Minnesota Iron Mining Industry Update

Craig Pagel
Iron Mining Association of Minnesota

If it wasn’t grown; it was probably mined.
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Iron Ore is used in almost everything we use; from paper clips to ships, agricultural implements, cars, washers and driers, manufacturing equipment….an endless list.

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• Mines have good high paying technical jobs—highest in the region at an average of $72,000 annually.
• Iron Mining is the main economic engine of the region—making other business and jobs possible.
• The industry continues to evolves technically, environmentally, and economically in the global and regional economy.
How is Iron Ore mined and what is produced:
Raw iron ore of about 20% iron, usually taconite, is open pit mined, crushed and refined into magnetic iron concentrate, agglomerated into a pellet, hardened for transportation, and sent to steel mills in the eastern United States and Canada to be made into the steel and iron products we all use every day.
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- Domestic iron ore is important to security of our countries
- 80% of U.S. domestic steel is made from Minnesota Iron Ore
- There are two types of pellets
  - Regular or acid pellets (no limestone added to them)
  - Flux pellets have limestone added to them
- Limestone is an ingredient for steel production

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<table>
<thead>
<tr>
<th>Mining companies that operate the mines are</th>
<th>Million tons</th>
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<tbody>
<tr>
<td>ArcelorMittal Minorca Mine</td>
<td>2.9</td>
</tr>
<tr>
<td>Cliffs Natural Resources Eveleth Taconite</td>
<td>4.3</td>
</tr>
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<td></td>
<td>8.3</td>
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<tr>
<td>Hibbing Taconite</td>
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<tr>
<td>Northshore Mining</td>
<td>4.9</td>
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<tr>
<td>U.S. Steel Keetac</td>
<td>5.4</td>
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<td>Minntac</td>
<td>14.7</td>
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</tbody>
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New Mining companies under construction or development
With state of the art environmental and conservation measures:
• Essar Steel Minnesota 4.1 million tons of pellets
• Steel Dynamics 97% iron nugget 500,000 tons
• US Steel Keetac an increase of 6.3 million tons
Operating companies business plans developed to:
• Meet and exceed environmental controls technologies
• Develop efficiency measures
• Compete in a global market to meet market demands
• Modernization of existing facilities and add new facilities

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Environmental
• Operating companies have agreed to develop and implement mercury control technologies on existing facilities.
• New NOx technologies are also being developed and installed on all new and some newly permitted existing facilities.
Develop efficiency measures

• Energy
• Production and Operation methods
• Delivery of product from ore to pellets down the lakes
• Modern contract practices that have vendors more directly involved in daily operation—resulting in vendors hiring more people and warehousing more equipment

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Economics of Iron Mining
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Minnesota’s Iron Ore Industry is ranked number one in gross product output—adding over $2 billion dollars annually to the economy of Northeast Minnesota and Northwest Wisconsin.

UMD Labovitz School of Business and MNDEED study for Northland Works Partnership--2008
Other industries’ economic output like energy, manufacturing, construction and state and local government depend on the industry follow closely behind this mining industry.

Copper-nickel is ranked 27th even though they have not yet open mines.
While employment has decreased in mine employment since mid 1980’s due to modernization:

• Vendor employment increased with just-in-time practices
• Salaries increased 40% for miners
• New mines will increase employment beyond 1980’s.
Iron Mines are one of the main economic support of local government, K-12, and University of Minnesota. $90 million annually in Production Tax Paid in lieu of property taxes—supports state and local government and schools. $10+ million in occupation tax.

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Direct payments to the State of Minnesota for state owned mineral rights.
$87 Million in Royalty Payments last year
$334,000 in income tax withheld for non-state owned

Money goes to K-12 Education and University Trust Fund

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Recently renegotiated Royalty Payments over next 25 years with money going to K-12 Education and University Trust Fund:

- ArcelorMittal $11.5 million for 40 acres
- US Steel $921 million

Does not include new mines

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Iron Mining in Minnesota will continue to renew itself and add value to the lives of all Minnesotans.

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