MAR 67

THE

ISHPEMING
ROCK and MINERAL CLUB

JASPILITE

Affiliated with the Midwest Federation
of Mineralogical and Geological Societies

T H E J A S P I L I T E

OFFICIAL PUBLICATION

of the

ISHPEMING ROCK AND MINERAL CLUB, INC.

Box 102

Ishpeming, Michigan

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MEMBERSHIP The IR&MC is open to anyone interested in the "earth sciences".

Initiation Fee	$1.50	
Husband & wife	$3.00	Dues payable
Adults	$2.00	by April 1st.
Junior	$1.00	

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Meeting Schedule

April 16, 1967 ---National Ski Museum 2:30 P.M.
May 21, 1967 ----Moving Day to new Quarters 11 AM until finish
May 28,1967 ----Field Trip to Champion Mine.
June 17-18 ----Field Trip to Keewenaw Peninsula
July 16 ----Field Trip to Randville area
Aug. 19-20 ----Field Trip to Ontonagon area
Sept 17 ----Field Trip to Manitou Island
October 15 ----Meeting in Marq. Co Historical Society

BE AN ACTIVE PARTICIPANT --ATTEND ALL OF THESE MEETINGS AND WORK BEES TO BE ANNOUNCE LATER.

March 21, 1967

4,575 MILES OF ADVENTURE

We had always longed, talked, and dreamed of going to see places like Yellowstone, The Tetons, Mt. Rushmore and etc., but never thought it would become a reality.

After a few months of planning and mapping-out our routes, we were ready and anxious to start on our camping trip. On June 13, 1966, Jarl, Glen, Anne and myself were on our way.

On our first day, we just traveled, making good time along the Freeways, enjoying the country-side. On the second day, we took a sight-seeing trip into Theodore Roosevelt Nat'l Park; in other words the Badlands of North Dakota. Here, is "out of this world" scenery.

Traveling on into Montana, the country was beginning to take a definite change. After all the spacious flat farm-land, trees and buttes seemed quite welcome. We came across some river beds filled with rocks. Coming all this way and having no rocks yet, we stopped here and there for Montana agate but didn't find anything exceptional. Our first view and experience of mountain travel was going over Bear-tooth Pass, and elevation of 10,942 Ft. In places the snow banks were about 20 feet high and the lakes were ice covered. It was all very beautiful and breath-taking.

We were up early and on our way to see the many wonderful sights of Yellowstone. Along the way, we saw many signs of wildlife--moose bear, antelope, elk, and different kinds of birds. Our first stop was at the "Petrified Tree". The sign read that it had to be fenced in otherwise the people would have carried it away piece by piece. The hot springs were very unusual and cover an area of 2,000 acres. Th springs form terraced of different colors, as a result of plant life (algae). Another natural sifht was the fence-like cliff called "The Needle". Other highlights are the Grand Canyon of Yellowstone, Yellowstone Falls, and Old Faithful. This famous geyser erupts regularly every 62 to 83 minutes. It is hard to find words to describe their beauty. These amazing and beautiful scenes are a "must" when traveling through Yellowstone Nat'l Park.

One of the most majestic mountain ranges in North America are the Grand Tetons. If you watch the television show "The Monroes" you'll get a " TV view" of the scenery in this area. The highest peak is 13,766 Ft. above sea level.

We traveled all day through canyon roads, then along wide-Open range land covered only by sage brush and cactus as far as the eye could see. Arriving in Rawlins, Wyoming we looked up Jarl's cousin, whom he hadn't seen on 26 years. We spent four wonderful days with Jarl's relations and also got to do some rock-hunting. Jarl's cousin took us to the Red Desert area one day to look for arrow-heads. Another time we went out for petrified sage brush near Saratoga We were lucky in both accounts besides having fun. We also spent a day in a jade area around Jeffrey City. I hate to say this, but the only jade we saw was in the many jade and rocks shops. Now we know why jade is so expensive.

Resuming our trip we were on our way to the Black Canyon of the Gunnison Nat'l Monument in Colorado. It reaches a depth of 3,000 ft. which makes the Gunnison River look like a green ribbon below.

ADVENTURE (cont)

Traveling on we were again amongst beautiful views of mountain ranges, and twisting canyons. The Royal Gorge at Cannon City is more than 1,000 ft. deep and has the world's highest suspension bridge. Flags from all our 50 states are unfurled along both sides of the bridge.

Believe it or not, we arrived in Denver just in time to take in the Gem O' Ramam We thought that was pretty good timing, especially when we hadn't any knowledge of it. Our rockhound friends talked Jarl into entering the show after they learned that he had some of his jewelry along. Then dame a hurry-up job of making labels, dressing up the jewelry, and setting up. After seeing the many beautiful exhibits we were much surprised to learn Jarl won 2nd place on his jewelry and 3rd place for the best of show. As busy as our friends were with the Gem O' Rama, they managed to find time to take us into the mountains for a day of rock-hunting. We had dug quite a hole and found some smoky quartz until the rain, hail and sleet drove us back!

We very much enjoyed Rocky Mountain Nat'l Park. It has 65 mountain peaks over 10,000 ft. One has been named "Neger Summer Range" which describes it's snow-capped beauty.

After another day of travel we were back in Wyoming (northeastern at Devil's Tower. This column-like volcanic rock is 865 ft. high.

Another one of our Nat'l Monuments which we hear so much about is Mr. Rushmore. It is truly worth seeing. It's hard to imagine how these faces were carved in the granite cliff. The little village of Keystone is unique with it's Indians, old prospector and mule, "1880 train rides" and etc. It's quite a tourist attraction.

We drove 28 miles through the unusual formations of the South Dakota Badlands. They are somewhat different from those of North Dakota, as there is no vegetation. (Jarl must of had his fill of picture-taking because he took only one picture of this area.)

A very interesting place, especially to the rock-hound, is Pipestone Nat'l Monument at Pipestone, Minnesota. The main interest is a quarry of red pipestone "catlinite" named after George Catlin. This rock was used by the Indians to make peace pipes. We saw a movie showing how the peace pipe was made and the story regarding the "Calumet"--the ceremonial pipe smoked as a sign of peace and friendship. There were many beautiful peace pipes on display made by the Indians of the area.

We headed northward, and need I say we were quite anxious to get home. We stopped at one or two gravel pits, but didn't come upon any agates. We just kept on going until we got to good ole Michigan. Our first thought was to get some pasties--how good they tasted.

After 21 days and 4,575 miles it was good to be home. Even though months have passed since our trip, from time to time, we view our color slides and talk about our western adventure.

By: Ruth Kivela

Ed. note: CONGRATULATIONS to Jarl on winning 2nd prize for jewelry and 3rd prize for best-of-show at the Denver Gem O' Rama.

"ROCKHOUNDING" by ARNE & HELEN NELSON

We are two very enthusiastic new persons in the Rock & Mineral club., and all because close friends of ours got us interested in this fascinating hobby. They have been rockhounds for six years. It has really rubbed off on us.

W subscribe to monthly magazines to try and learn more of the different rock & mineral formations of this old earth of ours. I, myself never realized and appreciated our earth, and especially our own U.P, where so many precious stones and beautiful rock formations can be found. Each state seems to have somewhat the same minerals, but of different formation and coloring.

I think our firts thrilling experience in 2rockhounding" was at the Houghton Convention and Field Trips in June. We learned much, and shared a genuine"down to earth togeterness" with so many grand people.

The trading of specimens was so much fun, and the b est part was that the other person was made happy too; as they were anxious to receive specmens from our part of the country also.

We received many outstate specimens, like fluorite,of Kentucky & Ill., agates from Brazil,pyrites from different states and a lot of others. From our few pieces of peacock ore and jaspilite, we have a nice cabinet of rocks started.

We are so sorry we missed the picnic trip in July, but being on vacation at our camp at Clare,Mich., we just couldn't make it. We did do some rock hunting in the mitten area of the lower state. Found a few Petoskey stones around Traverse Bay and along a railroad track near Interlocken, where the gravel had been used as bed for the ties.

Just as the time came for us to head back to the U.P. and home, we learned of a good location for petoskeys. So next July we are heading for Elmira, Mich. and north of Eastport. We were told you can pick Petoskey Stones by the bushel in gravel pits in this area. We hope to bring back lots of trading material. Wish us luck. The Nelsons

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WILL OUR CLUB WIN A MERIT AWARD ?

This all depends on two things what our club has accomplished, and if it enters a complete report in the MERIT AWARD COMPETITION. No matter how excellent our group is, we can't win honors for achievments we do not report. No matter how little we feel we have accomplished, the Midwest wants to know all about us. Lets take part in each phase of activity in the Federation and we will have a much more active club. How about starting with the PLEA FOR FUNDS for THE SCHOLARSHIP COMMITTEE?

****** ***** ****** ******

What's a tumbler? see below

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HEAT TREATING AGATE

Place slab in unheated oven & set temperature at 200 for 15 min. next raise temerature to 250 for another 15 min., continue this way raising the temperature 50 degrees at a time for each 15 min period until you reach 550 degrees Leave slab at this temperature 20 to 25 min and then turn off heat.

WARNING: Do not open oven door under any condition. Let oven completelycool before opening door. Best done in the evening so oven can cool overnight.

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Give up? A tumbler is one who falls down a rock pile.

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SHOP HINT

"Twinkle" the copper cleaner works wonders on pyrite xls.

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LAPIDARY SESSIONS to be held in usual place on March 21,30 and April 4, and 11. Notify Bob by calling 486-9055

MIDWEST FEDERATION CONVENTION

GEM & MINERAL SHOW

OUR WORLD OF STONES

presented by

Illowa Gem & Mineral Society

Convention Headquarters --Blackhawk Hotel, Davenport, Iowa
Show Headquarters --Rock Island Armory, Rock Island, Ill.

JULY 27, 28, 29, 30, 1967

SWAPPING: Two large tents will be set in a shaded area on the north side of the Armory.
LECTURES: Noted lectures with topics for everyone.
BANQUET SPEAKER: Richard M. Pearl, Professor of Geology at Colorado College, Colorado Springs, Colorado. At present he is Editor-in-Chief of Earth Science. He was Co-Founder and Past President of the American Federation of Mineralogical Societies and CO-Founder of the Colorado Mineral Soc.
ROLLING ROCK CLUB! Meeting at the Rock Island Armory, Junday, July 30th at 9:30 A.M.
DISPLAYS: From all over the United States, many having never been seen before. If you wish to enter the competitive or non-competitive displays you are welcome. Markert's Rock Shop has blanks for you to fill out and send in to request space or a case in needed.
DEALERS: are coming from California to Vermont and from Minnesota to Texas. 22 dealers will be there.

LET'S ALL MAKE PLANS TO GO TO THE SHOW----------JULY 27,28,29,30.

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********** 1967 *******
NATIONAL GEM AND MINERAL SHOW

WASHINGTON, D.C.

June 29 & 30, July 1 & 2

Visit your Nations Capital and take in "ROCKHOUND HEAVEN IN 67"

PLACE: The Washington Hilton TIME: 10 AM to 10 PM each day

HOSTED BY: THE GEM & LAPIDARY SOCIETY OF WASHINGTON, D.C., INC.
THE MINERALOGICAL SOCIETY OF THE DISTRICT OF COLUMBIA, INC

EXHIBITS SPECIAL DISPLAYS DEALERS LECTURES SWAPPING FIELD TRIPS

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1967 DUES BECOMES DELINQUENT on April 1, 1967. Check your wallet. Are you in good standing? Doris Hughes, 765 White St., Ishpeming will gladly send you a rece ipt in exchange for dues sent in.

TO ALL MIDWEST FEDERATION MINERAL COLLECTORS by MRS. MARGARET YANASAK

As an added aid to the mineral collectors of our Federation, we have prepared a list of persons qualified by training and experience to identify or help to identify minerals. This list was obtained by writing to the Chairman of the Earth Science or Geology Departments of a number of midwestern universities.

The following quotations taken from the above mentioned letter explains the purpose of this list.

".....The primary purpose of this committee (nomenclature which is caired by Mrs Yanasak) is to help club members to properly identify or name their rock or mineral specimens.

"With so many amateur minerologists or rockhounds trying to give names to their discoveries, this is becoming a serious proble m. We feel that only a professional minerologist is properly qualified for this

"in most clubs thate are at least one or two who can do fairly well in identifying the more common specimens. It is with the more rare or uncommon materials that we need help.

"It is our hopes that we shall be able to list at least two minerologists in each midwest state who would be willing to help club members of their state in identifying their specimens...."

A few have not yet answered our request, and some turned it down, but the great majority expressed an interest and willingness to help. one or two stated they were willing to help., as far as the policies of their institutions, time and equipment would permit.

Any club member planning to send a specimen to one of the persons on the list should FIRST BE SURE HE HAS EXHAUSTED ALL LOCAL SOURCES OF HELP THEN REFER TO THE PERSON LISTED FOR HIS OWN STATE FOR HELP. A self addressed, stamped envelope should be enclosed with the request. This letter should accompany, if possible, the specimen being sent. Specimen should be large enough to make identification easier (send more than one specimen if possible),. No request should be made for the return of the specimen. A brief but accurate description of the source, location, and other pertinent data should accompany the specimen or be included in the letter. No request should be made concerning the monetary value of the material. And finally, be sure to give the name of your club. In other words, this is to be strictly identification only, with no returns, all costs to be born by the sender and planned for Federation members only.

With this understanding, the following have graciously agreed to accept requests and to give whatever help they could.

Dr. Kiril Spiroff, Dept. of Geology, Mich Tech. University
Houghton, Michigan, 49931
Dr. J.P. Dobell, Dept. of Geology, Mich Tech. University
Houghton, Michigan 49931
Dr. H.B.Stonehouse, Assoc. Professor, Natural Science Bldg.
Dept. Of Geology, Midh. State University
East Lansing, Mich. 48823

EMPIRE MINE

Palmer, Michigan

OWNED BY:

THE CLEVELAND-CLIFFS IRON COMPANY (Operators)

INLAND STEEL COMPANY

INTERNATIONAL HARVESTER COMPANY

McLOUTH STEEL CORPORATION

Welcome To The Empire Mine

The scenes you see here are quite different from those of the original Empire Mine which operated from 1907 to 1928 and shipped a total of 768,000 tons. Maximum annual shipments of 109,000 tons occurred in 1909.

Although the old mine was also an open-pit operation the product was a hard, red siliceous hematite ore analyzing 38% iron and 38% silica.

Today such a product could not be marketed. However, through the results of Cliffs' research and development programs of the past decade combined with new operating techniques, the present day Empire Mine is supplying the iron and steel industry with uniform sized pellets analyzing more than 63% iron and less than 8% silica.

Current capacity is 1,200,000 tons per year. As of January 1, 1967 the Empire Mine will be producing at the rate of 2,400,000 tons of high-grade pellets per year.

The grinding and concentrating operations at the Empire Mine, which is the third pellet property to put into operation by Cliffs on the Marquette Range, differs from methods in use at the other two.

First of all, at the Humboldt and Republic Mines, conventional rod and ball mills are used to grind the crude ore, whereas, here full autogenous grinding is employed, the first such application in the iron ore industry in the United States.

Secondly, because the crude ore here is magnetic, recovery of the iron ore particles is accomplished by magnetic separation rather than flotation as is used at the Humboldt and Republic mines.

The pictures which follow show the operations and equipment here at Empire, a $50,000,000 project providing 335 jobs.

Drilling blast holes in the crude ore is the first step in mining. After blasting . . .

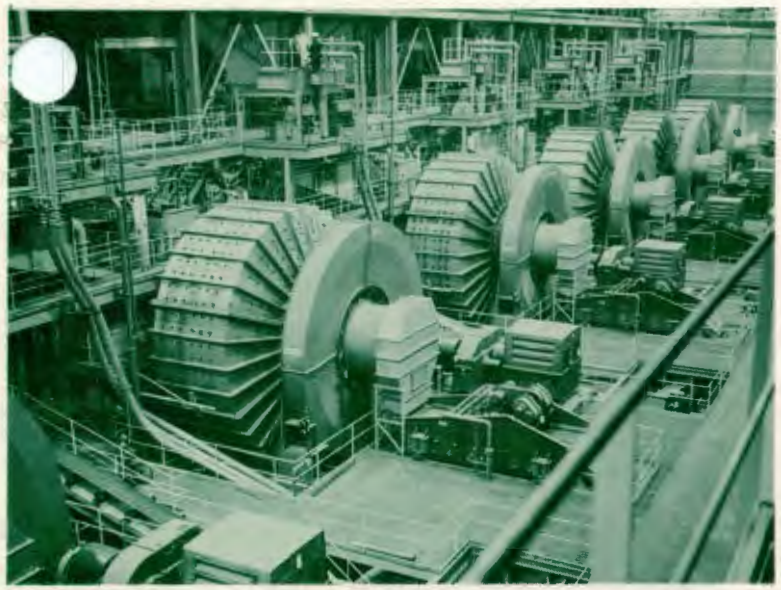
60 ton trucks, loaded by large electric shovels, transport the broken ore to . . .

a gyratory crusher, capable of crushing chunks five foot square, where the crude ore is reduced to minus 9 inches. The crushed ore is then . . .

conveyed to either a surge pile (225,000 ton capacity) for later reclamation or to . . .

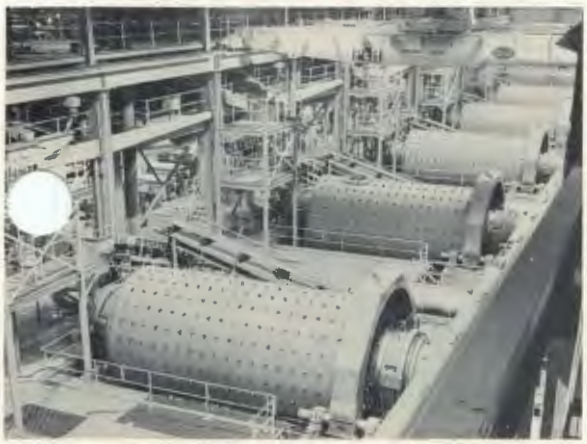
the covered ore storage building (40,000 ton capacity). From here the crude ore starts its way through the grinding process of the mill.

The crude ore grinds against itself in these six 24 by 8 ft. cascade mills--the largest presently in use for the autogenous grinding of iron ore.



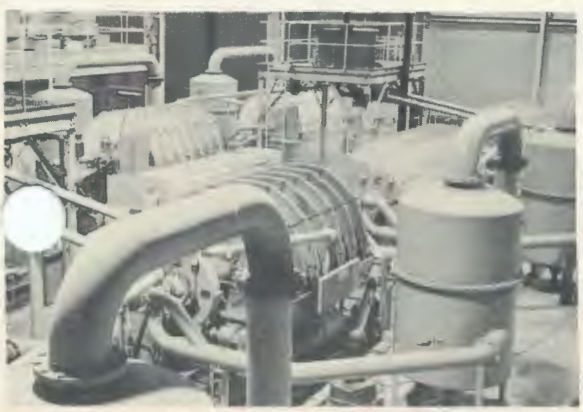
Oversized ore is screened off and returned to the cascade mills while pebbles of a 2½ in. top size are conveyed to . . .

six pebble mills (each 24½ by 12½ ft.) where they serve as media for fine grinding.

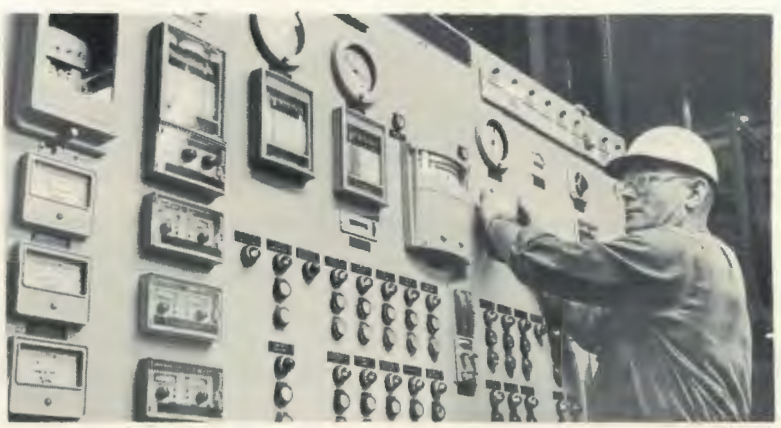


The iron in the crude ore (now much finer than face powder) is recovered by these magnetic separators and pumped as a pulp to . . .

these disc filters for the removal of water.

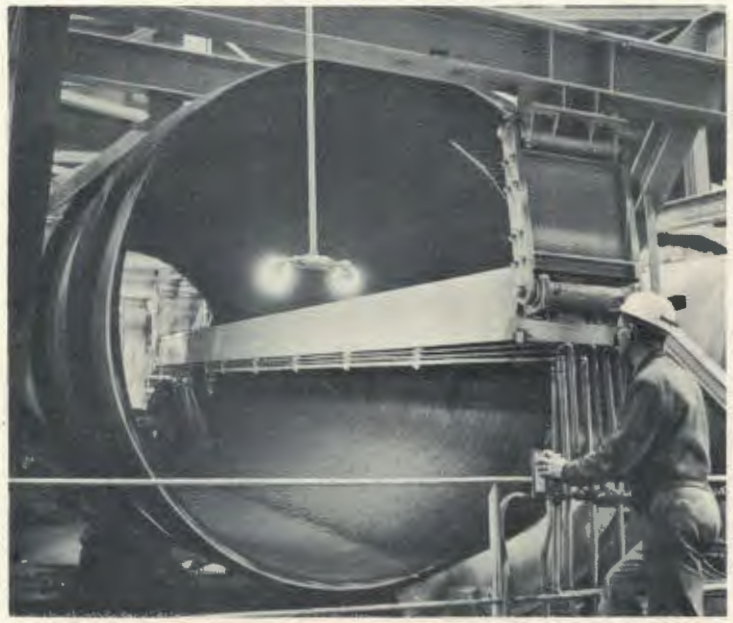


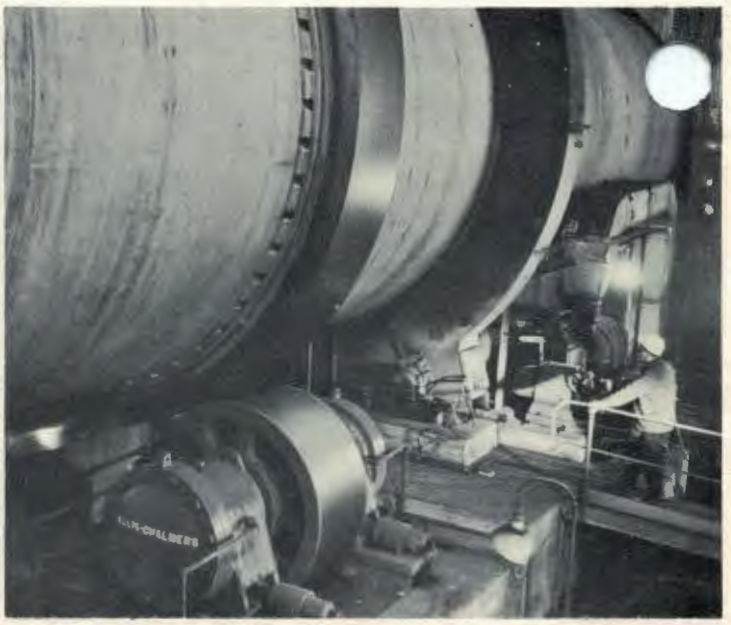
Operations throughout the concentrator are monitored and controlled from panels such as this one.



Lithographed by Globe Printing - Ishpeming, Mich.

The dewatered iron ore concentrate is rolled into small sized pellets in four 10 by 31 ft. balling drums. To harden the pellets they are fed to . . . the traveling grate (12 by 96 ft.) for movement into the drying zone (500° F.) and then to the pre-heated zone (1,900° F.). The pellets are finally baked hard at 2,400 F. in a rotary kiln 17 by 114 ft.

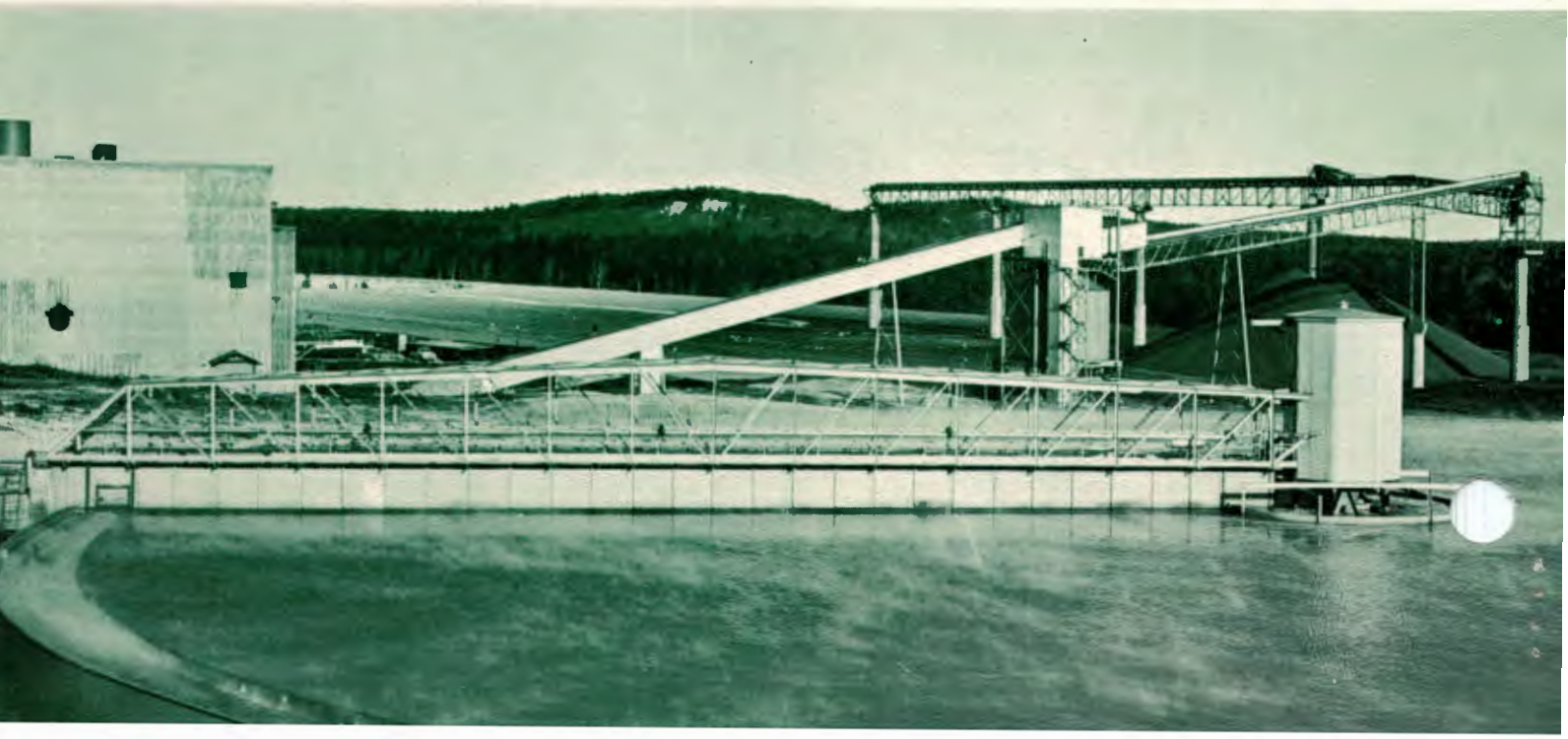




Operations of the traveling grate and the rotary kiln are controlled and recorded by this panel.

After cooling, the pellets are conveyed to the railroad car loading pocket or to stockpile for later reclamation.

Water is clarified and reclaimed for use in the plant by this 300 ft. diameter tailings thickener. The plant uses 65,000 gals. of water per minute of which 63,000 gals. is reclaimed water.



BORON

Boron, the fifth element in the periodic table (between beryllium and carbon) is a non0metal that is low in chemical reactivity at ordinary temperatures. In its crystalline state, although it is less dense than aluminum, is is stronger than steel and as hard as carborundum. It is opaque to visible light but transparent to infrared rediation. It has a high melting point (2,000 degrees centigrade) and remains a liquid only within a narrow temperature range, vaporizing at 2,400 degrees. It is a poor conductor of electricity at normal room temperatures but the conductivity increases remarkably with increasing temp.

Boron reacts readily with oxygen at higher temperatures, and it is found in nature only in oxygen-containing Compounds. About 100 of these compounds are known: they are chiefly borates (salts) and boric acid. In overall abundande Boron is not a common element. Deposits of borax (the hydrated sodium salt of boron) occur in many places, notably in the Middle East; and boric acid has been found in high concentration in the Tuscan Region of Italy. Today more than half of the worlds supply of boron comes from the Mojave Desert of California, where it is mined in the form of the mineral Kernite.

Borax and its derivatives have a wide variety of uses: as a water softener, a welding flux, a rust inhibitor, a household bleach, a chemical agent serving various purposes, and as the basis for manufacturing the tough and durable Pyrex glass. The last is Boron's principle use.

When nuclear technology developed, boron quickly achieved prominence because its stable isotope boron 10 was found to be an excellent absorber of themmal neutrons. Thus it was put to use in control rods and shielding for reactors. In rocketry boron has attracted much interest because its compounds combine low mass with high energy yields as fuels. Other possibilities include the use of boron or its compounds as materials for windows transparent to infrared radiation, for semi-conductors that will operate reliably at high temperatures and for electrical generators of the thermo-electric type.

Excerpts from and article on Boron by A.G.Massey appearing in Scientific American, Jan.'66

Submitted by Domenica Carlyon

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We extend our thanks to the CLEVELAND CLIFFS MINING CO. for contributing the enclosed pamphlet on the Empire Mine

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DEPARTED FROM US

Miss Gladys Haney, past Vice President of the Ishpeming Rock & Mineral Club passed away at her home in Sparta, Wis., where she lived after retiring as a Biology teacher in the Ishpeming High School.

Gladys loved Ishpeming and the people living here. She was an ardent outdoors women, keenly interested in all phases of living creatures and plant life of the area. This keen interest was extended to rocks and the IR&MC soon was to receive her enthusiasm, membership and backing.

We shall feel the loss and may Gods Blessing be with her.

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ENJOYING THE FLORIDA AND ARIZONA SUNSHINE.

Ed & Florence Christian
Champ & Catherine Lemin
Floyd & Helen Mortenson
Arne & Helen Nelson

Lucky people!

FORMATION OF GEMSTONES ON ISLE ROYALE

by

SCOTT MARKERT

FOREWORD (Editors note) "This article was submitted to English class by Scott during his Senior year in High School and because of the information contained therein we will reprint complete article except for illustrations."

INTRODUCTION

ISLE ROYALE has often interested me. My father and brother have been over on the island several times and I am planning to go there sometime in the near future. Before I go over I would like to know more about t e gemstones and where to find them even though you can't take themm off the island.

The knowledge that I get from the research paper will help me to inform other rockhounds who are planning to go to the island. Thiss will give them more details on the gemstones found there.

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On Isle Royale there was once a volcanic action. Nobody knows where the volcano is located, but volcanic evidence on the island ind icates that there was a volcano or volcanoes. All of the hills and ridges around the island were produced by volcanic action. They are all made of basalt and all the gemstones on the island have something in common with the volcanoes.

One of the gemstones which were found by the presence of the volcano is Prehnite. Prehnite occurs in the cavities of the volcanic rock. They are light green and occur mostly in rounded masses(botryoidal) having a series of plats, with vitreous surfaces.[1] Prehnite grows mostly in jug-shaped or barrel-shaped groups with the individual rectangular plats. The ele ments which make up the Prehnites are calcium, aluminum, silicate, oxygen and hrdrogen.

The rarest of the gem stones on Isle Royale is the CHLORASTROLITE or the common name is greenstone. This specimen is so rare that there is very little information on it. The only places in the world where you find them are at the Kandan Mine, Cliffs Mine, Delaware Mine, and occasionally along the shores of Keweenaw County in addition to the island.[2] It is a metamorphic rock consisting largely of chlorine, epidote and hornblende.

One of th e most valuable of the quartz family minerals is found on Isle Royale. This gem is called Amethyst. It occurs in patches and layers which are in crystal form. The bright purple or violet in the amethyst is due to the presence of iron in the rock.

Epidote is one of the most common gemstones on Isle Royale. This rock has been changed by heat and mountain-building. The xls of Epidote are most attractive even though they are yellowish-green in color, sometimes called pistachio green. Some of the xls range in color from brownish-green, grey, black, red to colorless. Even though these colors colors are found, the yellowish-green is most prominent. This mineral is associated with the copper of Isle Royale. Its composition is made of calcium, aluminum, ir on, silicon, oxygen and hrdrogen. Crystals of epidote are in prismatic shapes.

The second rarest gemstone on Isle Royale is Datolite. It is found chiefly in veins and cavities ofvolcanic rock located around basalt regions of the island.

(continued next page please.)

It occurs as a colorless, white, red, blue, and yellow nodule. The rarest of the Datolite comes in an olive green nodule." This mineral is a characteristic mineral of copper deposits. Datolite is also found in Keewenaw, Houghton and Ontonagon Counties.

Zeolites; whose common name is thomsonites, is the third rarest mineral on the Island. This mineral is also found in the cavities of lava rock which has cooled near the surface of the earth. Crystals of this group have a fan like group of xls which are spread out at each end. Pearly luster on the faces indicates the rarity of this gem.

The most common of the gemstones found on Isle Royale is the agate. Agates are formed in the cracks and cavities of the volcanic rock. most of these agates are located on the shore of Lake Superior, and only a very few are found in Cliffs on the island. The water seeping through the rocks leaves layers of silica in cracks and lava bubbles and holes forming the wavy irregular stripes for which agates are known. Although the layers were hard, the water was able to soak or seep through them and deposit still more quartz until the holes were filled. Finally the agates which were formed break away and are found in boulders, seams, nodules, and as geodes. Agates are found on the lake shores and in streams. They look glassy and are quite hard. A broken piece may scratch a knife easily.[4] Colors range from white, grey, green, red, orange to brown.

Different kind of agates are:

1. Banded--colored parallel bands
2. Fortification --parallel lines
3.-Polka Dot- usually light color with rounded spots.
4.-Scenic-Color disribution or dendritic inclusions of scenes.
5.-Carnelian-translucent shades of red and brown.
6.-Sardonyx-layers of carnelian and white chalcedony (waterworn jasper pebbles--other sardonyx
7.-Onyx-straight parallel bands or layers of colors.[5]

Some of the more common occurances of these gemstones ont the island is as follows;

1 Agates are found best along t the northwest corner of Siskiwit L. Lake and at Hay Bay on the south side of t he island. Other places where there is good hunting is at Conglomerate Bay, Caribow Island, Mott Island, and at the islands in Washington and Grace Harbors. Also on the west side of the Isle from McGinty Cove to Todd Cove. There are other places to hunt agate, but these are the best.

2. Amethyst is found along the cliffs on the island, adjacent to the shorelines.

3. Greenstones are found mostly at the northwest corner of Siskiwit Lake and at Port Hay Bay. An occasional few are found on the beaches at Mott Island, Caribou Island and in Grace and Washington Harbors.

4, Prehnite is found along the beaches in the ridges from McGinty Cove to Todd Cove. This isn't the only place on the island where they can be found, ut it is the best.

5, Thompsonites are found along the beaches all over the island. The best place is at Thomsonite Beach. Usually where you find thompsonites you will find agates.

6. Datolite is found in the abandoned copper mines. It is found in the old pilings which were left from mines.

7. Epidote is found with the datolite in or near most of the abandoned mines.