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# What's Happening in Mining on the Mesabi Iron Range?



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**Projects that must go through Environmental Review**

**lvpmn.org**

**23 Project locations 13 Developers**



**\$6 billion dollars = Approximate total value of all projects**

# Large Scale Developments 2005 - 2011

The Iron Range has a history of large scale projects that can transform the landscape. But, not since the 1960's and early 1970's has the region seen so many large scale projects under consideration all at the same time

• Excelsior Energy Project	\$2,000,000,000
• Minnesota Steel Industries project in Nashwauk	\$1,650,000,000
• Machine #7 at the UPM paper mill in Grand Rapids	\$650,000,000
• Franconia Minerals – Birch Lake & Maturi Extension	\$616,000,000
• PolyMet's NorthMet Project	\$380,000,000
• Keetac Plant Expansion	\$300,000,000
• Mesabi Nugget Production Scale Plant in Hoyt Lakes	\$235,000,000
• Taconite Plant Capacity Expansion & Alternate Energy Improvements	\$275,000,000
• MP Allede Clay Boswell Unit 3 Retrofit	\$200,000,000
• Laurentian Energy Project for Hibbing and Virginia	\$80,000,000
<b>Total</b>	<b>\$6,386,000,000</b>

# **Currently 6 Taconite Mines are in operation in Minnesota**

**2004 Foreign ownership: Stelco 14.7% of HibTac**

**Today: Global ownership & competition**



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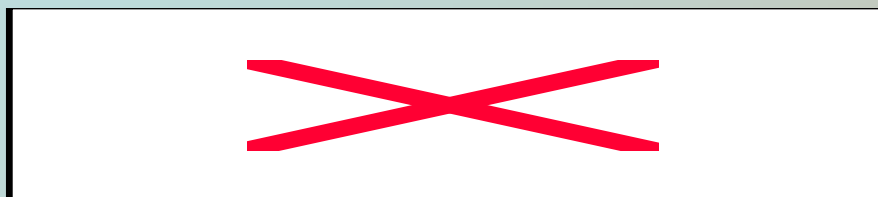
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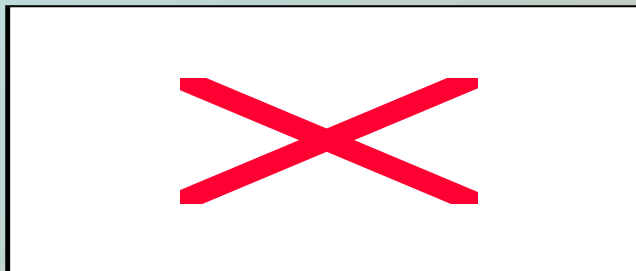
# United States Steel

<b>Name</b>	<b>2007 Production Million Tons</b>	<b>Employees</b>	<b>Ownership</b>
<b>Minntac</b>	<b>12.751</b>	<b>1210</b>	<b>US Steel Corp.</b>
<b>Keewatin Taconite</b>	<b>5.220</b>	<b>385</b>	<b>US Steel Corp.</b>



**Managed by Cleveland Cliffs Mining Co.**

<b>Name</b>	<b>2007 Production Million Tons</b>	<b>Emp.</b>	<b>Ownership</b>	
<b>Hibbing Taconite</b>	<b>7.266</b>	<b>689</b>	<b>ArcelorMittal</b>	<b>62.3%</b>
			<b>U S Steel Corp.</b>	<b>14.7%</b>
			<b>Cleveland-Cliffs</b>	<b>25%</b>
<b>Northshore Mining</b>	<b>4.975</b>	<b>511</b>	<b>Cleveland-Cliffs</b>	<b>100%</b>
<b>United Taconite</b>	<b>5.279</b>	<b>431</b>	<b>Cleveland-Cliffs</b>	<b>70%</b>
			<b>Laiwu Steel Group</b>	<b>30%</b>



<b>Name</b>	<b>2007 Production Million Tons</b>	<b>Emp</b>	<b>Ownership</b>
<b>ArcelorMittal Minorca Mine Inc.</b>	<b>2.708</b>	<b>533</b>	<b>ArcelorMittal 100%</b>



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# 2005 & 2006 GLOBAL STEEL PRODUCTION

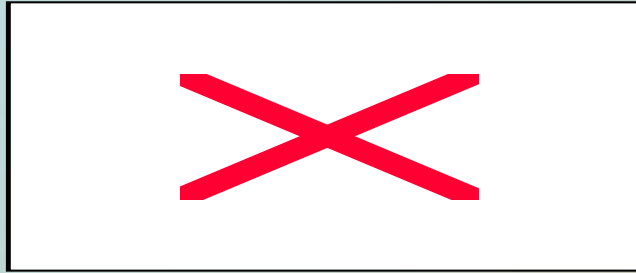
	Rank	2005	Rank	2006
<b>ArcelorMittal</b>			<b>1</b>	<b>117.2</b>
<b>Mittal Steel</b>	<b>1</b>	<b>63.0</b>		
<b>Arcelor</b>	<b>2</b>	<b>46.7</b>		
<b>Nippon Steel</b>	<b>3</b>	<b>32.0</b>	<b>2</b>	<b>32.7</b>
<b>JFE</b>	<b>5</b>	<b>29.9</b>	<b>3</b>	<b>32.0</b>
<b>POSCO</b>	<b>4</b>	<b>30.5</b>	<b>4</b>	<b>30.1</b>
<b>Baosteel</b>	<b>6</b>	<b>22.7</b>	<b>5</b>	<b>22.5</b>
<b>U.S. Steel</b>	<b>7</b>	<b>19.3</b>	<b>6</b>	<b>21.2</b>
<b>Nucor</b>	<b>8</b>	<b>18.4</b>	<b>7</b>	<b>20.3</b>
<b>Tangshan</b>	<b>12</b>	<b>16.1</b>	<b>8</b>	<b>19.1</b>
<b>Corus Group</b>	<b>9</b>	<b>18.2</b>	<b>9</b>	<b>18.3</b>
<b>Riva Group</b>	<b>10</b>	<b>17.5</b>	<b>10</b>	<b>18.2</b>

**2006  
Top Ten Producers  
produced 331.6  
million tons of steel**



**117.3**

**(million metric tons)**

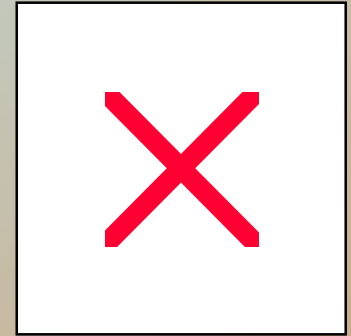
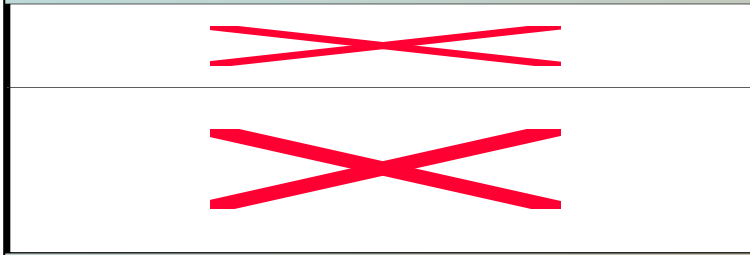
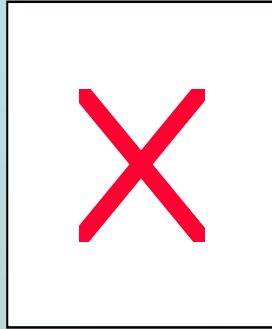


- ✓ **World's largest and most global steel company started in 1976**
- ✓ **Shipments of 117 million tons of steel per year**
- ✓ **Revenues of \$58.870 billion in 2006**
- ✓ **Steel-making facilities in 27 countries on 4 continents**
- ✓ **Employs 320,000 people spanning 45 nationalities and 60 countries.**



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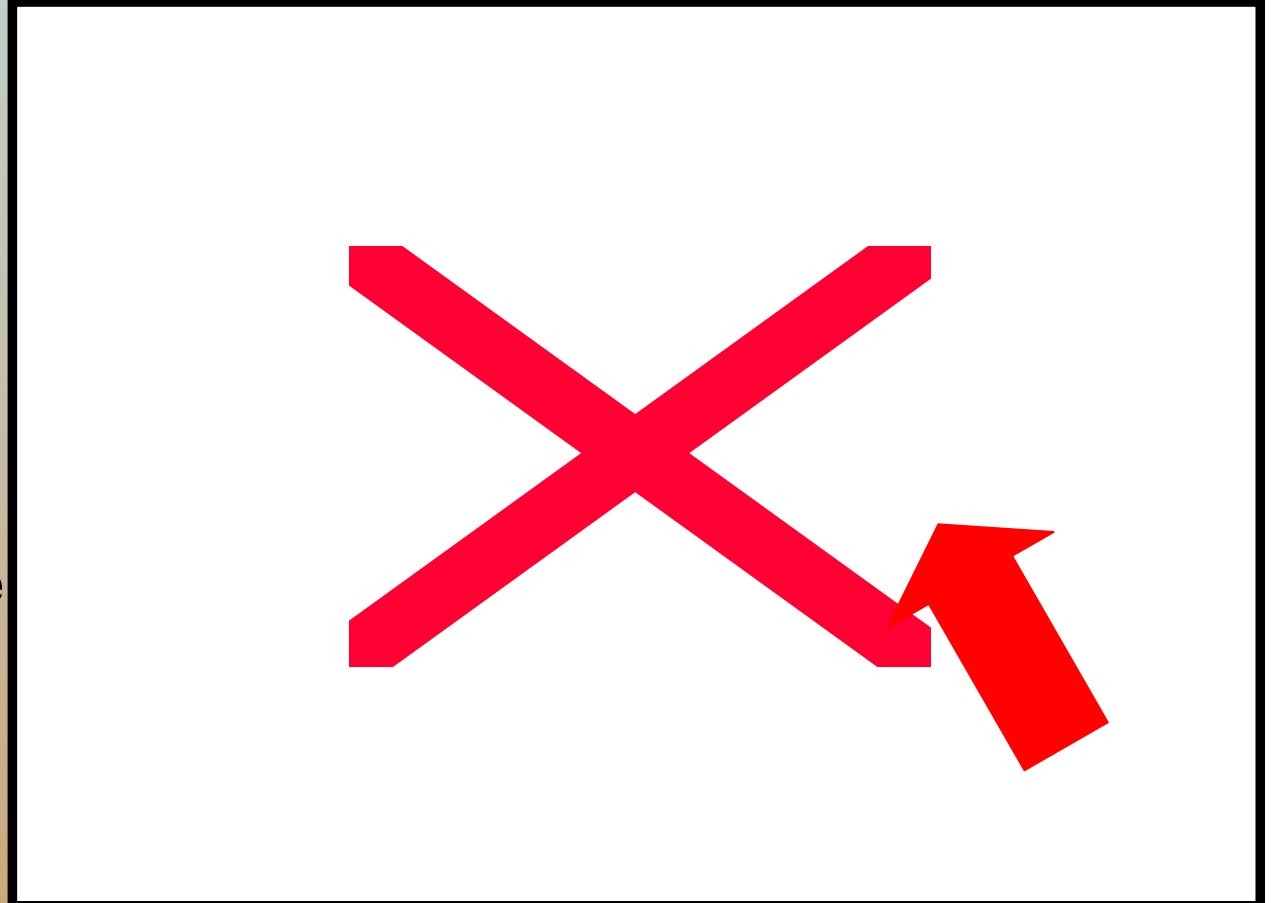
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**Part of Essar Steel Holdings Limited Group**

Minnesota Steel is developing a \$1.65 billion fully integrated, onsite, mining through steelmaking project on the Mesabi range in northern Minnesota.

It is designed to produce up to 2.5 million tonnes of steel products each year and employ up to 700 people.





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- PolyMet Mining Corp. is an investor-owned Canadian junior mining company.
- Formed to develop the world's largest undeveloped non-ferrous metal project in the U.S.
- Open pit mine for copper, nickel, cobalt, platinum, palladium, and gold.
- Metal extraction using the PlatSol process.



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## PLATSOL PROCESS

Temperature:	225°C
Pressure	100 psi
Salt	Cl
Oxygen	O <sub>2</sub>
Time	2 hours
Sulfide provides the energy	



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# Taconite Aggregate Project

- \$1.7 million analyses, testing, marketing and promotion of taconite by-products for use in the aggregate industry.
- MnROAD testing facility - Monticello
- NRRI providing the coordination and leadership.
- Large, diverse group: mining companies, DNR, Iron Range Resources, Blandin Foundation, Minnesota Power, railroads, US Dept. of Commerce – EDA, MnDOT, and great lakes shippers.



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# THANK YOU

## QUESTIONS or COMMENTS

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