

THE IRON MINES

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OF

**Menominee Co., Mich.**

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BY

**HON. E. S. INGALLS.**

**Menominee, Mich.,**  
January 18, 1871.

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## *The Menominee Iron Mines.*

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Menominee County is situated in the south west corner of the Upper Peninsula of Michigan, and bounded on the west by the Menominee River which is the dividing line between the States of Michigan and Wisconsin, and on the south east by Green Bay, which although only a Bay of Lake Michigan, is over one hundred miles long and would of itself be considered a very respectable sized Lake in any other part of the world. The county is but sparsely settled, the settlements being mostly confined to the Bay shore. The interior of the county is a forest wilderness, being covered with pine, beech, maple, and other forest trees, and interspersed with Tamarac and Cedar Swamps.

It has not been known until within three or four years, that the county is rich in minerals. About five years ago the Menominee Marble Quarries were discovered; These attracted attention and induced parties, to further explore the country in search of other minerals, and it thus became discovered that the real Iron district of the Upper Peninsula, was in Menominee County, and that mines of untold wealth, lie buried in the interior of the county, and amid its tangled forests.

**THE BREEN MINE** —Is the one now showing the greatest outcrop, and so far as surface appearances can be taken as a criterion to judge from, is the richest mine in the State of Michigan, if not in the United States.

The Breen Mine is situated twenty six miles from the shore of Green Bay, at the mouth of Deer Creek, in a direct line, and fifty four miles from the village of Menominee, at the mouth of the Menominee River; The country between the Bay Shore at Deer Creek, and the mines is entirely unsettled, altho if opened by a Rail Road it is capable of settlement, some of it being very fertile hard wood land. It is rolling with no very steep grades, and well adapted to a route for a Rail Road.

## MENOMINEE IRON MINES.

The Breen Mine presents on one side of a high ridge, a solid wall of iron ore nearly perpendicular from thirty to fifty feet high, and over a quarter of a mile in length. The ridge is about a quarter of a mile wide at its base, and from fifty to one hundred feet high in the centre or crown of the Ridge. The wall of iron is in the South East side and is covered with moss and leaves only. The top of the Ridge is covered with earth and trees to a depth of from one to two feet. The trees in many places were blown down, and where such had been the case the roots turning up the earth, has laid bare a solid floor of iron ore, thus demonstrating the fact that the whole Ridge is Solid Iron Ore.

It is highly probable from the course of the mine and Ridge that the mine extends much farther along the Ridge, than is shown by the outcrop, but this can only be determined by uncovering the earth which has never yet been done.

But if any person can figure out an estimate of the number of tons of ore that there would be in a space one quarter of a mile long and one quarter of a mile wide and an average height of fifty feet and affix a value of one dollar per ton in the mine they can demonstrate fully the value of such a mine.

But there is no reason to suppose that all the iron lies above the bottom of the valley which runs along side of the Ridge.

There is every reason to suppose that the depth of the mine is much greater than the height, as in most mines that have been known for a long period of time the depth has always been found to be many times the height, and it is probable that after this mine is opened that the great, great grand children of the great, great grand children of this generation will not see this mine worked out.

The iron from this mine is pronounced to be a soft hematite, well adapted to smelting. It has been analysed or rather specimens taken from the wall of iron have been and the analysis of these surface specimens show sixty per cent of iron. This for surface specimens is considered very rich ore as the leanest ore in all mines is usually found on the surface.

We give below reports of analysis by two different gentlemen far apart and neither knowing that the other was testing the ore. One from John E Siebel Esq, Chemist at Chicago Illinois, and the other from Julius Ropes Esq, of Ishpeming Marquette County Michigan. From these reports it will be seen that no mistake could be made as to the quality of the ore. The speci-

mens sent to each, were broken out of the solid wall or ledge of iron ore, on the South East side of the Ridge.

JOHN E. SIEBEL'S CHEMICAL LABORATORY,  
Office, 42 La Salle Street,

Chicago, Nov. 27, 1870.

Mr. S. P. Saxton,—The analysis of an average of the specimens of Iron Ore, which I received from you, gave the following results:

Water,	0.031 per cent.
(Slag),	26.492
Silica free,	13.421
Phosphorus (Traces),	Traces.
Sulphur,	None,
Peroxide of Iron,	60.014
Lime,	0.048
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Total,	100.006.

According to this analysis, the ore contains a trifle over 42 per cent. of Iron, (42.01 per cent.) in the metallic and pure state.

Respectfully yours,

John E. Siebel.

"Ishpeming, Mich, Dec 14th, 1870

"Mr. S. P. Saxton,

Dear Sir,—I herewith enclose you the result of the analysis of the last one of three specimens of Iron ore sent me for analysis by J. B. Minick, and requesting me to report results to you, which are as follows:

Metallic Iron,	58.11 per cent.
Silica and Insoluble,	15.43 "
Allumina,	1.75 "

The ore is a variety of hematite and will work easily in a furnace without a doubt, and is rich enough for this quality of ore, to be valuable. I regret that I have been so situated that I could not attend to it before.

Very truly,

Julius Ropes."

This one mine if there were no other, would warrant the building of a Rail Road, but fortunately for Menominee County and for the world when a Rail Road shall be built, there are several other mines but a few miles farther along from the shore of Green Bay, which if they do not show as large an out crop as the Breen mine, show enough to prove that they are very valu-

able mines and when opened will give employment to thousands of men and plenty of business for numerous Locomotives and Cars to transport the iron to the Shore of Green Bay, and from thence to all parts of the country.

By the side of the Breen mine runs a small stream of water called Hamilton's Creek. It is very rapid and its banks are high. It furnishes plenty of water Power for a blast furnace and a water power may be got by the side of the mine with fifteen feet of head, and there is abundance of good hard wood near by for charcoal.

**DEER CREEK**—Was formerly called Little Cedar. It is situated in the North East corner of Menominee County, directly opposite from the Door,—the main ship channel from Green Bay into Lake Michigan. There is good water close up to the shore. Six hundred feet from the shore giving seventeen feet of water, and gradually deepening from that to forty five feet. It lies in an indenture or curve of Green Bay, which protects shipping from every wind but an east wind and furnishes safe guards against the action of ice on the docks.

There is a dock now there which is a spile dock, and has stood against the ice for two winters before the present one, without harm.

Deer Creek is approachable by all winds but a due west wind, and vessels clearing can lay their course across Green Bay to the Door and Lake Michigan by all winds but a due east wind, and due east and west winds are very rare on Green Bay.

The ice is clear out of the Bay, usually two weeks earlier and later than it is either at Escanaba on Little Bay-du-lac, or at Menominee. This is caused by the action of the waves coming in from Lake Michigan.

Deer Creek is capable of being made a good harbor by dredging, but at present it is usually barred up at the mouth so that nothing larger than sail-boats can enter over the Bar. The anchorage in the hight of the Bay where Deer Creek enters it is good. The bottom being clay.

The Iron mines are nearest to the Bay Shore at this point of any point on the shore, and in addition to this advantage, is that of having deep water right up to the shore, at a point well protected from winds and ice, and directly accessible to Lake Michigan, and that too much earlier in the spring and later in the fall than any other place along Green Bay.

**THE MARBLE QUARRIES.**—Lie about three miles from the

Breen Mine and directly on the proper route for a Rail Road to the next mines.

They have never been opened or worked owing to the great difficulty and expense of getting men and supplies through the woods, where there are no roads to them. The out crop looks well and is extensive and there can be no doubt that as soon as a Rail Road is built to them they will be found to be very valuable. They were discovered before Iron Mines was known to exist and in consequence of this fact the first effort to open the country was directed to opening an outlet to these quarries to a shipping point on Green Bay, but now it is found that valuable as they are supposed to be, that we have got a much greater wealth in the Iron Mines which seeks an outlet by the same route.

**MAGNETIC ORE**—On the lands owned by the Menominee marble company has been found a valuable mine of magnetic ore. It lies in a steep hill side on the Bank of Sturgeon River and not far from Little Sturgeon Falls. The hill side for about fifty feet high, appears to be solid ore. A hole has been opened in it about ten feet and in it the ore appears to be rich. It is undoubtedly a very rich mine but owing to the same causes which has prevented the Marble Quarries from being opened, nothing further has been done to develop this mine. The Sturgeon River near this mine furnishes abundance of water power sufficient to run either smelting furnaces or rolling mills, and hard wood timber abounds suitable for charcoal for smelting. About three miles from this Magnetic Ore Mine commences another series of mines covering an area of one half of a township of land. Heavy out crops of ore appears in several places indicating a large extent of mining ground. The Ore is hematite, and appears to be as rich in quality as that of the Breen mine, but I have no knowledge that any of it has been analyzed, but suppose it may have been, no very large expense has been incurred in opening it, but enough has been done to show that if there were no other iron mines in the Upper Peninsula these would stamp the country as being a great iron district. These last mines have been personally examined by Professors Pompilly and Grednar and pronounced by them very rich but I have never seen any report of an analysis of the ores.

Ten miles farther along is another great iron mine, showing a very large outcrop, but little is known about it. The country is so rugged and tangled, that but few visit it, and it is easier now

to go to the Rocky mountains and prospect than it is to get provisions up into that country and to go there, and make such a stay as would enable any person to learn much of the country around it, yet with a Rail Road from Deer Creek to these first mines the difficulties of getting there would seem so small that probably in one year after its completion, the country would be as well known as the shore of Green Bay is now.

To the left towards the Menominee River about six miles from the Green Mine is another valuable outcrop of iron and with it a mine of mineral paint or rather a vein of red oxide of iron which when prepared by grinding makes a valuable paint and works well with oil.

These discoveries of iron have all been made within the last five years and yet the country there, is but very little known. Such is the nature of the country, covered by dense and tangled forests and swamps, that a person can hardly learn what there is in one township, in a whole summers exploration, and there is no doubt but that when the country is opened by a Rail Road so as to become accessible, that many other mines will be found within the same area of country, that I have been describing, but which are now thinly covered with earth and forest so as to be hid from the casual explorer, who occasionally forces his way through the woods.

**A RAIL ROAD.**—Shall we have a Rail Road from the shore of Green Bay to these mines. Can there be any doubt but that the public have a large interest in the opening of these mines? And when we speak of the public we mean the whole country, as well as the residents of Menominee County, we mean the iron workers of Pennsylvania and Ohio, with the farmers who feed them, and the Merchants who trade with them, we mean the Mechanics of Massachusetts and Merchants of New York City who want another large section opened to consume their merchandise, we mean the people of Chicago and all Illinois, Milwaukee and all Wisconsin, of Detroit and all Michigan, who want another market for their products, we mean the people of the whole United States who will reap a benefit from the manufacturing of iron and the saving of the vast amount of gold, which now flows out to Europe for an article which we have in our own country of such abundance that we could furnish the world with it, and in a better quality than that for which we now drain the country of gold to buy.

Every part of the country is interested in developing the re-



sources of the country, and especially of our mines, and any grant which may be made to aid in the construction of a Railroad to open up valuable mines, will return to the State and country an hundred fold the value of such grant.

For the purpose of building a Railroad to these mines, a Railroad Company has been formed, called "The Deer Creek and Marble Quarry Railroad Company," which association is composed mainly of citizens of Menominee county. This company is determined to build a road from the shore of Green Bay to these mines. Many of the stockholders in this company are interested as owners in these mines. But money is required to build Railroads, and as in most other cases the stockholders are not wealthy enough to build the road without the aid of other capital than what they possess. Capitalists are not forward to advance money for such purposes unless they have a security for their money. Land is usually considered the best basis of security for such loans. Taking this view of the subject and further that the United States and State of Michigan will derive as much or more benefit from the construction of a Railroad by opening up to settlement what is now a wilderness, and bringing into market a large tract of country which is now worthless. The company ask of Congress, and the State of Michigan, a moderate grant of lands to aid them in the construction of this road, and that only on condition that they build the road. The Legislature of Michigan has twice recognized the necessity of this road, once by Session law of 1869 granting the right of way over State lands for that purpose, and by Joint Resolution of the same Session, asking our members of Congress to use their best endeavors to obtain a grant of land for that purpose. This is a sufficient recognition to show that this is a matter of public interest, and not purely a private speculation.

But some cry out against land grabs, and without investigation pronounce every effort to open and develop the country an attempt at a land grab. We have no doubt but that there are many such projects that merit the severest condemnation, but the other fact is also apparent that much of the west would still be an unsettled wilderness had not Congress wisely aided in the construction of Railroads by liberal grants of land, and not only has the country where the roads have been built been greatly benefited, but the Government has realized twice as much by the sale of unsaleable lands, thus made saleable, than they would have done in the next fifty years for the whole, if no grants had

been made.

Take Illinois for instance, when we settled in it thirty two years ago, if we remember rightly, the whole State had a population of less than 300,000, and Chicago was a deserted looking hamlet, of a few score of houses, and it's now principal streets were frog ponds. Great tracts of fertile prairies had no settler; we have travelled from morning till night from one house to the next, and even camped on the prairies because we could not reach a house. These fertile lands were so nearly worthless that Congress tried to give them away but could not. So anxious was Congress to give away the lands that it passed a graduation act, reducing the price of lands that had been in market a certain number of years to one dollar per acre, and certain other years to seventy-five cents, then fifty, then twenty-five and then to a shilling an acre. And the Government could not give away these fertile lands for that price. There was nobody to take them. The settlers then in the state, did not want the lands and would not pay taxes on them for them. What was the reason? It was because there was no *transportation for their products*. Corn was worth eight cents a bushel, Pork alive in the hog, was worth one and one-half to two cents per lb., and everything in proportion. If a man started for Chicago to sell a load of the products of his farm he had to borrow money of his neighbor,—if he had a neighbor who had any money,—to pay his way back from town, for his load of produce would not pay his expenses. But a new idea came up. A few enterprising men petitioned Congress for a grant of lands to aid in constructing a Railroad and got a liberal grant, and with that as a basis of security, loaned capital and built Railroads. Now observe the consequence of this land grab. Illinois to-day has considerably over two million of inhabitants, 2,500,000 we believe they claim. The frog ponds in Chicago have been filled up, and that enterprising village has now about 300,000 inhabitants, (we don't know that the census gives them that, but they claim it and they ought to know you know). Those trackless prairies which we used to camp on, and which Uncle Sam could not then sell for a shilling an acre, are now covered with farms and cities and villages, and remote from the villages the lands are worth from \$10 to \$100 per acre. Who made the most by that land grab? was it the Railroad Companies, the United States, the State of Illinois, or Chicago? We leave the astute politicians and other wiseacres who make such loud outcries

about land grabs to figure it out, and ask them to figure up the wealth of Illinois in men, animals, lands, money; and other valuables and set them down in one column, and then figure up the amount the Government would have received for unsettled prairies, which would have remained unsettled to this day, if these Railroads had not been built, and place it in another column, and strike a balance, and they will then find who made the most by the land grab. But this will not fully demonstrate the value to the country derived from these grants, for Iowa, Minnesota, Wisconsin, Michigan and all the Territories west of us, would have remained a wilderness, had not Illinois thus been enabled to settle up rapidly, as it was enabled to do by the building of the Rail Roads in that State. We do not wish to be understood as advocating every scheme for grants to Rail Roads. There are undoubtedly some that ought to be refused, and we are opposed to taking and keeping vast tracts of country for Rail Roads out of market when the Rail Roads are not built.

But when Rail Roads will open up the resources of the country, and bring forth to human use, wealth that otherwise would remain dormant, we believe that no more judicious application of the public lands could be made than to grant a portion of them, under proper restrictions, in aid of such enterprises.

Much stress is also laid on the argument that the public lands should be held for actual settlers. This too is an argument based on a fallacy. Every person who has lived in a new country, knows that a man will sooner pay five or ten dollars more for lands, in a neighborhood through which a Railroad runs, than take the gift of equally good lands, in a new section of the country, remote from Railroads, and where none are expected to be built, and this view of the subject is based on sound economy, for if a man for twenty years should be compelled to transport the products of his farm fifty miles by team, he would expend much more in additional cost of transportation than would buy an improved farm in the neighborhood of a Railroad, besides losing the sale of many products of his farm that would not pay the cost of transportation by the slow style of teaming.

And if this theory is true of a prairie country where people can travel almost anywhere with a wagon, how much more true is it of this section of the country where men can at best make but slow progress through the woods on foot, and where before the settler can get to government land to settle, he would have to pay out more to build a road than it would cost him to buy

an improved farm. In fact a poor man cannot afford to take the gift of public lands in many places in the Upper Peninsula of Michigan and be compelled to move on it, and live on it. When he has cleared his land it will have cost him twenty five dollars an acre, let alone the cost of making roads through the woods and swamps to it. But when a Rail Road is built instead of costing him twenty five dollars an acre he can clear his land and make a profit in doing so. A market is opened to him at once for all his cord wood, cedar posts, railroad ties, and other timber growing on his land with quick and cheap transportation, and he can save the expense of cutting and burning all this growth which he must otherwise do and he will at the same time actually make a profit of from ten to twenty dollars an acre in clearing his land, besides saving the twenty five dollars per acre which it would cost him to clear the land, if no cheap means of transportation was afforded him.

The country from Deer Creek for five or six miles, is covered with cedar and tamarac swamps and pine and hemlock ridges, and this is characteristic of the whole west shore of Green Bay. From that point to the Breen Iron mine will be found beech and maple, and pine and hemlock, with occasional cedar and tamarac swamps. The Beech and maple lands are good farming lands, and some of the cedar swamps where high enough to be drained are also fertile lands. All other lands are worth less for agricultural purposes, and for all other purposes in the present state of the country. To reach these hard wood lands roads of some description must be built, but common roads, though they furnish a way to get to the good lands, do not aid in converting the growth of wood into available capital. On the contrary to make the land available for purposes of agriculture the wood must be cut off, and burned, to clear the land, at the great expense before mentioned.

Unless a Rail Road shall be built through the country this agricultural portion of the county will not have a settler on it in fifty years, and the United States and the State of Michigan, will continue to be large land holders in fee of this great tract of cedar swamps, and tamarac swamps, and beech and maple lands, and hemlock ridges, and not even a graduation act will enable the General and State Government, to induce the people to take the lands off from their hands and pay taxes on them.

But let the Government and State give to a Rail Road Com-

any who will build a road, one half of the land along its route, and people will jump at the chance to buy the other half at double the minimum price of public lands, and thus the Government and State will receive as much for one half as they would for the whole land, and find speedy sales, and have the use of their money, and what is better the purchasers would make money by buying the lands at double price of Government lands.

What would be the result of building a Rail Road from Deer Creek to the Menominee Iron Mines?

The country which is now a wilderness, the haunt of the wolf and the bear, the lynx the catamount and deer, would be opened to the advance of civilization. Smelting furnaces would spring up along its route. Busy choppers would be felling the now worthless trees for charcoal to furnish their fires and thus clear the land for busy farmers to raise grain and other products of the farmers villages would spring up at these furnaces, and at the water powers and at the mine, and the busy hum of machinery would be heard all through the country from the Bay Shore to the mines. Thousands of men would find employment at the mines blasting out iron ore, to furnish other thousands with employment, numberless ships, would find employment, in shipping the ore to the smelting furnaces of Pennsylvania and Ohio, and the Rail Roads of the whole country, would find an additional profit in transporting that iron to the work shops of the whole country while the artizans then, would find their profit in working it, and the people of the whole west would have an additional market added for their produce and east and west north and south, for their products and merchandize. The Government and the state would derive a large benefit from the additional ability of the people to pay taxes and revenue, and the world would derive a benefit by bringing into use a country now worthless, and a wealth of mineral which for all practical purposes without a Railroad might as well be in the bottom of the Atlantic Ocean.

And all this would be brought about by the exertion of a few determined men aided by a grant of land, which are now worthless.

And if these men by their hands can thus combine forces now inert, and bring about such results, will any one say that they shall not reap any reward, and that all this good shall be produced by their exertions, and else be benefited by their acts, and labor, and yet they be deprived of any benefit therefrom?

Their talk of land grabs when applied to all such enterprizes without distinction is a humbug. It is cheap claptrap, which small beer politicians can use, who have not minds of sufficient calibre to comprehend cause and effect, but should never be used against an enterprize really meritorious.

There is without doubt, many land grabs where nothing but private interest is sought, or will be promoted. The term land grab is very properly applied to such projects, and they should be defeated, but the good should not be sacrificed to the bad, and an attempt to develop the latent wealth of the country when all may be benefited, should not be defeated, because some projects are devised in selfishness.

The building of a Rail Road to these mines is a work of national importance. The whole United States is divinely interested in fostering and building upon our iron interests, every branch of industry will derive a benefit by it, and is safe to assert that if the company succeed in building a Rail Road to these mines, that other people will profit a thousand fold more by their success, than will the projectors of the Road, and owners of the the mines.

We have in endeavoring to give some idea of the extent of our iron mines wandered off into a discussion of subjects supposed to belong to the region of politics but we could not help it: for those questions which if decided rightly or wrongly, would affect our interests vitally for good or evil, and this we hope will excuse us to the reader for stepping aside from the subject that we started out upon, but we hope that what we have written about the iron mines of Menominee County may have imparted some information that may be deemed useful, and which may call forth a feeling of good will towards our efforts to bring this great wealth out of the earth, and thus make it useful to mankind.

That we have in this County the largest and most valuable iron district in the United States no one who has seen our mines can doubt. Shall those mines be opened for the benefit of mankind in this generation? or shall they lie undeveloped until a more enterprizing people succeed us, who will develop their vast wealth to mankind. That these mines lie in a wilderness not now habitable, but when opened by a Rail Road will admit of large settlements is equally well known.

Shall we have a Rail Road that will open that country to settlement which

will give us a population in two years of 18,000 people instead of 1,500 and which will constantly increase which will give us assessable property of \$4,000,000 instead of \$400,000—which will give the State and Government a rapid sale of now worthless lands to actual settlers who will convert the wood and timber into useful merchandize and clear the lands for purposes of agriculture, or shall the country continue a wilderness until our childrens children, more enterprizing than their fathers shall open up to the world their great riches?

For ourselves we believe in exorcion. We believe all should pull steadily in favor of the most practical method of opening a route from navigable waters to the mines and that the United States and state Government who will profit more than all by our success should give aid to the enterprize.

To sum up the advantages of building the Deer Creek and Marble Quarry Rail Road, we will state as some of the results of its first success, that it will open to the use of mankind an iron mineral district, which we do not think we exaggerate in saying that it is the richest in the United States. It will furnish transportation for the iron ore and marble to the nearest and best point for shipping it to the Shores of Green Bay and from thence by the great Lakes, and Railroads, to all parts of the country, east west and south.

Second: It will build up villages at the mines for mining purposes, and smelting furnaces, along the route, which will cause other villages to be built, in what is now a wilderness which is worthless to man.

It will give employment to thousands and tens of thousands at and about the mines, and the products of their labor will furnish work for other thousands all through the country. It will enable agriculturists to clear off the dense forests, and to get rich in doing so, to furnish fuel for the smelting furnaces, when without such advantages, settlers who would be hardy enough to attempt to make a farm in these forests, would be compelled to cut off and burn this wood on the land, at a great loss. These dense woods would be saved by having a use for the wood, and thereby add to the wealth of the nation.

The lands when cleared would be easily prepared for cultivation, and the farmers who would then improve them, would have a good market at home for the produce of their farms.

Third. The lands which are now practically worthless, would immediately become valuable, and settlers who would not now take them as a gift, would jump at the chance to buy the reserved sections at two dollars and fifty cents an acre, and would make themselves rich in doing so, and in a few years this northern wilderness country, would be covered with farms and farm houses, and these houses inhabited by thriving and happy farmers.

Fourth; it would give an additional impetus to industry throughout the land, in working it up into the various implements needed by man, the merchant in supplying these workers with merchandize, and the farmers in feeding them all, while the Government and State in giving one half, finds itself as rich as if it had sold the whole, and finds a ready market for what is now unsaleable land, and then reaps in the way of taxes and revenue, from the People who are thus enabled to find employment, a yearly income greater than would be the value of the lands if sold at the price, minimum and better than all this it brings into use wealth which is now unavailable, which when made available, is of greater value to the State and County, than is twice or even ten times the present value of the lands donated.

The Deer Creek and Marble Quarry Rail Road Company has among its stockholders and incorporaters, owners of five of the largest mines. The rich in wealth, and thus available means will not enable them to build a road to open mines without further aid. They took hold of this enterprize with the settled determination, to build the road, and they meant to build it or die in the last ditch and if they find themselves in that unpleasant predicament, they will their determination as a legacy with the mines to their children. If they can get the aid they ask for they will have the Locomotives running to the Green Mine in six months, and to all the others within two years. If they do not get it they will fight it out on that line until they succeed.



