Mather "B" Mine Negaunee, Michigan ca 1949 to 1957

Pictures courtesy of William H. Treloar Family, Lake Street, Negaunee, MI







The "Mighty Mather," most productive underground iron mine in the Western Hemisphere and a significant contributor to the last 38 years of America's industrial revolution, is phasing down to a total closing July 31.

Only two shifts of the 900 men and women who have worked there were needed by mid-June to extract the required amount of the mine's natural, soft hematite ore to meet the total budget. Employees were being transferred to nearby Cleveland-Cliffs mines also on the Marquette Range of Michigan's Upper Peninsula. By late July, hoisting will cease, salvageable mining equipment will be removed and raised to the surface.

Production at the Mather Mine's A and B Shafts will have exceeded that of any other underground iron mine — 56.7 million long tons of ore and pellets. Operating only from the B Shaft in Negaunee in recent years, the mine has reached the end of its economic life.

With a history that dates back to the start of the A Shaft's construction January 6, 1941 in Ishpeming, the Mather strained to help meet America's demands for iron ore during World War II and the Korean

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conflict. It matured vigorously into the space age when modern processing technology in chemistry and metallurgy extended its life through the opening of the Ore Improvement Plant in 1957 and the Pioneer Pellet Plant in 1965.

The Mather Mine has been a major influence on Cleveland-Cliffs' position in the iron ore industry and to the careers of many persons associated with it.

The last underground iron mine in the Lake Superior Region including Michigan, Wisconsin, Minnesota and Ontario became known as the "Mighty Mather" because of its size. The name has added significance through the mine's link to the earliest iron ore mining in the area. B Shaft is beneath the Jackson Mine, famous as the site where the first iron ore in the Lake Superior Region was discovered Sept. 19, 1844. Word of the discovery spread throughout the north central United States the following winter, exciting the interests and ambitions of young men who were to stake claims there. The Jackson Mining Company, the first on the range, shipped the first iron ore produced from the surface and produced the first charcoal iron there on February 10, 1849. The B Shaft site also



is where the first iron ore concentrating plant opened in 1881.

The Mather Mine was named for William G. Mather, who with his father, Samuel L. Mather, served as treasurer, president and chief executive officer of Cleveland-Cliffs and its predecessor companies from 1854 until 1933. It produced its first ore in 1944 when construction of the A Shaft was complete. Construction of the adjoining B Shaft was started in January 1947 and production there started in 1950.

The Mather's production exceeded one million tons a year at A Shaft by 1948 and at B Shaft by 1952. By 1957, the record combined production hit 2,646,700 tons. Mining at A Shaft ended in December 1960 with all remaining hoisting being done from B. Company officials have indicated all of the Mather's 900 men and women will be absorbed into operations at other Cliffs' mines on the Marquette Iron Range. All but 250 will be relocated before the mine closes. They will be assigned as expanded operations begin at expansions to the Tilden and Empire Mines.

Both shafts of the Mighty Mather will be capped with concrete slabs. The skips, cages and hoisting cable will be removed and the headframes and trestles will be placed on bids for their removal. Some of the mine's buildings will continue to be used for various needs for data processing, apprentice training and safety training which is provided for all persons in Cliffs' Michigan Mining Division. So ends an era.



Mather Bin the foreground mather a in the background

MATHER MINE to NEGAUNEE HIGH SCHOOL

Mather Mine Memorial - Dedication Event Thursday July 12, 2018 1PM

> Welcome Andy Skewis NHS Teacher

Remarks

Sara Cambensy

State Representative: 109th District

Mike Prusi Mather B Miner, Retired.

Chaz Bluse

Negaunee High School Senior

Dedication & Closing Andy Skewis

Thank you to all who contributed to the creation of the memorial and today's dedication. Special thanks to the sponsors: Negaunee Public Schools, United Steelworkers Local 4950, United Steelworkers 4974, Marquette Range Retirees Club, and Cleveland-Cliffs Inc. Greg Montgomery deserves special recognition for his tremendous efforts to support our students and promote this event.

Please join us after today's dedication to view a new documentary, *A Vanishing Breed*. This full length movie features a variety of stories about working at Mather B. It was written and produced by students at Negaunee High School and will play in the NHS auditorium after our program. Admission is free and there will be DVD copies available for purchase.

MATHER MINE TO NEGAUNEE HIGH SCHOOL

The Mather "B" Mine operated at this site from 1950-1979. During its lifespan, it became the most productive underground iron mine in the history of the world, producing over 42 million tons of high-grade ore. When it was closed, it marked the end of underground iron mines on the Marquette Range. This site was renovated and reopened as Negaunee High School in 1986. While new generations of Negaunee Miners come through these doors, it is important to know that at the Mather "B" and its associated properties, the Mather "A" and Ore Improvement Plant (OIP), men lost their lives. We honor their memories here.

Mather Mine "A" & "B" Shaft & OIP Fatalities:

3/9/44 Gust Maki A 2/19/47 Roy A. Wendt A 2/6/48 Rudolph R. Saari B 1/14/48 Willis J. LaForest A 12/12/50 Wallace C. Hewitt B 11/29/51 Robert E. Lerlie B 4/1/52 Vito P. Roti A 10/13/52 Arvo J. Sippola A 8/29/55 Wilfred E. Mallett B 10/10/55 Henry Anderson A 10/10/55 Rupert Frederickson A 4/29/57 Thomas Sharp B 3/11/58 Clarence M. Prudom B 8/18/58 Glenn C. Veale A 5/1/66 David S. Fine B 7/31/66 Charles V. Mingori OIP 12/17/67 Eugene W. Anderson B 12/17/67 Gerald J. Lebresh B 12/25/67 Elmer Lachance B 12/27/67 Henry L. Terres B 11/27/70 Bart J. Juidici B 2/18/76 Ernest W. Garbett B

Dedicated July 12th, 2018

United Steelworkers Local 4950 United Steelworkers Local 4974 Marquette Range Retirees Club Cleveland-Cliffs Inc. Negaunee Public Schools

Mather 'B' Mine







Loading Iron ore

The Miner: King of the Underground

The Mather Mine includes nearly two square miles within the city limits of Negaunee and Ishpeming, Michigan. It is owned by the Negaunee Mine Company, participants in which are McLouth Steel Corporation, Bethlehem Steel Corporation, Republic Steel Corporation, Sharon Steel Corporation and The Cleveland-Cliffs Iron Company, who also manages and operates the property.

When George Cardoni and Roy Bellantonio arrive at the Mather Mine they still have about a mile and a half to go to get to work. A half mile down, and a mile to their work area.

George and Roy are two of the Mather Mine's 206 miners – the only men in the Company with this classification. Members of a vanishing breed of craftsmen that flourished before the introduction of open pit methods, they occupy, eight hours a day, the subterranean world of one of the country's nine operating underground iron ore mines.

At the top of the shaft, they enter the cage which takes them down to the 11th level. Like their counterparts a hundred years ago, they wear hard hats, equipped now with battery operated lights instead of candles.

And, they still take their lunches along because they don't see daylight until the end of the shift.

They are burly men, accustomed to heavy boots and near isolation. Their once-green overalls are iron-ore red.

And they don't bat a lash during the cage's vibrating, rushing descent -30 feet per second.

Virtually kings in the underground world of the Mather, the miners are responsible for gaining access to the orebody by blasting, removing the material and installing drift supports for the production crews.

They work in pairs, highly skilled and experienced teams that work under changing conditions, adjusting their methods and procedures accordingly.

As the cage slides to a halt, George switches on his light. "The first time I came down here, I was a little leery. But

that was a long time ago. Being underground, being alone. It doesn't bother me anymore."

As the group moves along the main line drift, light beams from the hard hats jog along in front. Keeping cadence. Illuminating, like popping flashbulbs, the steel and timbersupported walls.

They stride along in silence, following a track used by the ore trains. Occasionally, a warning light flashes, sirens sound, and cars rumble by, loaded with ore or equipment.

Roy moves to the safety area as it passes.

"We like the independence and making our own decisions. Unless something major occurs, we never have to call our supervisor. So, we don't see many people all day."

Driving of the slusher drift is the first step in developing production blocks at the Mather. An opening driven underneath the orebody, the slusher drift provides access to the ore above.

George and Roy are currently nearing the end of their drift. They set to work with little conversation, working smoothly.



The Miner: (Cont.)

They have their work down to a science.

As George handles the 60 lb. drill, Roy stands by to take a turn and lend a hand when necessary.

"We've learned each other's habits. We don't have to talk much about it because we've been together a long time and pretty much know what we're going to do next and who's going to do it.

"As you can see, it's pretty important to get along with your partner when you're together down here 8 hours a day."

The temperature underground is about 67° . The relative humidity is 99% and everything and everyone is coated with the red ore material.

At the end of the shift, George and Roy head back to the cage, the surface and the showers.

"You take a certain pride in your work," George said, as he

and his partner stepped back into the other world above ground. "You do something that turns out real good, and you feel fine. Like any other job."

"We're no different than anyone else," Roy agrees. "But," he laughed, "we get dirtier."

Time was, the word miner conjured up visions of rugged men with candle-lit hard hats headed underground to work with picks and mules to extract ore.

Things are different now.

Technology and changing times and demands have almost eliminated the traditional miner in the 20th century. But, like the blacksmith and the cowboy and the buffalo, there are still a few around.

Like other vanishing Americana, they are somehow venerable.

And a little awesome.



Miner George Oja, right, uses a pick and a scraper to make room for steel supports in a slusher drift. As the cut is extended, the miners stand and assemble the steel supports using split cedar to "lag the sides" for additional protection.

Using a jack-leg drill, George Cardoni (center) and his partner create a pattern of holes which will be filled with explosives and detonated. The broken material is then moved to the transfer drift below and hauled to the surface. This drift will eventually extend 125'.

LIFE AS A MINER

and the second second

Have you ever wondered what drew people to the cold, frosted, and snowy Upper Peninsula? My grandpa, Tony Certo, told me about mining, one of the main industries that spurred the development of the Upper Peninsula. He explained experiences he went through while working in the mine.

Suia. The explained experiences ne went unough while notating in the parents, Georgina and Antonio, were My grandpa was born in Negaunee, Michigan, on April 12, 1929. His parents, Georgina and Antonio, were the proud and lucky parents of five children. Grandpa was the middle child. The other four children were: Joseph, grandpa's only brother, and three sisters: Grace, Antoinette, and Rosemary.

My grandpa and his brother and sisters had many chores to do throughout the day. Grandpa's whole family worked in their enormous garden in the summertime. In the winter, Grandpa and his brother, Joseph, had to haul wood and shovel snow.

In addition to his chores, Grandpa went to school. My grandpa walked seven to ten miles to attend St. Paul's Catholic School in Negaunee, Michigan. School life for Grandpa was different than most because he went to a Catholic school which was run by nuns. They were very strict which was one reason he found school life very challenging. My grandpa remembered one nun in particular. She was special because every day at lunch she played baseball with the children.

After grandpa got home from school and did his chores, he enjoyed some recreational activities, like skiing, sledding, and skating in the winter. Grandpa explained the kind of skiing that he did was ski jumping. My grandpa had fun ski jumping, but he exclaimed, "I never got the guts to ride Suicide. I did ride many other hills though." Another recreational activity he enjoyed was driving his Model A car. At the time, not many other kids had a car. "Once I had my car, I drove to school everyday," Grandpa stated. My grandpa never finished high school, but he completed the tenth grade.

At age fifteen, Grandpa started his first job which was to collect tickets and usher people into the Vista Theater in Negaunee. However, his tenure at this job was short. Next, he worked at a roofing and siding company which Grandpa explained was like a regular construction company. Grandpa's boss traveled around and bid for siding or roofing jobs. Most of the money that Grandpa earned was used to help out at home.

At age eighteen, Grandpa began his career in mining with the Cleveland Cliffs Iron Company. The first kind of mining he did was underground mining at the Athen's Mine. When I questioned Grandpa about underground mining, he explained that underground mining was going into the drifts, blasting the dirt out, and bringing the ore out of the shaft onto the railroad cars. The ore was transported to Escanaba by railroad cars and then loaded onto ships. My grandpa was a motorman at the time. He brought ore out of the shaft, it was raised to the surface by skips.

Grandpa worked at four different properties or underground mines. He worked at the Mather A Mine, Mather B Mine, Bunker Hill Mine, and the Athens' Mine. Grandpa worked underground until he was about thirty years of age.

During these ten to twelve years of underground mining, he married Abbie Mitchell. My grandpa explained how hard it was to raise a family and to make ends meet. Grandpa stated that then it was much harder to make ends meet than it is now.

When I questioned Grandpa about any memories he had about his underground mining years, he responded, "I do remember a couple of memories from working at the Athen's Mine." One accident occurred in April. My grandpa and his boss were sitting on a dirt pile. Grandpa's boss left, but for some unkown reason Grandpa stayed seated on that dirt pile. A very short time after his boss left, that dirt pile caved in. Grandpa was left there alone buried up to his chest in dirt. After he hollered long and hard, somebody found him and he was rushed to the hospital by ambulance. My grandpa was a very lucky man because he did not have anything



Main office, Cleveland-Cliffs Iron Company.

broken at all! After a week he was released from the hospital with only a bruise on the back.

Another accident happened while Grandpa was working at the Athen's Mine as a motorman underground. Grandpa's partner, the brakeman, was coming, and he had his hand inside the sling that held the pole up to the trolley. The pole flew off and was jammed. The pole was so strong that it pulled him off the motor and right off to the side. My grandpa was afraid to look back, but his partner was very fortunate as he wasn't injured. Over the years, safety at the mines has improved greatly.



Tony Certo underground in the Athens Mine in 1950.

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Following the years of underground mining and four years of being laid off, grandpa started working at the Mather B Mine as a belt attendant. In about 1964 he was transferred to the Empire Mine as an analyst where he worked until the year 1974. I listened as Grandpa explained what an analyst's duties were. Miners brought in ore samples to the lab. Then the analyst had to take the samples and run tests to determine the grade ore. If it was the grade desired, they kept it and it was made into pellets. Otherwise the tailings were thrown away. Next, he was transferred to the Tilden Mine. Grandpa continued as an analyst at the Tilden Mine until he retired. Grandpa said that by this time all underground mining was shut down for safety reasons. Grandpa stated, "Boy was I glad when they shut down underground mining because I didn't care to go underground." Grandpa was one of the first people to work at the Tilden Mine. The new lab was operational very quickly after the Tilden Mine opened.

My grandpa retired on May 1, 1989. He is enjoying his retirement spending time with his three children Jacqueline, Carolyn, and Tony. His eight grandchildren keep him busy also. One thing that has kept my grandpa's retirement very active is the recreation committee in the Township of Ishpeming, and he is also a volunteer fireman for the township.

When I questioned my grandpa on what he thought made this area special, he said, "The only thing that makes Ishpeming and Negaunee keep growing are the mines." He enjoys the different seasons of the year, even though the winters can be difficult at times.

My grandpa is very loving and special. I will always appreciate the memories that he shared with me. I have learned much about my grandpa's childhood and his life. Since our talk, I have learned that I should be very happy for what I have, and what my family can do.

- Kim Szenina







Mather B Mine - 1947 (Temporary Shaft, Looking Northeasterly)



Mathar R Mina Shaft Construction I calving Northeastarty



Relic of the past . . . the headframe.

In these days of huge open pit iron mining operations, the Mather Mine is unique. It is the sole surviving underground iron mine on the Marquette Range.

But that is not the only claim to fame for the "Mighty Mather." Ever since it began production in 1943, the Mather has been a very special mine.

Its very name is symbolic of the history of iron ore mining in the Lake Superior district. The mine was named for William G. Mather, who died in 1951, after more than 70 years of association with The Cleveland-Cliffs Iron Company. As president and chairman of the board, he gave many years of enlightened leadership to Cleveland-Cliffs, just as his father, Samuel L. Mather, had done many years before. The senior Mather became the first secretary-treasurer of Cleveland-Cliffs' predecessor company in 1853 and was named president in 1869.

The mine that bears their name is managed by Cleveland-Cliffs and owned by the Negaunee Mine Company, originally a partnership of CCI and the Bethlehem Steel Corporation.

In its relatively brief history, the Mather became known as North America's largest underground iron ore mine.

Development of the mine began in 1941 with the sinking of its "A" shaft in Ishpeming. The first shipment of ore was made from the mine in 1943.

A second shaft — the Mather "B" was sunk in neighboring Negaunee in 1947. It wasn't until three years later that the two shafts were directly linked underground. This required some amazingly precise surveying, considering that the two shafts were approximately 9,000 feet apart.

From Mines to Forests

To many, The Cleveland-Cliffs Iron Company means mining from the Marquette Range to the hills of Western Australia.

But Cleveland-Cliffs is the "Paul Bunyan" of the east-central region in Michigan's Upper Peninsula. Here, Cliffs' timber lands stretch from Marquette eastward through Alger and Luce to Chippewa County.

This great swath of northern forest lands contains millions of board feet of choice maple, beech, birch, cherry, pine, hemlock and other conifers and hardwoods.

Cliffs' carefully managed timber lands supply some of the nation's finest lumber and veneer logs.

To handle its more than 750,000 acres of forest lands, Cliffs established a land and lumber department in 1896, with headquarters in Negaunee. In 1900 it acquired the Munising Railway to transport timber products. The railroad stretched from Munising on Lake Superior southwest to Little Lake, a distance of 37 miles.

Several years later, an east branch was built to Cusino, northeast of Shingleton, and a network of other logging branches was built to tap prime stands of virgin hardwoods and softwoods.

Cleveland-Cliffs promoted the development of a variety of wood products industries in this area of the Upper Peninsula, including sawmills, a veneer plant, paper mill and woodenware factory. Mine timbers for iron mines on the Marquette Range were also cut from Cliffs' timber stands.

In 1902, the company was instrumental in the building of the Marquette and Southeastern Railway, which ran from Marquette, 27 miles to Lawson, a station on the Munising Railway. These two railroads played an important role in Cliffs' logging operations for many years. They later became a part of the Lake Superior & Ishpeming Railroad.

By the 1920's, Cliffs' logging operations were producing about 22 million board feet annually. Four or five logging camps were running continually with crews of hundreds of men each, using more than 100 horses. Nearly 50 miles of railroad track were required for the logging operations.

The company continued to run its own logging business until 1938 when it began to contract with independent jobbers to carry out the woods work.

During World War II, the tempo of logging increased, with an annual yield of 75 million board feet.

Sustained timber harvesting has resulted from wise and careful management of the forest. As early as 1900, Cliffs hired a forester to experiment with plantings in areas which had been cut over. In 1942, a scientific system of selective harvesting was established on a 20-year cutting cycle.

Cliffs' holdings of timber lands, which now number approximately 330,000 acres, continue to be managed under the highest forestry standards. After 80 years, the company's lands continue to provide not only forest products, but some of the finest recreational opportunities in the Midwest.





William H. Treloan





Back Row. Left to Right 30 (white Hat) - John Havela Front Row: Left to Right 1st ? Juidei, Next to Last - Egidio Torreano











Left to Right (Seated): James Westwater, ?, Walter Sterling, Fay Brown, Charles W. Allen Standing far right: Joseph Haller

Standing (L to R) P. Dominic Polini, P., T., P., P., P., P., P., P. John Havela, P., P. Hugo Korpinen, P., P. Carl Carlson, Harry Swanson Seated: (L to R) Al Koski, P., James Westwater, P., Joseph Haller, P., P.

















L. Bill Peterson R. Glen B. Jork



L. TO R. Charlie Van Ginkle - Glen Bjork - John W. Mattson About 1949 Mather "B"



1950 mother B" 6th Level at shoft



L to R (Seated at Table) 2nd_ Charles Kincaid, 6th William Treloan, 7th-John Bjorne. Seated behind table 4th - Ernie Bengry <u>Standing</u> <u>AB</u>_Sunne Laitinen Top Row (Lto R) 1st Sonne Laitinein, 10th Edward Rosar 2nd Row (L to R) 1st Al Baldini, 3rd Wm. Treloar, 6th Charles Kincaid, 1st Etherd Rosar Front Row (1 to R) 1st- Bierrike (Boxcar") Nautt



































































L.TOR, M. Whole - J. Hok mann - W. Cannon - William H. Treloare







LTO.R. - William H. Treloar - M. Whale - J. Hokmann



















Taken Sat. Dec. 20, 1947



TOP Row Left To right: August Jokinen (Tram Boss) - Abell Leitinen (Tram Boss) Arvid Sarri (shift Boss Rouben Carlson (Foreman) Toivo Laitinen (shift Boss) Wesley Leese (timber Boss) William Hares (shift Boss) Ragner Sundberg (surface Bogs) Front Row L. R. Earl Rule (clectrician) John Pascoe (shift Boss) Thomas Tippett (captain) Frances Trestder (shift Boss) William Treloar (Foreman) Fred Staples (moster Mechan



Michigan Retirees of 1964 Saluted

TWENTY-SIX Michigan employees, who retired in 1964, were guests of the company December 12, at the annual retirees luncheon at the Mather Inn, Ishpeming. All 42 employees who retired last year were invited.

The veterans had compiled service records ranging from 15 years-5 months to 47 years.

They were saluted by Cliffs' superintendents and department managers with whom they had worked over the years. Nine of Cliffs' management personnel served as hosts upon the occasion. Speaking for the company and extending greetings and best wishes were H. C. Swanson, E. B. Johnson and Lowell Holmgren.



Shown at the luncheon (seated - left to right) were: Leonard Perry, Carl Carlson, John E. Maki, James Pesenti, Clinton Doney, Glen Robare, William Olgren, Edwin J. Peterson and John Nigra.

In the middle row are: John Johnson; Arthur Mager; John Pietro; Clyde Eddy; Dana Cory, Chief Electrical Engineer; Clarence Anderson; Carl V. Larson; David Corlett; E. B. Johnson, Assistant Manager of Michigan Mines; Earl Scanlon; Maurice Hager; Onni Marjama, Superintendent, Cliffs Shaft Mine; William G. Anderson; Folke Bjork; Gill Dawe, Superintendent, Ore Improvement Plant and Pioneer Pellet Plant; O. E. Johnson, Director of Industrial Relations; Edwin M. Anderson, and H. C. Swanson, Manager, Michigan Mines.

Standing are the following: Wesley Jennings, W. Roy Roberts; K. C. Olson, Superintendent, Republic Mine; J. D. Crites, Superintendent, Humboldt Mine; Henry Kuisti; Carl Lundquist; Emil Saari; Albert Carlson; Eric Beinlich, Underground Superintendent, Mather Mine, and Lowell Holmgren, Supervisor - Pensions, Insurance and Compensation. Unable to attend were: Reuben W. Anderson, Joseph M. Flack, Fred J. Gauthier, Arthur J. Harvala, Julius R. Lahti, Edward W. Larson, John Latola, Herbert E. Nelson, Ernest Orchard, Aro E. Pelkie, Leonard T. Perry, Albert J. Poirier, J. D. Preston, Leo Racette, John G. Renfors, and Eino Ronn.

Names in bold type indicate non-retirees.

CLIFFS NEWS • FEBRUARY, 1965



Center of Picture: Hugo Kompinien





<u>L</u> to <u>R</u> <u>P</u> Juidici, William Treloar, <u>P</u> <u>P</u> Juidici

WILLIAM H- . TRELOAR









WM H. TRELCAR

THIS PICTURE IS IN THE STATE OF MI. MUSEUM



WM H. TRELOAR

THIS PICTURE IS IN THE STATE OFMI. MUSEUM



Miners paused for a brief moment of reminiscence on the last day of operations at the Mather B. Drilling to prepare for a blast and scraping towards the "Grizzle", a steel grid, were all part of a day's work for the men who worked underground.







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The Mather Mine of the Negaunee Mine Company is owned by the Mc Louth Steel Corporation, the Bethlehem Steel Corporation, the Republic Steel Corporation, the Sharon Steel Corporation, and the Cleveland-Cliffs Iron Company, who is also the operating agent. It embraces nearly two square miles of area within the city limits of Negaunee and Ishpeming in the eastern part of the Marquette Iron Range.

Shaft sinking of the "A" Shaft was begun in January, 1941, and the first production of ore began in September, 1943. The "B" Shaft was begun in April, 1947, and the first production from this shaft occurred in October of 1950.

The "B" Shaft surface plant was completed in December, 1950. This plant includes the change rooms, warehouse and repair shops, all under one roof. The headframe and engine house are separate installations.

The two shafts are 8,800 feet apart and are about 3,600 feet deep. They are connected by the 5th, 6th, 7th, 8th, 9th, 10th, 11th, and 12th Levels. These levels are spaced approximately 200 feet apart vertically. The presently mined area is approximately one square mile to date, and about sixty miles of railroad has been laid to mine this area. Mining is presently being carried out on the 11th and 12th -Levels.

There are presently 620 men employed at the Mather Mine and b annual production is approximately 2,000,000 tons a rate of 7,300 tons per d /.

The men and supplies are brought down into the mine by means of an aluminum two-deck cage 12' x 6' x 24' high. It has a capacity of seventy men or two timber supply trucks.

The ore is brought to surface by means of two 14-ton capacity bottom dump skips hoisting in balance. One skip can complete one cycle in about two minutes. The skips empty into bins in the headframe and the ore is conveyed to railroad cars. for transportation to the Ore Improvement Plant and Pellet Plant.

The skip and cage hoists are twelve feet in diameter with an eight-foot face. These drums weigh seventy-five tons each. The cage hoist is powered by a 1500 HP DC motor and operates at 1700 ft./min. The skip hoist is powered by three 1500 HP motors and operates at 2800 ft./min. Both of these hoists use 1-7/8" diameter wire rope.

Also in the engine house are four 2700 cfm air compressors powered by 500 HP motors. On the first floor of the engine house are three motor generator sets used to convert AC current to DC current which is used for the hoists.

The ore consists of iron oxide or hematite which varies in color from dull red to bluish gray and averages 60% in iron content.

The Mather B-Mine the last day Iron Ore was taken out of the mine

Shovel loading ore cars last day ore was taken from the Mather-B