

Mineral Industry Surveys

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IRON ORE IN AUGUST 2004

U.S. mine production of iron ore in August 2004, on a daily average basis, was 9% lower than that of the prior month, according to the U.S. Geological Survey. Average daily production was 145,000 metric tons per day (t/d), almost 15,000 t/d less than in July 2004.

Shipments on a daily basis were more than 2% higher compared with those of July 2004. Mine stocks at the end of August 2004 were almost 21% lower than the corresponding stock figures at the end of the previous month.

U.S. imports of iron ore in July 2004 exceeded exports by 175,000 metric tons.

Exploration and Development.—Strong markets for iron ore have led to an increased interest in mine development.

Australia's BHP Billiton Limited (BHPB) and Japan's JFE Steel Corp. formed a joint venture to develop the Western 4 deposit at BHPB's Yandi Mine. This 109-million-metric-ton (Mt) deposit of pisolitic ore is located in Western Australia's Pilbara region. The joint venture will become effective in July 2005 with the following ownership structure—BHPB (68%), JFE (20%), Itochu Minerals & Energy of Australia (6.4%), and Mitsui Iron Ore Corp. (5.6%). In addition, JFE agreed to increase its receipts of iron ore from 12.5 million metric tons per year (Mt/yr) to 16 Mt/yr beginning in April 2005 (Clarke and McCulloch, 2004).

Fortescue Metals Group Ltd. of West Perth, Western Australia, announced a binding agreement with China Railway Engineering Corporation to build and finance the rail component of Fortescue's A\$1.85 billion Pilbara iron ore project (Fortescue Metals Group Limited, 2004¹). The major project parameters include a memorandum of intent from a Chinese mill to purchase 10 Mt/yr of iron ore and a decision to develop the near-surface Christmas Creek iron ore deposits located closer to northern port facilities (Kirk, 2004).

Domestic Production Update.—On August 13, Cleveland-Cliffs Inc. announced plans to expand production at its United Taconite Mine and pellet plant in Minnesota. The plant

expansion, the first in the Mesabi iron range since the 1970s, would increase production capacity by about 40% over the next 2 years. United Taconite is jointly owned by Cliffs (70%) and China's Laiwu Steel Group (30%) (Skillings Mining Review, 2004).

World Production.—Labor strikes at iron ore operations in Canada began in early July and continued through the summer months and into the fall. In spite of reaching agreement with union representatives in early September, Iron Ore Company of Canada did not have a ratified agreement on a 3-year contract until the end of the month, after a 10-week strike. At Wabush Mines in eastern Canada, a 5-year contract was ratified by the Steelworkers Union in mid-October (Sacco, 2004a, b).

Companhia Vale do Rio Doce (CVRD), the world's leading iron ore producer, achieved record production at all three of its production areas in the second quarter of 2004. Production in the Southern System increased by 10.5% compared with that of the first quarter; at Carajás, despite beneficiation problems, production improved by 12.2%; and at CVRD's Caemi subsidiary production increased by a record 12.3% (Mining Journal, 2004).

According to Rudprom, an association of Russian iron ore producers, Russia increased its iron ore exports by 16.5% in the first half of 2004 compared with those of the same period for 2003. These exports included 4.3 Mt of concentrates and 4.6 Mt of pellets with over 80% of these exports going to countries outside the Commonwealth of Independent States (Metal Bulletin, 2004).

Transportation.—Shipments of 5.8 Mt of iron ore made August another strong month for iron ore trade on the Great Lakes. This was an increase of 16.5% compared with the year-to-date figures for transport from Upper Lakes ports and Canadian Seaway terminals to Lower Lakes ports in 2003. This comparison with 2003 data indicates the dynamic change in the U.S. iron ore industry over the past year, but a better long-term indicator is a 3.1% increase in Lake transport, comparing August 2004 year-to-date data with average year-to-date figures for the past 5 years (Lake Carriers' Association, 2004).

¹A reference that includes a section mark (§) is found in the Internet Reference Cited section.

References Cited

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TABLE 1
U.S. PRODUCTION AND SHIPMENTS OF IRON ORE^{1,2}
(Exclusive of ore containing 5% or more of manganese)

(Thousand metric tons)

Period	Production		Shipments	
	Monthly	Year to date	Monthly	Year to date
2003:				
August	3,950	32,500	4,330	29,600
September	3,870	36,400	4,220	33,800
October	4,190	40,600	4,370	38,200
November	4,140	44,700	4,540	42,700
December	3,740	48,500	5,170	47,900
2004:				
January	4,270	4,270	3,920	3,920
February	4,230	8,500	1,190	5,100
March	4,130	12,600	2,710	7,810
April	4,630	17,300	5,260	13,100
May	4,800	22,100	5,300	18,400
June	4,470	26,500	5,880	24,200
July	4,950	31,500	5,550	29,800
August	4,500	36,000	5,670	35,500

¹Data are rounded to no more than three significant digits.

²Excludes byproduct ores.

TABLE 2
U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF IRON ORE IN AUGUST^{1,2}

(Thousand metric tons)

State	Production		Shipments ³		Stocks ⁴	
	2004	2003	2004	2003	2004	2003
Michigan	1,260	1,350	1,150	1,110	1,700	1,540
Minnesota	3,240	2,590	4,520	3,220	2,800	4,620
Total	4,500	3,950	5,670	4,330	4,500	6,160

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Excludes byproduct ore.

³Includes rail and vessel.

⁴Includes mines, plants, and loading docks.

TABLE 3
CANADA: SHIPMENTS OF IRON ORE¹

(Thousand dry metric tons)

Period	Newfoundland	Quebec	British	Total
			Columbia	
2003:				
July	2,140	1,460	8	3,610
August	1,530	1,100	6	2,630
September	1,710	1,240	7	2,950
October	2,080	1,500	6	3,580
November	2,260	1,190	5	3,450
December	1,740	1,060	6	2,800
Year total	19,800	13,300	69	33,200
2004:				
January	1,150	839	5	1,990
February	1,070	589	7	1,660
March	1,250	1,030	6	2,290
April	1,650 ^r	858	5	2,520 ^r
May	1,920 ^r	1,740	7	3,660 ^r
June	1,970 ^r	981	8	2,960 ^r
July	1,710	1,380	10	3,110

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Natural Resources Canada.

TABLE 4
CONSUMPTION AND STOCKS OF IRON ORE AND BLAST FURNACE PRODUCTION OF
HOT METAL AT U.S. IRON AND STEEL PLANTS^{1,2,3}

(Thousand metric tons)

Consumption by source	Consumption of ores and agglomerates, January ³			
	2004	2003		
United States ores	4,670	3,780		
Canadian ores	401	428		
Foreign ores	439	707		
Total	5,510	4,920		
Consumption by process	Consumption of ores and agglomerates, January 31 ³			
Blast furnaces	5,010	4,370		
Steel furnaces	3	39		
Agglomerating plants ⁴	492	510		
Miscellaneous ⁵	--	--		
Total	5,510	4,920		
Storage point	Stocks of ores and agglomerates, January 31 ³			
Furnace yards	NA	11,100		
Receiving/transfer docks	NA	1,430		
Total consumer	11,700	12,600		
Blast furnace production of hot metal				
	August		January-August	
	2004	2003	2004	2003
Hot metal and pig iron produced in blast furnaces	3,480	2,950	27,200	26,300
No. of blast furnaces operating on the last day of the month	NA	30	XX	XX

NA Not available. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes agglomerates.

³Data after January 2004 is not available at the time of publication.

⁴Iron ore and iron ore concentrates consumed in agglomerating plants not located at the mine or

⁵Sold to nonreporting companies or used for purposes not listed.

Sources: American Iron Ore Association (consumption of iron ore 2003) and American Iron and Steel Institute (production of hot metal and pig iron).

TABLE 5
U.S. EXPORTS OF IRON ORE, BY COUNTRY OF DESTINATION AND TYPE^{1,2}

(Thousand metric tons)

Country of destination and type of product	2003	2004		
	July	1st quarter	2nd quarter	July
Canada	723	958	2,860	913
China	--	59	83	71
Mexico	(3)	1	(3)	(3)
Slovakia	--	--	53	108
Yugoslavia	--	--	52	--
Other	1	1	1	(3)
Total	724	1,020	3,050	1,090
Pellets	719	1,020	2,960	1,020
Concentrates	--	2	19	1
Direct shipping ores	--	(3)	65	75
Other	5	1	2	(3)
Total	724	1,020	3,050	1,090

--Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes agglomerates.

³Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE, BY COUNTRY AND TYPE^{1,2}
(Exclusive of ore containing 20% or more manganese)

Country of origin and type of product	2004					2003
	July		Year to date			January-July Thousand metric tons
	Thousand metric tons	Value ³ (thousand dollars)	Thousand metric tons	Value ³ (thousand dollars)	Value ³ (dollars per ton)	
Australia	--	--	(4)	24	54.15	128
Brazil	477	15,500	2,930	80,600	27.51	2,940
Canada	675	21,300	3,460	114,000	32.91	3,480
Chile	--	--	107	2,810	26.23	178
Finland	4	142	8	332	42.57	9
Mexico	--	--	26	548	20.88	24
Norway	--	--	--	--	--	4
Peru	17	298	32	578	18.05	29
South Africa	--	--	104	4,100	39.29	--
Spain	--	--	(4)	3	39.91	--
Sweden	60	1,930	60	1,930	32.46	--
Venezuela	35 ⁵	9,680	56	10,500	188.39	21
Total	1,270	48,900	6,790	215,000	31.74	6,810
Concentrates	79	2,020	485	11,100	22.89	498
Coarse ores	4	142	4	153	39.43	24
Fine ores	192	3,920	1,640	37,000	22.52	1,260
Pellets	928	32,400	4,560	156,000	34.11	4,730
Briquettes	35 ⁵	9,680	56	10,500	188.39	--
Other agglomerates	30	725	30	728	24.47	293
Roasted pyrites	(4)	14	4	207	48.83	7
Total	1,270	48,900	6,790	215,000	31.74	6,810

-- Zero.

¹Data, with the exception of the dollars per ton column, are rounded to no more than three significant digits; may not add to totals shown.

²Includes agglomerates.

³Customs value. Excludes international freight and insurance charges.

⁴Less than 1/2 unit.

⁵May include hot-briquetted iron, direct-reduced iron, or other specialty product.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE IN JULY 2004^{1,2}
(Exclusive of ore containing 20% or more manganese)

(Thousand metric tons)

Country of origin	Type of product						Total
	Concentrates	Coarse ores	Fine ores	Pellets	Briquettes and other agglomerates	Roasted pyrites	
Brazil	--	--	123	354	--	--	477
Canada	43	--	28	574	30	--	675
Finland	--	4	--	--	--	--	4
Peru	--	--	17	--	--	(3)	17
Sweden	36	--	23	--	--	--	60
Venezuela	--	--	--	--	35	--	35
Total	79	4	192	928	65	(3)	1,270

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes agglomerates.

³Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF PELLETS, BY COUNTRY¹

Country of origin	2004					2003
	July		Year to date			January-July
	Thousand metric tons	Value ² (thousand dollars)	Thousand metric tons	Value ² (thousand dollars)	Value ² (dollars per ton)	Thousand metric tons
Brazil	354	12,900	1,680	55,600	33.08	1,750
Canada	574	19,600	2,880	100,000	34.71	2,970
Total	928	32,400	4,560	156,000	34.11	4,730

¹Data, with the exception of the dollars per ton column, are rounded to no more than three significant digits; may not add to totals shown.

²Customs value. Excludes international freight and insurance charges.

Source: U.S. Census Bureau.

TABLE 9
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE,
BY CUSTOMS DISTRICT^{1,2}
(Exclusive of ore containing 20% or more manganese)

(Thousand metric tons)

Customs district (code no.)	July	January-July	
	2004	2004	2003
Baltimore, MD (13)	317	2,290	2,040
Buffalo, NY (09)	--	3	3
Charleston, SC (16)	(3)	(3)	106
Chicago, IL (39)	178	481	452
Cleveland, OH (41)	338	1,470	1,680
Detroit, MI (38)	--	99	99
Great Falls, MT (33)	--	(3)	--
Houston - Galveston, TX (53)	--	28	37
Los Angeles, CA (27)	--	--	(3)
Mobile, AL (19)	60	80	63
New Orleans, LA (20)	375	2,330	2,300
Nogales, AZ (26)	--	(3)	--
Ogdensburg, NY (07)	--	--	1
Philadelphia, PA (11)	--	4	28
Total	1,270	6,790	6,810

-- Zero.

¹Data are rounded to no more than three significant digits;
may not add to totals shown.

²Includes agglomerates.

³Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 10
U.S. IMPORTS FOR CONSUMPTION OF PELLETS,
BY CUSTOMS DISTRICT¹

(Thousand metric tons)

Customs district (code no.)	July	January-July	
	2004	2004	2003
Baltimore, MD (13)	181	922	682
Charleston, SC (16)	--	--	105
Chicago, IL (39)	55	142	--
Cleveland, OH (41)	338	1,430	1,680
Detroit, MI (38)	--	99	99
Houston-Galveston, TX (53)	--	28	37
Mobile, AL (19)	--	--	59
New Orleans, LA (20)	354	1,940	2,070
Total	928	4,560	4,730

-- Zero.

¹Data are rounded to no more than three significant digits;
may not add to totals shown.

Source: U.S. Census Bureau.