## mineral industry surveys



## U. S. DEPARTMENT OF THE INTERIOR BUREAU OF MINES WASHINGTON, D.C. 20241



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Iron Ore, Monthly

## IRON ORE IN APRIL 1988

U.S. mine production of iron ore was 11% more than that of March, according to the Bureau of Mines, U.S. Department of the Interior. The increase in production reflected a pickup of activity at four of the six active pelletizing plants on the Mesabi Range. Mine shipments increased more than threefold with the arrival of spring and resumption of ore shipping on the upper Great Lakes. All six of the active U.S. loading docks on the Lakes were in operation by April 2. Dock shipments totaled 5.1 million long tons for the month and were 37% greater than those of April 1987. Imports rose 89% between March and April, with 83% of the material entering through Gulf or mid-Atlantic ports. Exports to Canada increased more than fivefold, a normal event linked to the opening of the Soo Locks and the Welland Canal for the new navigation season. Consumption of ore and agglomerates declined slightly during the month. However, total consumption through April reached 22.9 million tons, up 26% from the 18.1 million tons for the same period in 1987. On April 30, 50 blast furnaces were in operation, the same number as on March 31.

In mid-April, Cleveland-Cliffs Inc. raised its 1988 production goal for the Tilden Mine near Ishpeming, MI, to meet increased pellet orders. The mining operation is expected to produce between 6 and 7 million tons of pellets this year, instead of 4.8 million tons as was originally planned. Recent steps taken to improve productivity and lower operating costs have made Tilden's pellets more competitive. Two grades of fluxed pellets are being made in addition to the traditional acid pellets. The mine has an annual capacity of 8.0 million tons, but produced only 4.7 million tons in 1987 because of depressed demand. To meet the revised goal, Cliffs has recalled about 75 employees, bringing total employment to about 850. Ten of the twelve grinding lines at the concentrator are now on stream, up from six at the beginning of the year. One of the two remaining lines is being used to grind fluxstone. The second of two pelletizing lines has also been put into operation. The production increase should not interfere with the company's ongoing project to develop the Cliffs Drive III magnetite ore body.

Eveleth Mines also has revised its 1988 pellet production goal upward. To meet the new goal of 4.4 million tons, the company has had to recall 80 employees and reactivate the second of two pelletizing lines at its Fairlane plant, about 10 miles south of Eveleth, MN. This older line, which had been idle since July 1982, gives Fairlane a total effective capacity of 6.1 million tons per year. In 1987, the mining operation produced 3.5 million tons of partially-fluxed pellets using an organic binder and a 1% limestone additive. Eveleth presently employs about 565 hourly and 215 salaried personnel.

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Last winter, Oglebay Norton Co., manager and part owner of Eveleth, filed an environmental assessment plan with the Minnesota Department of Natural Resources, seeking approval to expand the north pit of the Thunderbird Mine toward the City of Virginia. Under the long-term plan, Eveleth would expand the pit by 400 acres and create three new stockpiles. One of these stockpiles would be located in the old Rouchleau Pit on the southeastern edge of Virginia.

 $\underline{\text{Update}}$ : The second pelletizing line at Eveleth became operational on July 1 and will be run on a continuous basis for a minimum of 4 months.

## **U.S. IRON ORE** MONTHLY PRODUCTION AND SHIPMENTS 1987 1988 APRIL 1986 - APRIL 1988 + MINE SHIPMENTS

Table 1. - U.S. production and shipments of iron ore, by districts  $\frac{1}{2}$ (Exclusive of ore containing 5% or more manganese)
(Thousand long tons)

	Lake		Total 2/		
Period	Superior	Other U.S.	1988	1987	
Production:					
1987 <u>p</u> / 1988:	46,194	700		46,894	
1st Quarter	12,396	211	12,607	9,069	
Apri1	4,655	63	4,718	3,076	
Shipments:					
1987 p/ 1988:	46,523	734		47,257	
1st Quarter	4,557	212	4,769	1,484	
April	5,225	57	5,282	3,437	

MINE PRODUCTION

p/ Preliminary. 1/ Excludes byproduct ore, except where noted. 2/ Data may not add to totals shown because of independent rounding.

Table 2. - U.S. mine production, shipments, and stocks of iron ore  $\underline{1}/$ (Exclusive of ore containing 5% or more manganese) (Thousand long tons)

District	Production April		Shipments April		Mine Stocks April 30	
-	1988	1987	1988	1987	1988	1987
ake Superior:			-			
Michigan	1,054	737	1,573	1,190	2,289	3,060
Minnesota	3,600	2,283	3,652	2,176	7,330	6,801
Other U.S	63	56	57	70	215	264
Total <u>2</u> /	4,718	3,076	5,282	3,437	9,834	10,124

Table 3. - U.S. exports of iron ore (Thousand long tons)

Period	Canada	Other	Total <u>l</u> /		
			1988	1987	
1987 <u>p</u> /	5,011	2		5,013	
1988: 1st Quarter April	334 548	( <u>2</u> /)	335 548	92 440	

Source: Bureau of the Census.

<sup>1/</sup> Excludes byproduct ore. 2/ Data may not add to totals shown because of independent rounding.

p/ Preliminary.  $\frac{1}{2}$  Data may not add to totals shown because of independent rounding.  $\frac{2}{2}$  Less than one-half unit.

Table 4. - Canada: Shipments of iron ore (Thousand dry long tons)

Period	Newfound- land	Quebec	Ontario	British Columbia	1988 Total <u>1</u> /	1987 Total <u>1</u> /
1987 p/	18,368	15,621	3,184	33		37,206
1st Quarter	2,710	3,413	812	6	6,941	6,081
April	1,656	1,418	123	2	3,200	3,115

p/ Preliminary.

Source: Energy, Mines, and Resources Canada.

Table 5. - U.S. imports for consumption of iron ore, by country (Exclusive of ore containing 10% or more manganese)

_	April	1988	Ye.	Year to date		
Country of origin	Thousand long tons	Value $\frac{1}{2}$ (thousand dollars)	Thousand long tons	Value $\frac{1}{2}$ (thousand dollars)	Value $\frac{1}{2}$ /(dollars per ton)	1987 (thousand long tons)
Australia	123	1,706	366	6,235	17.04	
Brazi1	466	10,271	1,221	22,692	18.58	1,338
Canada	808	25,347	2,483	85,258	34.34	758
Chile			54	1,235	23.00	329
Liberia	126	1,460	126	1,460	11.58	313
Mauritania	68	1,072	131	2,076	15.90	66
Peru			78	1,308	16.76	41
Spain						1
Sweden	(2/)	3	(2/)	3	31.25	55
Venezuela			<del>5</del> 06	10,440	20.64	528
Other	55	1,336	<u>3</u> /55	3/1,337	24.17	58
Total <u>4</u> /	1,646	41,195	5,019	132,045	26.31	3,486

<sup>1/</sup> Customs value. Excludes international freight, insurance, and other c.i.f. charges.

Source: Bureau of the Census data reported under item 601.24 of the Tariff Schedules of the United States.

 $<sup>\</sup>overline{1}$ / Data may not add to totals shown because of independent rounding.

<sup>2/</sup> Less than one-half unit.

 $<sup>\</sup>frac{3}{2}$ / Excludes 28,466 tons of crude iron sulfate crystals reported in March from the Federal Republic of Germany. The material had a customs value of \$318,651.

<sup>4/</sup> Data may not add to totals shown because of independent rounding.

Table 6. - U.S. consumption and stocks of iron ore and agglomerates at consuming plants and production of pig iron (Thousand long tons)

	Co	Stocks			
	Apri1	Year	to date	April 30	
State or Region	1988	1988	1987	1988	1987
Alabama, Kentucky, Tennessee,	_				
Texas, and Missouri	315	1,289	1,257	701	795
California, Colorado, and Utah-	NA	NA		NA	
Delaware, Maryland, and West					
Virginia	688	2,790	2,504	1,215	1,323
Illinois and Indiana	2,285	9,234	6,979	3,166	3,555
fichigan and Minnesota	510	1,989	1,895	2,455	1,323
New York, Ohio, Pennsylvania,					
New Jersey, and Rhode Island-	1,909	7,562	5,457	2,048	2,207
Total <u>1</u> /	5,707	22,864	18,090	9,585	9,204
Stocks at U.S. receiving/transfer	docks			1,023	557

_	Consu	mption by	process	Pig iron produced		
Consuming Sector	Apri1 1988	Year 1988	to date 1987	April 1988	Year t	to date 2/ 1987
Blast furnaces Steel furnaces Agglomerating plants 3/ Miscellaneous 4/	5,109 33 565 ( <u>5</u> /)	20,249 87 2,528 ( <u>5</u> /)	15,802 19 2,256 13	4,196   	16,667   	12,697   
	5,707	22,864	18,090	4,196	16,667	12,697

NA Not available.

Source: American Iron Ore Association (consumption of iron ore). American Iron and Steel Institute (production of pig iron).

 <sup>1/</sup> Data may not add to totals shown because of independent rounding.
 2/ Includes revisions for previous months.
 3/ Iron ore and iron ore concentrates consumed in agglomerating plants not located at the mine site.

<sup>4/</sup> Sold to nonreporting companies or used for purposes not listed.

 $<sup>\</sup>overline{5}$ / Less than one-half unit.

Table 7. - U.S. imports for consumption of iron ore, by customs district (Exclusive of ore containing 10% or more manganese) (Thousand long tons)

Customs district	April 1988	Year to date		
	•	1988	1987	
Baltimore	930	2,446	1,199	
Buffalo			(1/)	
Charleston, SC	50	118	$\overline{1}10$	
Chicago	161	226	222	
Cleveland	127	149	143	
Detroit	1	31	26	
Houston			$(\underline{1}/)$	
Los Angeles			` <del>-</del> -	
Milwaukee				
Mobile	107	342	406	
New Orleans	52	2/475	502	
New York	(1/)	$\frac{1}{(1/)}$	$(\underline{1}/)$	
Philadelphia	$\overline{2}19$	$1,\overline{2}28$	<u>8</u> 78	
San Juan, PR		(1/)	1	
Wilmington, NC		\ <u>-</u> ''		
Other		5		
 Total <u>3</u> /	1,646	5,019	3,486	

Source: Bureau of the Census.

 $<sup>\</sup>frac{1}{2}$  Less than one-half unit.  $\frac{1}{2}$  Excludes 28,466 tons of crude iron sulfate reported for March.  $\frac{1}{2}$  Data may not add to totals shown because of independent rounding.