tanks will be less than 2 feet deep and may either be closed or open top in design. Drill cuttings and fines in the settling tanks will be emptied onto the ground near the drilling site and will be spread around the pad area and used in the reclamation process. Water storage tanks will be closed top designs. Open top tanks, if used, will be equipped with an escape ramp for wildlife egress, or they will be securely covered while drilling personnel are off-site.

Erosion is not expected to be an issue on site since the water from the drilling process will either be recirculated in the drilling process or will be returned to the water storage tanks on site. Should water escape from any tank or containment location, it will be contained within an earthen berm. Dry earth may be added to the water to absorb it. Wet material will be removed and stockpiled on the northeast corner of our current bench area. Any water remaining in tanks on the drill pads after the completion of that pad's well will either be transported to another location or will be emptied slowly from the tanks onto the ground.

Open Drill Holes

During the drilling operation, the hole on the active drill pad will remain open. To prevent obstructions inadvertently entering the open holes when drilling personnel are not on site, open holes will be temporarily plugged using the head of the drill rig to cover the hole, or by inserting a steel cap to the top of the surface casing. Drilling locations containing open drill holes will be marked with traffic cones and sectioned off with yellow caution tape when drilling personnel are not on site. This includes the time between shifts, weekends, and any time following the completion of the drilling operations. Once drilling is complete, a PVC hydrology baseline well will be installed. All five locations will have surface completions.

Surface Completion

The hydrology baseline monitoring well will be completed with a steel protective surface casing with a lockable cover. The surface casing will be approximately 3 feet high, with less than 100 square feet of surface disturbance. A 4 foot x 4 foot mounded concrete pad will be constructed to move surface water away from the well location. The surface casing will be protected with at least two painted steel bollards filled with concrete to minimize accidental damage to the well from vehicular traffic.

Rock Testing

RMR plans to perform several tests on any retrieved rock samples including:

- UCS testing on core samples
- XRF testing and geochemical analysis on core and chip samples
- Rock properties testing on crushed core samples

XRF testing will be conducted with a Bruker S1 Titan. Elements tested for with XRF include:

- $MgCO_3$
- $CaCO_3$
- Al_2O_3
- K_2O
- SiO_2
- TiO_2
- P_2O_5
- MnO
- SO_3
- Fe_2O_3

RMR will submit the findings of any testing to the BLM for their records. RMR will also provide sample splits for all cores subjected to XRF or geochemical testing. For testing where an intact core is required, RMR will provide adjacent sections of core to the BLM.

Plugging and Abandonment

After mining of the Mid-Continent limestone deposit is completed and/or the hydrology baseline wells are no longer required, the five wells will be promptly plugged and reclaimed in accordance with CO-DWR, 2CCR 402-2, Rule 16. Wells, without any water present, will be backfilled with inert fines material and capped with a non-metallic plug and 3' of concrete. Should static water be present in any of the wells, they will be backfilled with bentonite pellets to a height of 50' above the static water level and then filled with cuttings to a height of 3' below surface level. A non-metallic plug will be installed, and the hole will be capped with 3' of concrete. Should artesian water flow be present in a well, the well will be plugged and abandoned immediately the following plugging procedures will be used. The drill hole will be filled with bentonite pellets or concrete to a height of 3' below the surface level. A non-metallic plug will be installed, and the hole will be capped with 3' of concrete. Well abandonment forms will be filed with the Division of Water Resources and the BLM will receive notification of the plugging and abandonment.

Hydrology Baseline Study Well Installation

Hydrology baseline wells in the Leadville Limestone will be constructed in accordance with the Colorado Division of Water Resources Board of Examiners rules and regulations for monitoring well construction (Rule 14). These requirements include submitting a notice of intent to the State Engineers office (at least 72 hours prior to drilling) and submitting well construction completion reports (Rules 5, 6, 9, and 17) prepared by the Geologist or Geotechnical Engineer observing the hydrology baseline well installation.

Basic well construction will include 2-inch diameter schedule 80 PVC with flush-threaded joints. Well screen will consist of machine-slotted PVC pipe with a PVC end cap, and solid PVC casing riser pipe extending from the top of the screen interval to the ground surface. Centralizers will be placed on the well casing during installation to maintain the annular space around the casing for installation of annular fill materials. The bottom of the hole will be backfilled using hydrated bentonite chips to isolate the Chaffee Group from the screen interval. The screened interval will be selected a minimum 10 feet above the base of the Leadville Limestone. Graded clean filter sand is placed in the annular space around the screen interval, and an upper annular seal consisting of hydrated bentonite chips is placed in the annular space around the solid riser pipe. A tremie will be used to place a cement-bentonite grout mix from the top of the annular bentonite seal to approximately 5 feet below ground surface. The remainder of the borehole will be filled with neat cement grout or hydrated bentonite chips to the ground surface. Finish construction will consist of a 4-foot x 4-foot (wide) x 0.5-foot thick concrete well pad (with a brass cap mounted in the surface of the concrete pad), a well cap (J-plug), and a locking metal well box.

General guidelines for well installation are as follows:

1. Drill a HQ hole using the appropriate drill rig.
2. Verify that cuttings have been removed or flushed from the hole to a minimum of 3 feet below the design screened interval.

3. Install Schedule 80, PVC well standpipe casing (2-inch factory-slotted and solid pieces, as appropriate) in accordance with manufacturer's specifications. Record the elevation of all slotted (screened) intervals on the well installation log. The factory slotted interval may range from 10' to 40' depending on the geologic conditions encountered during drilling.
4. Install a filter pack consisting of clean, uniform #10-#20 silica sand from the base of the borehole extending up around the screened interval and at least 5 feet above the screened interval. Sand should be placed in lifts to prevent bridging.
5. Install a minimum 3-foot thick bentonite chip surface seal on top of the filter pack. Pour water into the hole to hydrate the bentonite chips prior to grouting.
6. Place cement-bentonite grout from the top of the bentonite chip surface seal to the surface. Cement-bentonite grout may need to be placed in stages to minimize the risk of damaging the well casing from the heat of hydration during curing of the grout mix.
7. Record all elevations/depths of materials used to construct each hydrology baseline well.
8. If the depth to water is deep, heat of hydration of a long grout column may damage the PVC casing. During hydrology baseline well construction, the borehole annulus above the bentonite seal will be grouted in stages.

Downhole Geophysical Logging

Downhole geophysical logging may be performed at some of the hydrology baseline well locations to provide additional information to characterize the geology. The surveys applicable to the investigation could include: Optical and/or Acoustical televiewers, Dual focus Resistivity, Caliper, Natural Gamma, Density, vertical flow-meter and Temperature. The temperature log would help identify discrete depth intervals where groundwater flow enters and/or exits the borehole in fractured rock.

Piezometer Development and Water Level Monitoring

All wells will be developed after the cement seal has had sufficient time to cure (2-3 days), procedures are outline in SOP-2 Monitoring Well Development (Attachment A). Water extracted from the well during development will be discarded onto the ground (preferably vegetated). The depth to water will be measured manually two to three times per week for approximately two weeks following completion of well installation and well development. These manual depth to water measurements will provide data to evaluate when the water level in the well has equilibrated with the surrounding formation following drilling and well installation. A downhole pressure transducer or vibrating wire piezometer and data logger will be installed following completion of well development and the initial groundwater sampling event. Geokon vibrating wire piezometer, model 4500S, with Geokon LC-2 Data loggers will be installed and setup following the manufacture procedures. Data loggers will be set to record every hour and will be stored in a weatherproof, lockable case that is attached to the protected steel casing or bollard. A Geokon Vibrating Wire Barometer will be installed at one of the hydrology baseline well locations and used to correct the vibrating wire piezometer for barometric pressure changes.

Water-Level Measurement

Prior to purging and sampling, the sampler will measure the depth-to-water or pressure (if artesian) in the hydrology baseline well to determine the static water level. The depth to water will be measured from the top of casing to the top of the static water level using an electronic water level meter (e.g., Solinst, Heron, Geotech, or similar).

The procedure for measuring the depth to water in a hydrology baseline well is described below.

- The static water level depth and the total depth of the well will be measured using an electric water level meter. The measuring point for all hydrology baseline wells should be the top of the well casing. The measuring point will be marked by a notch or other mark in the casing.
- The static water level and the depth of the well shall be measured with the water level meter to the nearest 0.01 feet. The depth to water measurement will be written on the field data sheet or in a field notebook, and immediately re-measured to confirm the depth to water before the water level meter is used to measure the total depth of the well and removed from the well.
- If available, the depth to water can be compared with past measurements to help verify the readings.
- The total depth of the well is measured by lowering the electric water level meter probe to the bottom of the well. In deep wells, or wells where soft sediment has accumulated in the well bottom (sump), it can be difficult to determine when the probe tip encounters the bottom of the well casing. The probe cable will become slack, and field personnel will need to lift and lower the probe cable a few times and "feel" for the exact depth when the probe first touches the bottom and the cable starts to become slack. The total depth measurement is recorded from the measurement point on the top of the casing.
- The water level depth below the measuring point (in feet) will be subtracted from the measuring point elevation (surveyed top of casing elevation) to calculate the elevation of the static water level. The land surface datum (brass cap installed in the concrete well pad) of each hydrology baseline well will also be surveyed.
- Surveying will be performed by a professional surveyor and recorded in the UTM NAD83, Zone 13N coordinate system.

Groundwater Sampling

Groundwater sampling and associated laboratory testing will be performed quarterly to develop baseline data for at least four quarters, and will be continued until completion of the NEPA process.

All non-dedicated purging and sampling equipment coming in contact with well water will be decontaminated prior to the start of sampling each day and after sampling each well by washing with potable water and rinsing with distilled or de-ionized water before the next well is sampled. Sampling equipment will be protected from contacting the ground surface.

Electronic equipment used during sampling includes temperature, pH, EC, DO, and ORP meters, and an electronic water-level meter. Before going into the field, the sampler shall verify that all field equipment is operating properly and is properly calibrated before each day's use in accordance with the

manufacturer's instructions, and calibration information, including calibration solution types and brands, will be recorded in a field notebook or on the field data sheet (Attachment A)

Prior to sample collection, the well shall be purged to help ensure that the water sample is representative of the aquifer. A minimum of three well volumes will be purged from each well to be sampled. Purged water will be discharged onto the ground surface (preferably vegetated). A water-quality meter (e.g. YSI 556 MPS or Horiba U- 22) capable of measuring pH, conductivity, dissolved oxygen, turbidity and temperature shall be utilized to monitor water quality during purging. A minimum of three sets of pH, conductivity, dissolved oxygen, turbidity, and temperature readings shall be taken at approximately five-minute intervals. Once these measurements stabilize, or three casing volumes have been removed from the well, groundwater is considered to be flowing from the aquifer and is ready to sample. During sampling the sample team will document procedures in a field notebook or on-site specific Groundwater Sample Collection Record sheets to record sample collection and well inspection observations, well purging field parameters, and number of samples collected. See SOP-3 Monitoring Well Purging and Groundwater Sampling (Attachment A).

Sample Analysis
All water samples collected from wells will undergo analytical testing. Laboratory analysis will be conducted by a certified water testing laboratory. The following sections describe the analytical methods for laboratory analyses.

Laboratory Analysis
Laboratory samples shall be collected in laboratory-supplied containers immediately following field collection. Laboratory analysis will consist of major ions (cations and anions), metals, and trace elements. Specific analytes and method numbers are specified in Table 1.
Laboratory results will be provided directly to the BLM by the third party laboratory performing the analysis.

Quality Assurance/Quality Control Samples
Quality Assurance (QA) samples will be collected to help ensure that the project QA objectives are met. Based upon the number of hydrology baseline wells to be sampled (5), QA/Quality Control (QC) samples will include one matrix spike/matrix spike duplicate sample and one field duplicate sample. An equipment rinsate sample will be submitted if non-dedicated sampling equipment is necessary.

One matrix spike/matrix spike duplicate sample will be collected and submitted to the laboratory for analysis. Matrix spike samples reveal information about sample preparation and analytical methodology. They can provide information about sample homogeneity, extent of matrix bias, or interference with analyte recovery; they also can indicate the accuracy of the method.

One field duplicate sample will be submitted for every 10 samples submitted to the laboratory for analysis. The field duplicate sample will be submitted to the laboratory as a blind duplicate, and will be labeled using a fictitious sample number.

If non-dedicated sampling equipment is used, one or more rinsate samples are collected to determine if the sampling equipment (e.g. submersible pump) was properly decontaminated and if cross contamination could have occurred between sampling locations.

Other Considerations – Geophysical Report

In preparation for submitting this hydrology baseline well request, RMR contracted Collier Consulting to perform a geophysical analysis of the proposed drilling sites. The focus of the geophysical analysis was to determine whether there were any cave or karst features in the immediate vicinity of the well sites. The final report from Collier determined there were a few features of interest in the proposed drilling areas but only a couple that could reasonably be thought to have cave type qualities. These features occur near the proposed drilling locations for Groundwater Wells #1 and #5. RMR does not intend to drill in the direct area of the features and will stay at least 75 feet away from the identified features. The Collier Consulting report is included in Attachment B.

Request for Hydrology Data from Private Parties

As a part of this hydrology baseline study proposal, RMR requested permission to drill a hydrology baseline well on land owned by the owners of Iron Mountain Hot Springs and to sample the water produced from the Redstone well on their property. RMR requested permission from the Glenwood Hot Springs Lodge & Pool to sample the Yampah Spring located on their property. Both parties elected not to comply with the request and are therefore not included in the proposed study. The letters to both parties, email communications, and their joint response are included in Attachment C.

Should there be any questions regarding our request, please contact Bobby Wagner at rwagner@rmrholdings.com. We appreciate your consideration of our request, and we look forward to hearing from you soon.

Sincerely,

Robert T. Wagner
VP, Operations
Rocky Mountain Resources
rwagner@rmrholdings.com