



U.S. Department of the Interior • Bureau of Mines

MINERAL INDUSTRY SURVEYS

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IRON ORE IN NOVEMBER 1990

U.S. mine production of iron ore was 10% less than that of October, according to the Bureau of Mines, U.S. Department of the Interior. Michigan had no production in November because of the 4-month long dispute between Cleveland-Cliffs Inc and the United Steelworkers of America. Shipments from U.S. loading docks on the upper Great Lakes dropped to 4.4 million metric tons, putting the year-to-date total 7% behind the corresponding figure for 1989. The American Iron Ore Association reported only 20,100 tons loaded at Escanaba and none at Marquette. As a result, production and shipments for the entire country were down 36% and 34%, respectively, from the pre-strike levels of July. U.S. mine shipments for the first 11 months of 1990 were 5% less than the corresponding 1989 year-to-date total of 52.5 million tons. Domestic steelworks consumed 6.1 million tons of ore and agglomerates in November, down 4% from the previous month. Ore consumption had been relatively stable throughout the third quarter, but concerns of an impending recession and the deteriorating situation in the Persian Gulf region caused consumer confidence to drop off and sales of products incorporating steel to weaken. Because of these signs of slowing demand, blast furnace operators cut back hot metal production more than normal during the yearend holiday season. On November 30, 47 blast furnaces were in operation, 1 more than on October 31. Furnace operators had, on the average, about 74 days of ore stocks in their yards.

Joint Venture Formed to Evaluate Commercial Production of Iron Carbide

Cleveland-Cliffs Inc (CCI) and North Star Steel Co. have formed a joint venture to evaluate the feasibility of producing iron carbide on a commercial scale. The joint venture will use technology licensed by Iron Carbide Holdings Ltd. of Lakewood, CO. Reformed natural gas will be used to reduce iron ore concentrates in a fluidized bed reactor. The bulk of the iron carbide would be sold in pellet form to steelmakers with electric arc furnace operations. The new product would supplement premium quality scrap and compete against imports of hot briquetted iron from direct reduction plants in Venezuela and Asia. In 1990, electric furnace operations accounted for 37% of total U.S. raw steel production, but to date the facilities have not used

Prepared in the Branch of Metals and Branch of Data Collection and Coordination, March 7, 1991.

large amounts of conventional iron ore pellets because of the resulting drop in productivity and higher electrical power consumption.

North Star is the ninth largest steelmaker in the United States. The Minneapolis-based company has mini-plants in 7 States and can produce 2.4 million metric tons per year of raw steel in its 11 electric arc furnaces. Melting and casting operations are located at Wilton, IA; Monroe, MI; St. Paul, MN; Youngstown, OH; Milton, PA; and Beaumont, TX. CCI is a major iron ore merchant and manages six iron mines in North America and Australia.

The MINES-DATA System

The telephone number for the MINES-DATA computer bulletin board is (202) 634-4637; the computer settings are: 2400, N, 8, and 1. Anyone who needs technical assistance or a copy of the MINES-DATA instruction manual can leave a message with the answering machine by calling (202) 634-9632.

U.S. IRON ORE

MONTHLY PRODUCTION AND SHIPMENTS

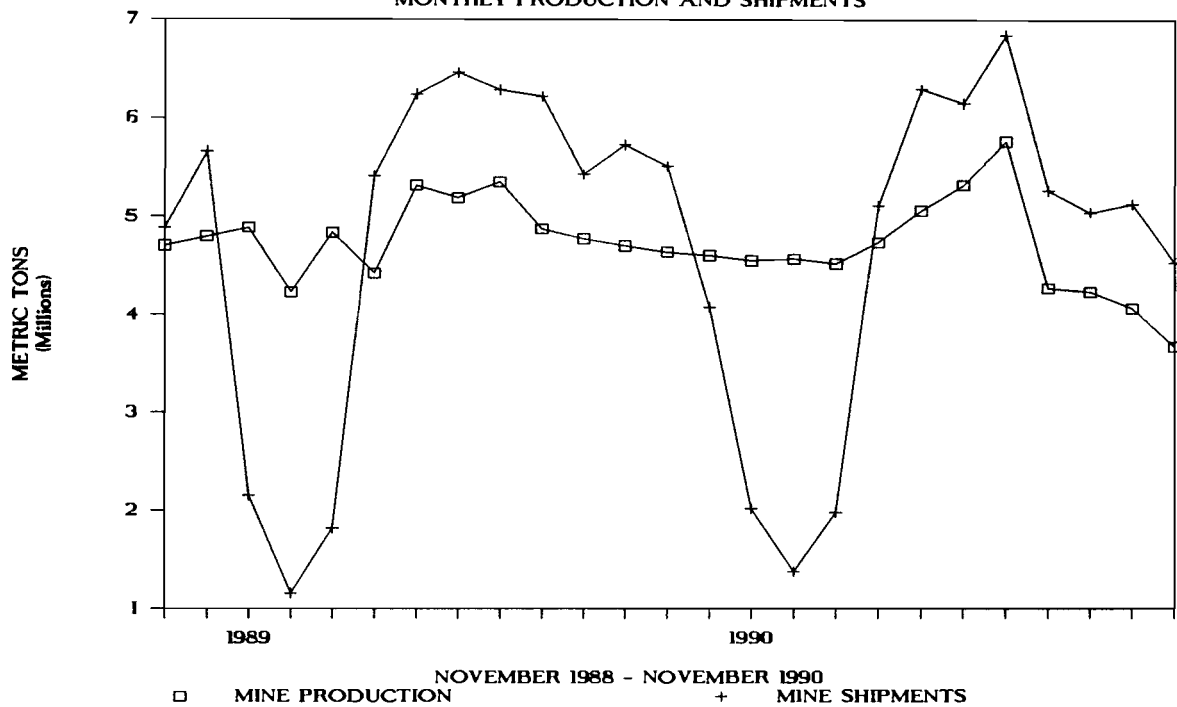


Table 1. - U.S. production and shipments of iron ore, by districts 1/
 (Exclusive of ore containing 5% or more manganese)
 (thousand metric tons)

Period	Lake Superior	Other U.S.	Total 2/	
			1990	1989
Production:				
1989	56,981	2,052	--	59,032
1990:				
1st Quarter.....	13,425	223	13,648	13,960
2nd Quarter.....	14,909	232	15,141	14,946
3rd Quarter.....	14,005	282	14,287	15,009
October.....	3,979	90	4,069	4,703
November.....	3,576	102	3,677	4,645
Shipments:				
1989 3/.....	56,089	2,210	--	58,299
1990:				
1st Quarter.....	5,145	230	5,375	5,131
2nd Quarter.....	17,335	250	17,585	18,121
3rd Quarter.....	16,912	262	17,175	17,945
October.....	5,047	93	5,140	5,735
November.....	4,457	83	4,540	5,520

1/ Excludes byproduct ore, except where noted.

2/ Data may not add to totals shown because of independent rounding.

3/ Includes byproduct ore.

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

District	Production November		Shipments November		Mine Stocks November 30	
	1990	1989	1990	1989	1990	1989
Lake Superior:						
Michigan 2/.....	--	1,135	14	1,502	408	1,092
Minnesota.....	3,576	3,424	4,444	3,956	4,978	2,881
Other U.S.	102	85	83	62	148	134
Total 3/.....	3,677	4,645	4,540	5,520	5,535	4,107

1/ Excludes byproduct ore.

2/ Production facilities were shut down by a labor dispute on August 1, 1990.

3/ Data may not add to totals shown because of independent rounding.

Table 3. - Canada: Shipments of iron ore
(Thousand dry metric tons)

Period	Newfound- land	Quebec	Ontario	British Columbia	Total 1/	
					1990	1989
1989 p/.....	20,662	15,395	3,353	64	--	39,474
1990:						
1st Quarter.....	1,179	1,884	677	9	3,749	6,008
2nd Quarter.....	5,070	4,058	296	33	9,457	11,230
3rd Quarter.....	7,028	3,904	112	r/35	r/11,079	11,355
October.....	1,836	1,598	--	r/9	r/3,442	r/3,398
November.....	2,458	1,816	--	9	4,282	3,920

p/ Preliminary. r/ Revised.

1/ Data may not add to totals shown because of independent rounding.

Source: Energy, Mines, and Resources Canada.

Table 4. - U.S. consumption and stocks of iron ore and agglomerates
at consuming plants and production of pig iron
(Thousand metric tons)

State or Region	Consumption			Stocks		
	October	Year to date 1/		October 31		
	1990	1990	1989	1990	1989	
Alabama, Kentucky, Tennessee, Texas, and Missouri.....	535	5,482	4,963	810	1,203	
California, Colorado, and Utah.....	166	1,695	1,828	119	124	
Delaware, Maryland, and West Virginia.....	432	5,196	6,695	1,922	2,235	
Illinois and Indiana.....	2,504	25,006	23,665	5,491	5,866	
Michigan and Minnesota.....	781	6,505	6,063	1,908	1,833	
New York, Ohio, Pennsylvania, New Jersey, Rhode Island.....	1,935	18,289	18,977	3,866	3,673	
Total 2/.....	6,354	62,173	62,191	14,116	14,933	
Stocks at U.S. receiving/transfer docks.....				1,513	1,520	
Consuming Sector	Consumption by process			Pig iron produced		
	October	Year to date 1/		October	Year to date 1/	
	1990	1990	1989	1990	1990	1989
Blast furnaces.....	5,626	57,197	55,499	4,239	41,856	42,954
Steel furnaces.....	5	73	269	--	--	--
Agglomerating plants 3/.....	571	4,721	6,419	--	--	--
Miscellaneous 4/.....	152	181	4	--	--	--
Total 2/.....	6,354	62,173	62,191	4,239	41,856	42,954

1/ May include revisions for previous months.

2/ Data may not add to totals shown because of independent rounding.

3/ Iron ore and iron ore concentrates consumed in agglomerating plants not located at the mine site.

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

Source: American Iron Ore Association (consumption of iron ore).

American Iron and Steel Institute (production of pig iron).

Table 5. - U.S. exports of iron ore and agglomerates, by country of destination
(Thousand metric tons)

Period	Canada	Mexico	Other	Total 1/	
				1990	1989
1989.....	5,359	(2/)	6	--	5,365
1990:					
1st Quarter.....	352	(2/)	1	353	348
2nd Quarter.....	1,811	1	(2/)	1,813	1,991
3rd Quarter.....	774	(2/)	(2/)	774	1,700
October.....	85	--	(2/)	85	527

1/ Data may not add to totals shown because of independent rounding.

2/ Less than one-half unit.

Source: Bureau of the Census data reported under heading 2601 of the export classification system (Schedule B).

Table 6. - U.S. exports of iron ore and agglomerates, by type
(Thousand metric tons)

Period	Pellets	Concentrates	Direct shipping ores	Other	Total 1/
1989.....	4,852	353	145	16	5,365
1990:					
1st Quarter.....	296	3	2	52	353
2nd Quarter.....	1,704	2	8	99	1,813
3rd Quarter.....	770	2	2	1	774
October.....	80	1	3	1	85

1/ Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census data reported under heading 2601 of the export classification system (Schedule B).

Table 7. - U.S. imports for consumption of iron ore and agglomerates, by country
(Exclusive of ore containing 20% or more manganese)

Country of origin	October 1990		Year to date 1990			Year to date 1989 (thousand metric tons)
	Thousand metric tons	Value 1/ (thousand dollars)	Thousand metric tons	Value 1/ (thousand dollars)	Value 1/ (dollars per ton)	
Australia.....	--	--	14	584	42.14	329
Brazil.....	427	7,750	3,876	82,108	21.18	4,554
Canada.....	991	35,799	2/7,167	2/261,169	2/36.44	7,002
Chile.....	86	1,807	138	2,905	21.00	61
India.....	--	--	--	--	--	59
Liberia.....	--	--	--	--	--	200
Mauritania.....	134	2,805	544	11,597	21.31	526
Norway.....	--	--	--	--	--	40
Peru.....	22	614	2/59	2/1,632	2/27.56	121
Philippines 3/.....	--	--	--	--	--	66
Spain.....	(4/)	7	(4/)	27	72.66	--
Sweden.....	--	--	54	2,273	42.28	--
Venezuela.....	350	11,106	2/2,804	2/85,207	2/30.39	3,725
Other.....	2/(4/)	2/11	2/(4/)	2/24	2/183.97	(4/)
Total 5/.....	2,010	59,898	14,656	447,525	6/30.53	16,683

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

2/ All or part being questioned.

3/ Sinter made from raw materials supplied by Australia, Brazil, and other countries.

4/ Less than one-half unit.

5/ Data may not add to totals shown because of independent rounding. Unit values shown above are calculated from unrounded data.

6/ Weighted average calculated from unrounded data by dividing total value by total tonnage.

Source: Bureau of the Census data reported under heading 2601 of the Harmonized
Tariff Schedules of the United States.

Table 8. - U.S. imports for consumption of iron ore and agglomerates, by type
(Exclusive of ore containing 20% or more manganese)

Type of product	October 1990		Year to date 1990			Year to date 1989 (thousand metric tons)
	Thousand metric tons	Value 1/ (thousand dollars)	Thousand metric tons	Value 1/ (thousand dollars)	Value 1/ (dollars per ton)	
Concentrates.....	28	751	136	4,099	30.19	314
Coarse ores.....	119	2,757	439	11,134	25.34	546
Fine ores.....	699	13,443	7,235	189,006	26.13	r/9,662
Pellets.....	1,086	40,085	6,740	239,365	35.51	4,867
Briquettes.....	77	2,849	2/107	2/3,896	2/36.54	--
Other						
agglomerates.....	(3/)	14	(3/)	14	132.20	r/1,174
Roasted pyrites.....	--	--	2/(3/)	2/10	2/1,475.43	121
Total 4/.....	2,010	59,898	14,656	447,525	5/30.53	16,683

r/ Revised.

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

2/ All or part being questioned.

3/ Less than one-half unit.

4/ Data may not add to totals shown because of independent rounding. Unit values shown above are calculated from unrounded data.

5/ Weighted average calculated from unrounded data by dividing total value by total tonnage.

Source: Bureau of the Census data reported under heading 2601 of the Harmonized Tariff Schedules of the United States.

Table 9. - U.S. imports for consumption for iron ore and agglomerates
in October 1990
(Exclusive of ore containing 20% or more manganese)
(Thousand metric tons)

Country of origin	Type of Product						Total 1/
	Concentrates	Coarse ores	Fine ores	Pellets	Briquettes and other agglomerates	Roasted pyrites	
Brazil.....	--	--	427	--	--	--	427
Canada.....	28	--	--	886	77	--	991
Chile.....	--	--	86	--	--	--	86
Mauritania.....	--	--	134	--	--	--	134
Peru.....	--	--	--	22	--	--	22
Spain.....	--	--	(2/)	--	--	--	(2/)
Venezuela.....	--	119	53	178	--	--	350
Other.....	--	--	--	--	3/(2/)	--	3/(2/)
Total 1/.....	28	119	699	1,086	77	--	2,010

1/ Data may not add to totals shown because of independent rounding.

2/ Less than one-half unit.

3/ Being questioned.

Source: Bureau of the Census data reported under heading 2601 of the Harmonized
Tariff Schedules of the United States.

Table 10. - U.S. imports for consumption of pellets, by country

Country of origin	October 1990		Year to date 1990			Year to date 1989
	Thousand metric tons	Value 1/ (thousand dollars)	Thousand metric tons	Value 1/ (thousand dollars)	Value 1/ (dollars per ton)	(thousand metric tons)
Brazil.....	--	--	488	14,351	29.41	372
Canada.....	886	32,196	4,843	178,052	36.77	2,646
India.....	--	--	--	--	--	59
Peru.....	22	614	59	1,621	27.39	95
Venezuela.....	178	7,274	1,350	45,340	33.59	1,695
Other.....	--	--	--	--	--	r/--
Total 2/.....	1,086	40,085	6,740	239,365	3/35.51	4,867

r/ Revised.

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

2/ Data may not add to totals shown because of independent rounding. Unit values shown above are
calculated from unrounded data.

3/ Weighted average calculated from unrounded data by dividing total value by total tonnage.

Source: Bureau of the Census data reported under item 2601.12.00.30 of the
Harmonized Tariff Schedules of the United States.

Table 11. - U.S. imports for consumption of iron ore and agglomerates,
by customs district
(Exclusive of ore containing 20% or more manganese)
(Thousand metric tons)

Customs district	October 1990	Year to date	
		1990	1989
Baltimore (13).....	444	3,030	5,231
Charleston, SC (16).....	45	497	413
Chicago (39).....	295	1,338	2,556
Cleveland (41).....	184	1,410	1,218
Detroit (38).....	53	873	524
Houston-Galveston (53)....	--	(1/)	(1/)
Laredo (23).....	--	10	--
Los Angeles (27).....	(1/)	(1/)	(1/)
Mobile (19).....	239	2,593	1,641
New Orleans (20).....	337	1,618	1,583
New York (10).....	(1/)	(1/)	(1/)
Ogdensburg, NY (07).....	(1/)	1	4
Philadelphia (11).....	412	3,285	3,514
San Francisco (28).....	--	--	(1/)
San Juan, PR (49).....	(1/)	(1/)	--
Other.....	(1/)	(1/)	--
Total 2/.....	2,010	14,656	16,683

1/ Less than one-half unit.

2/ Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census data reported under item 2601 of the
Harmonized Tariff Schedules of the United States.

Table 12. - U.S. imports for consumption of pellets, by customs district
(Thousand metric tons)

Customs district	October 1990	Year to date	
		1990	1989
Baltimore (13).....	244	863	688
Charleston (16).....	45	449	305
Chicago (39).....	106	332	694
Cleveland (41).....	106	649	369
Detroit (38).....	52	328	--
Laredo (23).....	--	10	--
Mobile (19).....	239	1,316	--
Philadelphia (11).....	293	2,792	2,812
Total 1/.....	1,086	6,740	4,867

1/ Data may not add to shown totals because of independent rounding.

Source: Bureau of the Census data reported under item 2601.12.00.30
of the Harmonized Tariff Schedules of the United States.