TAR HEEL ROCKHOUND

JANUARY 2026

Catawba Valley Gem & Mineral Club, Inc.

2026 Officers and Committees

President:	Ben Houston 704-284-2565	Education:	George Max 828-328-9107
Vice President:	Joan Glover 828-446-7633	Show Chairman:	Dean Russell 828-303-1448
Treasurer:	Terry Russell 828-303-1563	Scholarship:	George Max 828-328-9107
Secretary:	Dean Russell 828-303-1448	Field Trip:	
Editor:	Tracie Jeffries 828-430-1341		

Club Address: PO Box 2521, Hickory NC 28603-2521
Regular Meetings: Second Tuesday, 7:00 PM
St. Aloysius Catholic Church, 921 2nd St. NE Hickory, NC
Annual Dues: Family, $25, Individual, $18

The purpose of the Club is to increase the individual's knowledge of the earth sciences and to aid in the development of lapidary and related arts and skills; to promote fellowship and exchange of ideas; to hold exhibitions, contests, lectures, and demonstrations for educational purposes; to help interest more people in the gem and mineral hobby; and to capture and preserve the beauty of nature, the arts, and the works of man.

CATAWBA VALLEY GEM AND MINERAL CLUB, INC.

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http://www.cvgmc.com

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INSIDE

PRESIDENT'S REPORT

I hope everyone had a great Christmas and New Year. I look forward to being the club president and participating in the upcoming show in March. It has been a little while since I joined the club in 2023 and from then on it has been an honor to be a part of this community. Don't forget the grab bag day on the 17th, I'll be bringing lots of material from Diamond Hill Mine.

Sincerely,
Ben H.

CVGMC MINUTES FOR DECEMBER 10th, 2025

There are no minutes for the December 10th meeting, but we need to vote to accept the November minutes, as published in the November newsletter.

JANUARY PROGRAM

The program for January will be our annual 'Bragging Rights Contest', so get your specimens and stories ready! Participants may enter 1 specimen in each category as follows:

1. Best Collected - Specimens you have found in 2025.
2. Best Purchased - Specimens you have purchased in 2025.
3. Best Crafted - Specimens you have crafted in 2025.

The Bragging Rights Contest is open to club members only. The prize for each category is bragging rights.

ANNOUNCEMENTS

DECEMBER 2025 AUCTION RESULTS: Approximately 80 items were auctioned off during the December Christmas party. The club received $287 for the lot 2 items, where 100% of the proceeds went to the club. It looked like everyone enjoyed themselves. It is always a fun meeting to have time to socialize with club members. We even had some new members sign up to join the club. Happy Holidays!!

GRAB BAG WORKDAY: We will pack grab bags for the show on **Saturday, January 17th from 9:00 AM to 12:00 PM.** Meet at the **St. Andrew's Lutheran Church 629 Eighth Street NE,** on the

Lenoir Rhyne Campus. We will work in Fellowship Hall on the bottom floor so park in the lot at the back. Please bring a variety of different rocks, minerals, and fossils which are clean and of appropriate size (no larger than a baseball.) Remember everything has to fit into a small paper bag. Grab bags are a very popular item at our rock shows especially with the children. Even if you don't have material, you can still come to help and join the fun!

CLUB T-SHIRTS: Pattern three won the contest for the club t-shirt. We would like to have shirts ordered and ready to wear for the March show. To do that we need to get orders in as soon as possible. Be thinking about your size (small, medium, large, 1x, 2x, or 3x), and style (men's or women's cut). More information will be available soon about the cost.

CLUB PARTICIPATION INCENTIVE: Starting in January the club will start a new program to encourage club participation. Every time you come to a meeting or help with an event you can put your name in a 'jar' . Every quarter we will randomly pull a name from the jar for a special door prize! It will be your responsibility to remember to enter your name each meeting.

SHOW THEME: The theme for the March Gem and Mineral Show will be "Home Grown: Rocks, Minerals, Gems, and Fossils of North Carolina". I hope many of you will do a show case and share your amazing collections. The club discussed not having club awards this year. Instead we will let the public vote for a show favorite. This would remove any pressure and hopefully, more people will participate. Also, feel free to enter cases that have an educational theme such as the rock cycle, mining, crystal types, how fossils are formed, etc.…To request a case please fill out the form attached at the end of the newsletter.

GEOLOGY MADE EASY: RHYOLITE

Rhyolite is a felsic extrusive volcanic rock. Its chemical composition is similar to granite, its intrusive counterpart. Rhyolite is felsic due to its high silica content from minerals such as quartz and feldspar, and low percentage of mafic minerals (See Table 1). Like most extrusive volcanic rocks, it cools quickly and usually has a fine-grained or aphanitic texture. Rhyolite is commonly whitish to cream colored, light pink, buff, or light to bluish-gray in color (See Images 1 and 2). But, it can also be reddish, yellow, green, brown, purplish, and darker grays.

ROCK TEXTURE	COMPOSITION			
	FELSIC > 63% SiO_2 < 15% mafic minerals (Quartz, feldspars, muscovite)	**INTERMEDIATE** 52% to 63% SiO_2 15 – 40% mafic minerals	**MAFIC** 45% to 52% SiO_2 > 40 % mafic minerals	**ULTRAMAFIC** < 45% SiO_2 nearly 100% mafic minerals (Hornblende, pyroxene, biotite, olivine)
COARSE (INTRUSIVE)	**GRANITE**	**DIORITE**	**GABBRO**	**PERIDOTITE**
FINE (EXTRUSIVE)	**RHYOLITE**	**ANDESITE**	**BASALT**	**KOMITIITE** (Very rare)
GLASSY (EXTRUSIVE)	**OBSIDIAN**	**NA**	**NA**	**NA**

TABLE 1: Summary of extrusive volcanic rock traits.

IMAGE 1: This is a good example of Rhyolite showing its light felsic color and fine-grained texture.

https://www.flickr.com/photos/jsjgeology/8456708386 , Photo by James St John

IMAGE 2: Another classic example of Rhyolite. Note the pinkish color and fine-grained texture. This sample was collected near the town of Castle Rock, Colorado, USA.

Photo by james St John, October 31, 2021 at 10:39:28 PM EDTCC BY 2.0

Rhyolite has many uses, such as:

- Aggregate for construction,
- Stone for carving (small decorative items to large statues)
- A semiprecious gemstone (cut and polished for jewelry)
- Countertops and
- Material for landscaping

Rhyolite was also commonly used by Native Americans to produce stone tools, such as knives, scrapers, and projectile points (See image 3). With a hardness of 6 - 7 on the Moh's scale and subconchoidal to conchoidal fracture, it easily formed and kept an edge. The Rhyolite in North Carolina is actually metamorphically altered Rhyolite, better known as Rhyodacite. Many of the ancient Rhyolite quarry sites are within the Carolina Slate Belt, with the largest concentration in and around Uwharrie National Forest (See Figure 1).

IMAGE 3: The four projectile points pictured above, were found in Burke County, NC. All four are made from Rhyolite (Metarhyolite) most likely quarried from the NC Piedmont area. Going from left to right, the broken first point was made from porphyritic Rhyolite, the second from aphanitic Rhyolite, the third from flow-banded rhyolite, and the fourth shows the typical light colored patina on the surface (note the darker unweathered material where the tip is chipped). Photo by T. Jeffries

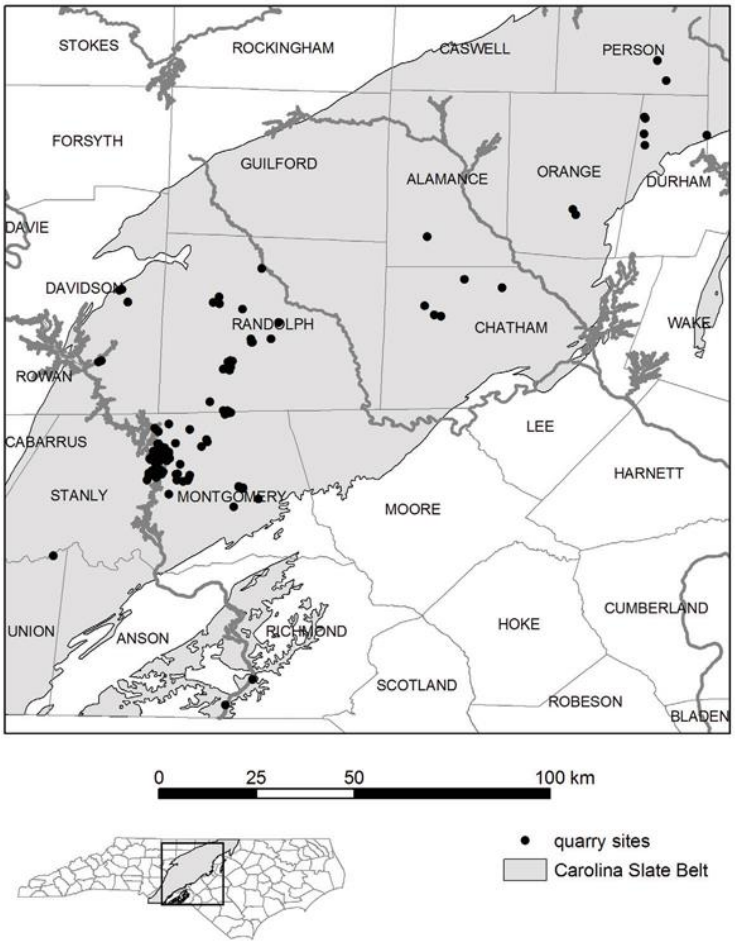


FIGURE 1: A study was conducted, surveying ancient quarry sites within the Carolina Slate Belt. Notice that the majority of these quarries are concentrated in and around the Uwharrie National Forest. Many of these quarries were mined for Metarhyolite.

https://rla.unc.edu/Publications/pdf/ResRep25/Ch3.pdf

There are wide varieties of Rhyolite depending on location, exact mineral composition, rate of cooling, and other conditions. Based on composition, even Obsidian and Pumice can be considered forms of Rhyolite. They are both extrusive felsic rocks that rapidly cooled. Obsidian is formed from lava with no gases, creating a smooth, glassy texture. Pumice is formed from lava rich in gases, yielding a highly vesicular texture.

Specimens of Rhyolite are sold under numerous trade names depending on location, color, pattern, and other factors. There seem to be as many names as there are variations of Rhyolite. This nomenclature can become confusing to collectors, especially since many forms are referred to as ‘Jasper’. You may see Rhyolite advertised as:

- Apache Sage or Apache Jasper,
- Birds-eye Jasper,
- Castlerock Rhyolite,
- Chrysanthemum or Flower Rhyolite,
- Dendritic Rhyolite,
- Galaxy Rhyolite or Que Sera Stone,
- Kambaba, Kabamba, or Crocodile Jasper,
- Mexican Leopard Skin or Leopard Skin Rhyolite/Jasper,
- Mushroom Jasper,
- Orbicular Rhyolite,
- Rainforest Jasper, or Australian Rainforest Jasper,
- Spiderweb Rhyolite,
- Wonderstone, Hickoryite, or Rainbow Rhyolite,
- And more!

Let’s explore a few variations based by texture and structures.

Aphanitic is defined as a fine-grained volcanic rock, where individual mineral crystals are too small to be seen by the naked eye (See image 4). The lava cooled so fast that individual mineral crystals did not have a chance to grow.

Porphyritic rocks are volcanic rocks that contain large visible mineral crystals within a silica-rich fine-grained matrix (See Images 5 and 6). This usually indicates a two stage cooling process during the formation of the rock. Many Rhyolitic deposits exhibit this texture.

IMAGE 4: Rhyolite Notice the light gray color and, very fine-grained/ aphanitic texture.

Photo credit: Koreller, CC BY-SA 4.0, via Wikimedia Commons

IMAGE 5: The Rhyolite sample above is porphyritic. Note the fine-grained pink Rhyolite matrix with visible white feldspar crystals/phenocrysts. This sample was collected in San Bernardino County, California. Photo by T. Jeffries

IMAGE 6: This is a nice polished sample of porphyritic rhyolite from eastern Central Germany. Note the brown fine-grained Rhyolite and numerous larger scattered mineral crystals/phenocrysts.

https://commons.wikimedia.org/wiki/File:Loebejuener_porphyr_poliert.jpg

Amygdaloidal Rhyolite contains amygdules (or amygdales) (See image 7). Amygdules form in two stages. First, gas-rich lava forms small, roundish vesicles created by gas bubbles. Secondly, at a later stage, these vesicles are filled with or lined by secondary minerals, such as quartz, calcite, agate, chalcedony, or various zeolites. At this point, the vesicles are now amygdaloids.

Spherulitic Rhyolite contains many small spherulites (See images 8– 13). Spherulites are small, rounded structures commonly found in extrusive igneous rocks. The spherulites are usually composed of radiating crystals of quartz, feldspar, and/or other minerals. Many of the more colorful and eye-catching forms of Rhyolite are due to spherulites and are highly desirable to collectors and lapidarists.

IMAGE 7: Notice the reddish fine-grained Rhyolite with numerous amygdules. I self-collected this rock near San Antonio, Socorro County, New Mexico. Photo by T. Jeffries

IMAGE 8: Notice the spherulites in this rhyolite flow. These can be seen in rhyolitic outcrops in the Long Valley Caldera area, California. USGS photo by Jessica Ball, Public Domain

IMAGE 9: A bowl carved from ‘Kambaba Jasper’. Note the green rhyolite matrix with darker spherulites**.** Kambaba Jasper is found in the Bongolava region of Madagascar. It is often marketed as Kambaba, Kabamba, or Crocodile Jasper. It is also, incorrectly, sold as a stromatolite fossil. Photo by T. Jeffries

IMAGE 10: Rainforest or Australian Rainforest Jasper is a form of Rhyolite with spherulites. It can have a wide range of colors and patterns making it very desirable to both rock hounds and lapidarists. Most Rainforest Jasper comes from areas near Queensland, Australia. Shihmei Barger 舒詩玫's photo, licensed as CC BY-NC-ND 2.0.

IMAGE 11: Mushroom Jasper is a special variation of Rainforest Jasper. Most Mushroom jasper comes from areas near Phoenix, Arizona. The spherulites overlap creating a pattern similar to lichens growing on trees. https://www.flickr.com/photos/cobalt/364570438/, **Photo by cobalt123**

IMAGE 12: A nice sample of Leopard Skin Jasper/Rhyolite from Mexico. This Rhyolite is commonly used to make cabochons for jewelry. Photo by T. Jeffries

IMAGE 13: The sample above is an example of a rhyolitic flow with spherulites. This specimen came from the Uwharrie Mountains in Gilead County, North Carolina. It was first reported to be a Palaeotrochos fossil and is now a classic example of a pseudo-fossil. Photo by T. Jeffries

A few other unique forms of Rhyolite include Thundereggs, Wonderstone/Rainbow Rhyolite and Flow-banded Rhyolite. Thundereggs form in rhyolitic lava or tuff deposits (See image 14). They are usually roundish in shape with an outer ‘rind’ of Rhyolite. The center may be solid or hollow. Solid Thundereggs are commonly filled with agate, chalcedony, or opal. Hollow Thundereggs, also called geodes, may be lined with crystals of quartz, gypsum, or calcite.

The term ‘Wonderstone’, or ‘Rainbow Stone’ is used to describe a wide variety of rocks that have colorful Liesegang banding. Liesegang banding most commonly occurs in porous sedimentary rocks such as sandstone, but it can also be found in metamorphic and igneous rocks such as Rhyolite (See image 15).

Flow-banding describes a layering effect seen in some lava flows. This outcome can be caused by several processes, and may produce some visually striking patterns (See image 16).

IMAGE 14: Thundereggs form in rhyolitic lava or tuff deposits. Note the reddish-brown rhyolite surrounding the agatized core. Photo by T. Jeffries

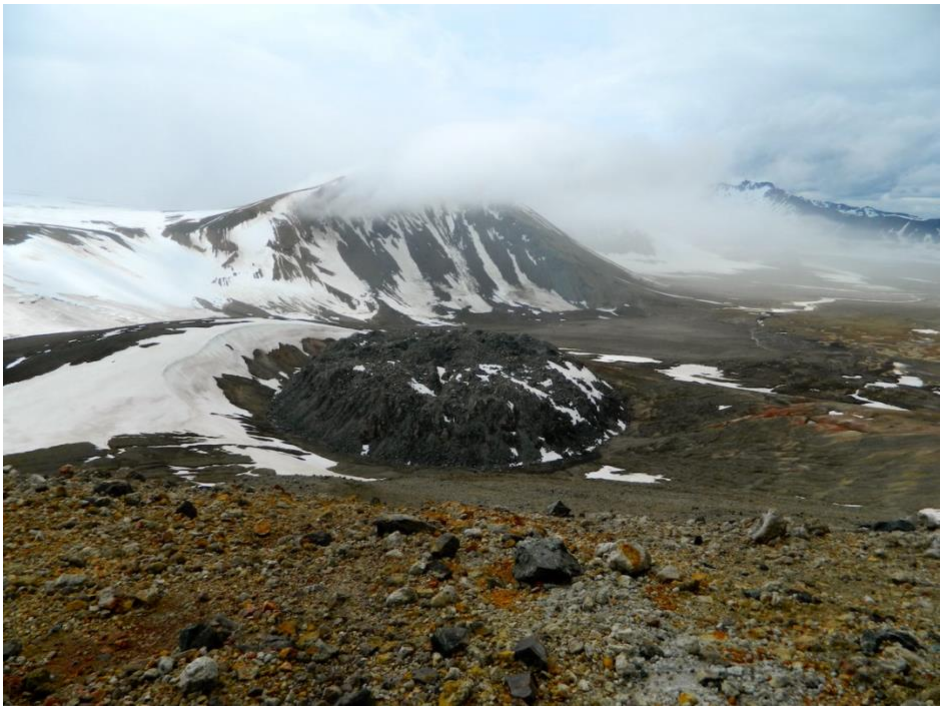
Image 15: Wonderstone, note the colorful Liesegang banding. Collection site unknown.

https://www.etsy.com/listing/4423810179/rainbow-rhyolite-slab-gem-show

IMAGE 16: Rhyolite banding, Pinnacles National Park, 2014. Photo: NPS, public domain.

Rhyolitic magma is not as common as mafic magma that produces Basalt. The silica-rich magma that forms Rhyolite is very viscous which results in extremely violent eruptions, usually associated with domes and calderas. Within the US, a notable Rhyolitic eruption was the 1912 eruption of the Novarupta Volcano in Alaska. This was the largest volcanic eruption to occur during the 20th century. It was so large and violent, it released 30x more magma than the Mt. St. Helens eruption of 1980 (See image 17). Luckily eruptions of this magnitude are rare.

IMAGE 17: A Rhyolitic dome marks the site of the Novarupta eruption of 1912.



https://www.nps.gov/katm/blogs/ashes-to-ashes.htm

Below are several notable areas to visit to view examples of Rhyolite in the United States.

- Hot Creek Rhyolite Flow, Hot Creek Gorge, Long Valley Caldera, California
  Deposits of Rhyolite in this area may contain examples of spherulites, phenocrysts, vugs, flow-banding, and exhibit diverse colors.

- Garnet Hill, White Pine County, NV
  “Garnet Hill is nationally known for its very dark colored garnets found in a flow-banded rhyolitic volcanic rock. Two square miles of public land were designated as a public recreation area in 1970 to ensure continued public access to the site because of its recreational, rock hounding, and scientific study values.”
  https://ely2025.nckms.org/explore/garnet-hill.php

- Grimes Point-Hidden Cave Archaeological Site (BLM Land, Fallon, Nevada)
  This is public land managed by the Bureau of Land Management (BLM). Within this area are three major collecting sites referred to as Wonderstone Mountain, A, B, and Green Mountain. You will need a four-wheel drive vehicle, and be aware that there are some private claims within the area. While there, also visit the archeological sites, museum, cave, and petroglyphs.

- Topaz Mountain, Juab County, Utah
  Topaz Mountain is public land managed by the Bureau of Land Management (BLM). The site is open for rockhounding. Rhyolite deposits in this area contain Topaz, Garnets, Beryl, and other minerals within small vugs. Different layers of Rhyolite may be red with spherulites, purplish, or gray in color. Topaz is found in the gray layers.

- Morrow Mountain State Park in Stanly County, North Carolina
  Morrow Mountain, in Morrow Mountain State Park, is the site of one of the largest prehistoric quarries in NC. The Rhyolite (Metarhyolite) used to make primitive artifacts across the eastern US can be traced back to this quarry. Visitors may hike to the quarry area, but collecting is not allowed. Also visit the nearby historical Town Creek Indian Mound near Mount Gilead.

As the reader can see, there is more to Rhyolite than meets the eye. It is an amazingly diverse rock, with multiple colors, textures, and patterns. Hopefully, you will add a few Rhyolite samples to your collection!

WHAT'S HAPPENING IN OUR AREA

WHAT	WHEN	WHERE
Catawba Valley Gem and Mineral Show	MARCH 3 -8th	1960 13th Ave Dr SE Hickory Metro Convention Center Hickory, NC 28602
Annual Gaston Gem, Mineral and Jewelry Show	MARCH 14 – 15th SAT: 10:00 - 6:00 SUN: 10:00 - 4:00	410 E Long Ave Gastonia Farmers Market Gastonia, NC 28054

2026 MEMBERSHIP DUES

The membership dues are now being collected for 2026. Included in this month's bulletin is a blank 2026 Membership form. Terry will also bring some blank 2026 Membership forms to the January meeting. This membership form must accompany your dues for your name to be included on the 2026 club roster.

- Family membership is $25
- Single membership is $18
-

Please print **clearly and legibly** on the form so that your information can be updated accurately.

Honorary members must also fill out the form each year in order to keep the club records up to date and to maintain your honorary membership status.

You can send your payment and form to the Club PO Box (address on the membership form) or directly to Terry Russell at the following address:
5254 Olde School Drive
Hickory, NC 28602

2026 MEMBERSHIP INFORMATION FORM

Date: _____

Please Check all the Appropriate Boxes

☐ **New Member** ☐ **Renewal**

☐ **Single $18/yr** ☐ **Family $25/yr** ☐ **Honorary $0/yr**

** ☐ **Onetime fee for name badge $10/person** ☐ **Quantity**

**** Spelling on badges ONLY IF PURCHASING any:**

_____

PLEASE PRINT CLEARLY & FILL IN ALL INFORMATION

NAME: _____

SPOUSE'S NAME (family membership): _____

ADDRESS (Street): _____

ADDRESS (City, State, and Zip Code): _____

MINOR CHILD (family membership): _____ Age ____

MINOR CHILD (family membership): _____ Age _____

HOME PHONE: _____ CELL PHONE: _____

E-MAIL ADDRESS: _____

***** Bulletins will be distributed by E-MAIL only *****

MAKE CHECKS PAYABLE TO: CATAWBA VALLEY GEM & MINERAL CLUB, INC.
MAIL TO: Catawba Valley Gem & Mineral Club, Inc
c/o Terry Russell
PO Box 2521
Hickory, NC 28603-2521

DUES (NEW MEMBERS ONLY) SHALL BE PRORATED AS FOLLOWS:
January 1 – June 30: full amount of annual dues
July 1 – September 30: 50% of annual dues
October 1 – December 31: full amount of annual dues shall apply as payment for the following year

FOR USE BY TREASURER ONLY: Amt Rec'd _____ Check # _____ Date _____

EXHIBIT APPLICATION

UNIFORM GEM, MINERAL, AND JEWELRY SHOW HICKORY METRO CONVENTION CENTER

Exhibits of minerals, fossils or gemstones are one way we can help to educate ourselves and the general public about our hobby. That is one of the main purposes of the Club. Hopefully many of you will choose to participate in this joint activity. Please fill out this form and return it by March 11th to Exhibits Chair, Catawba Valley Gem & Mineral Club, P.O. Box 2521, Hickory, NC, 28603-2521 OR to Tracie Jeffries, botanynerd89@gmail.com

DESCRIPTION OF EXHIBIT:

SELECT YOUR CASE REQUIREMENTS:

_____ I will furnish a case of the following dimensions: W_____D_____H_____

_____ I will need a club case. Please check preference:

_____ Regular 40” W X 19” D X 22” H

_____ Larger 48” W X 24” D X 24” H

_____ I need a case with risers.

The exhibit should be set up by Thursday, March 27th between 4PM and 9PM, and removed at the end of the show at 5 PM, Sunday, March 30th. If you are unable to meet this schedule, please contact the Exhibits Chair about making other arrangements.

SECURITY AND LIABILITY:

Professional security will be provided around the clock, beginning at 4PM on Thursday and ending at 7PM on Sunday. The Catawba Valley Gem & Mineral Club will take all reasonable precautions to protect property and person of each exhibitor, however, it is mutually agreed that Catawba Valley Gem & Mineral Club, Inc, or its members shall not be liable for any damage to or the loss of any exhibit. This includes the property of the exhibitor or injury to his/her person resulting from any cause. All claims for any such damage, loss or injury are expressly waived by the exhibitor. Submission of the signed application for exhibitor’s space constitutes acceptance of ALL the rules and regulations as outlined herein and releases the Catawba Valley Gem & Mineral Club, Inc., or its members from all liability as outlined above.

Signature of Exhibitor: Date:

Tar Heel Rockhound

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Club Meetings

2nd Tuesday of Month, 7:00PM

St Aloysius Catholic Church

921 2nd Street NE Hickory, NC

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HICKORY, NORTH CAROLINA
Organized 1969