

# Mineral Industry Surveys

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## IRON ORE IN JULY 2006

U.S. mine production of iron ore in July 2006, on a daily average basis, was 2% more than that of the prior month, according to the U.S. Geological Survey. Average daily production, at 152,000 metric tons per day (t/d), was 3,400 t/d more than that of June 2006.

Average daily shipments in July 2006, at 177,000 t/d, were 4% greater than those of June. Mine stocks at the end of July were 787,000 metric tons (t) less than those held on June 30, an 8% decrease.

U.S. imports of iron ore in June 2006 were one-third greater than exports, with imports exceeding exports by 286,000 t.

**Exploration and Development Update.**—Cotton & Western Mining, Inc. of Richmond, TX, announced that it had reached agreement to acquire mineral rights to 76 million metric tons (Mt) of magnetite, known as the Pacific Pearl deposits. These deposits are located in the Province of Bulacan, on the island of Luzon, the Philippines. Mine planning, environmental impact studies, land and water usage plans, and mine permit applications were all being expedited with operations and shipment possible as early as November (Skillings Mining Review, 2006).

Minnesota Steel Industries, LLC (See Iron Ore in May 2006.) entered into an agreement with Hylsa, S.A. de C.V. (Mexico) and Danieli & C. Officine Meccaniche S.p.A. (Italy) to construct a 1.86-million-metric-ton-per-year (Mt/yr) direct reduced iron (DRI) facility and a 1.68-Mt/yr steel slab facility. The agreement was valued at approximately \$600 million, and construction was anticipated to begin in early 2007 (Minnesota Steel Industries, LLC, 2006<sup>1</sup>).

Brazil's Companhia Vale do Rio Doce (CVRD) expected to bring on stream a new hematite and itabirite mine in early August. The Brucutu Mine, originally planned for 24-Mt/yr capacity, is now designed for 30 Mt/yr and should reach full capacity during 2007. The project, in the Brazilian State of

Minas Gerais, was expected to cost \$1.2 billion when completed (Kinch, 2006).

**World Production.**—It was reported that China's iron ore production reached 246 Mt in the first half of 2006, up 35% from that of the first half of the previous year. Steel product exports rose 48% during the same period (Interactive Investor, 2006§).

**Domestic Production.**—Mittal Steel USA loaded 24,500 t of pelletized iron ore from the Hibbing Taconite Mine at the Allouez dock in Superior, WI, for shipment to Algeria. The shipment aboard a 730-foot vessel, the maximum size capable of passing the Welland Canal, was a test of loading capability in Superior and unloading capability at Annaba, Algeria, as well as the compatibility of the Hibbing Taconite ores with the Annaba blast furnace (DuluthNewsTribune.com, 2006§).

**Transportation.**—Iron ore loaded over the life of the Upper Harbor ore dock in Marquette, MI, exceeded 400 million long tons (406 Mt) of iron ore. The dock, completed in 1912, loaded 8.0 Mt of iron ore pellets in 2005 compared with 2.2 Mt of direct shipping lump ore in its first year of operation (Mining Journal, The, 2006§).

## References Cited

Kinch, Diane, 2006, CVRD upgrades capacity of new Brucutu mine: Metal Bulletin, no. 8955, July 31, p. 22.  
Skillings Mining Review, 2006, Texas company acquires Philippine iron ore mineral rights: Skillings Mining Review, v. 95, no. 8, August, p. 10.

## Internet References Cited

DuluthNewsTribune.com, 2006 (July 14), Iron Range ore headed overseas, accessed July 17, 2006, via URL <http://www.duluthsuperior.com>.  
Interactive Investor, 2006 (July 23), China H1 iron ore imports up 22.9 pct at 161.36 mln tons, accessed July 27, 2006, via URL <http://www.iii.co.uk>.  
Mining Journal, The, 2006 (July 27), Ore milestone dock ships 400 millionth ton, accessed July 28, 2006, via URL <http://www.miningjournal.net>.  
Minnesota Steel Industries, LLC, 2006 (July 19), Minnesota Steel enters into exclusive, \$600 million agreement for DRI/steel plant, accessed October 27, 2006, via URL <http://www.minnesotasteel.com>.

<sup>1</sup>References that include a section mark (§) are found in the Internet References Cited section.

TABLE 1  
U.S. PRODUCTION AND SHIPMENTS OF IRON ORE<sup>1,2</sup>  
(Exclusive of ore containing 5% or more of manganese)

(Thousand metric tons)

Period	Production		Shipments	
	Monthly	Year to date	Monthly	Year to date
2005:				
July	5,160	31,600	5,110	27,200
August	4,840	36,500	5,020	32,200
September	4,460	40,900	5,150	37,400
October	4,480	45,400	5,190	42,600
November	4,740	50,200	4,330	46,900
December	4,380	54,500	4,880	51,800
2006:				
January	4,600	4,600	3,600	3,600
February	3,820	8,420	953	4,550
March	4,600	13,000	2,330	6,880
April	4,220	17,200	5,020	11,900
May	4,750	22,000	5,020	16,900
June	4,450	26,400	5,120	22,000
July	4,710	31,100	5,490	27,500

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Excludes byproduct ores.

TABLE 2  
U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF IRON ORE IN JULY<sup>1,2</sup>

(Thousand metric tons)

State	Production		Shipments <sup>3</sup>		Stocks <sup>4</sup>	
	2006	2005	2006	2005	2006	2005
Michigan	821	1,340	1,060	1,250	2,260	2,100
Minnesota	3,890	3,820	4,430	3,860	7,090	5,320
Total	4,710	5,160	5,490	5,110	9,350	7,420

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

<sup>2</sup>Excludes byproduct ore.

<sup>3</sup>Includes rail and vessel.

<sup>4</sup>Includes usable (marketable) material at mines, concentrators, pelletizing plants, and loading docks. Excludes stocks of crude ore at mine and concentrates at agglomerating complexes.

TABLE 3  
CANADA: SHIPMENTS OF IRON ORE<sup>1,2</sup>

(Thousand dry metric tons)

Period	Newfoundland and Labrador	Quebec	British Columbia	Total
<b>2005:</b>				
June	1,620	399	8	2,030
July	1,500	1,050	7	2,550
August	1,430	708	10	2,150
September	1,800	1,160	9	2,960
October	2,000	927	10	2,930
November	1,920	1,320	10	3,250
December	1,900	1,130	9	3,040
Year total	19,100	10,900	106	30,100
<b>2006:</b>				
January	1,010	705	10	1,720
February	951	730	10	1,690
March	1,210	730	7	1,950
April	1,840	1,170	8	3,030
May	1,670	1,610	12	3,280
June	1,550	1,180	10	2,740

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

<sup>2</sup>Includes production from steel plant waste oxides.

Source: Natural Resources Canada.

TABLE 4  
PRODUCTION OF PIG IRON AND RAW STEEL IN THE UNITED STATES, BY TYPE OF  
FURNACE<sup>1</sup>

(Thousand metric tons)

Period	Pig iron production, blast furnace		Raw steel production			
	Monthly	Year to date	Basic oxygen furnace <sup>2</sup>		Electric furnace	
	Monthly	Year to date	Monthly	Year to date	Monthly	Year to date
<b>2005:</b>						
May	3,080	16,500	3,430	18,600	4,320	21,200
June	2,690	19,200	3,000	21,600	4,110	25,300
July	2,630	21,800	2,920	24,500	4,210	29,500
August	2,890	24,700	3,180	27,700	4,370	33,900
September	2,840	27,500	3,330	31,000	4,440	38,400
October	2,940	30,500	3,470	34,500	4,810	43,200
November	3,000	33,500	3,170	37,700	4,660	47,800
December	2,840	36,300	3,380	41,000	4,420	52,300
<b>2006:</b>						
January	3,190	3,190	3,560	3,560	4,530	4,530
February	3,100	6,300	3,470	7,030	4,250	8,780
March	3,420	9,710	3,800	10,800	5,070	13,900
April	3,280	13,000	3,640	14,500	4,870	18,700
May	3,460	16,500	3,850	18,300	5,060	23,800
June	3,330	19,800	3,790	22,100	4,790	28,600

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

<sup>2</sup>Raw steel production figures for the basic oxygen process are usually greater than the corresponding pig iron production figures because scrap is routinely melted in the basic oxygen furnace together with the molten pig iron.

Source: American Iron and Steel Institute.

TABLE 5  
U.S. EXPORTS OF IRON ORE, BY COUNTRY OF DESTINATION AND TYPE<sup>1,2</sup>

(Thousand metric tons)

Country of destination and type of product	2005	2006				2nd quarter
		1st quarter	April	May	June	
Canada	11,200	998	579	966	822	2,370
China	282	--	52	47	(3)	100
Mexico	30	13	(3)	11	(3)	11
Slovakia	237	--	--	--	--	--
Trinidad and Tobago	(3)	--	--	--	--	--
United Kingdom	78	--	--	--	--	--
Other	8	2	(3)	4	1	6
<b>Total</b>	<b>11,800</b>	<b>1,010</b>	<b>631</b>	<b>1,030</b>	<b>823</b>	<b>2,480</b>
Pellets	11,600	925	628	972	816	2,420
Concentrates	89	2	(3)	52	1	53
Direct shipping ores	60	2	1	3	4	8
Other	11	83	2	2	2	5
<b>Total</b>	<b>11,800</b>	<b>1,010</b>	<b>631</b>	<b>1,030</b>	<b>823</b>	<b>2,480</b>

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown

<sup>2</sup>Includes agglomerates.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

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

Country of origin and type of product	2006					2005
	June		Year to date			January-June
	Thousand metric tons	Value <sup>3</sup> (thousand dollars)	Thousand metric tons	Value <sup>3</sup> (thousand dollars)	Value <sup>3</sup> (dollars per ton)	Thousand metric tons
Australia	--	--	8	135	16.88	--
Brazil	388	20,700	2,120	104,000	48.95	2,120
Canada	720	44,600	2,800	165,000	58.72	2,330
Chile	--	--	142	6,330	44.58	221
China	--	--	--	--	--	(4)
Finland	--	--	3	106	35.33	6
Greece	--	--	15	386	25.73	13
India	(4)	6	(4)	6	5,607.00	--
Mexico	1	22	7	163	23.29	7
Paraguay	--	--	--	--	--	4
Peru	--	--	38	1,210	31.71	18
Russia	--	--	--	--	--	99
Spain	--	--	--	--	--	1
Sweden	--	--	(4)	6	342.88	--
Trinidad and Tobago	--	--	284	5,900	20.79	375
Venezuela	--	--	--	--	--	87
Total	1,110	65,300	5,420	283,000	52.14	5,280
Concentrates	176	7,980	1,070	38,900	36.50	338
Coarse ores	--	--	--	--	--	21
Fine ores	121	5,240	1,540	62,900	40.86	1,900
Pellets	811	52,000	2,810	181,000	64.36	2,960
Other agglomerates	1	22	7	163	23.29	63
Roasted pyrites	(4)	6	3	111	37.09	3
Total	1,110	65,300	5,420	283,000	52.14	5,280

-- Zero.

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

<sup>2</sup>Includes agglomerates.

<sup>3</sup>Customs value. Excludes international freight and insurance charges.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE IN JUNE 2006<sup>1,2</sup>  
(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	120	--	121	147	--	--	388
Canada	56	--	--	664	--	--	720
India	--	--	--	--	--	(3)	(3)
Mexico	--	--	--	--	1	--	1
Total	176	--	121	811	1	(3)	1,110

-- Zero.

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

<sup>2</sup>Includes agglomerates.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8  
U.S. IMPORTS FOR CONSUMPTION OF PELLETS, BY COUNTRY<sup>1</sup>

Country of origin	2006					2005
	June		Year to date			January-June
	Thousand metric tons	Value <sup>2</sup> (thousand dollars)	Thousand metric tons	Value <sup>2</sup> (thousand dollars)	Value <sup>2</sup> (dollars per ton)	Thousand metric tons
Brazil	147	9,760	787	50,900	64.60	1,300
Canada	664	42,200	2,020	130,000	64.27	1,560
Russia	--	--	--	--	--	99
Total	811	52,000	2,810	181,000	64.36	2,960

-- Zero.

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

<sup>2</sup>Customs 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<sup>1, 2</sup>  
(Exclusive of ore containing 20% or more manganese)

(Thousand metric tons)

Customs district (code no.)	June	January-June	
	2006	2006	2005
Baltimore, MD (13)	421	2,060	1,290
Buffalo, NY (09)	(3)	(3)	6
Charleston, SC (16)	(3)	(3)	--
Chicago, IL (39)	185	579	429
Cleveland, OH (41)	330	1,040	877
Detroit, MI (38)	26	102	80
Houston-Galveston, TX (53)	--	15	36
Los Angeles, CA (27)	--	--	(3)
Mobile, AL (19)	--	5	61
New Orleans, LA (20)	147	1,600	2,480
Nogales, AZ (26)	1	14	7
Ogdensburg, NY (07)	--	(3)	--
Philadelphia, PA (11)	--	3	3
San Francisco, CA (28)	--	--	4
San Juan, PR (49)	--	--	6
St. Louis, MO (45)	--	(3)	--
Total	1,110	5,420	5,280

-- Zero.

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

<sup>2</sup>Includes agglomerates.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 10  
 U.S. IMPORTS FOR CONSUMPTION OF PELLETS,  
 BY CUSTOMS DISTRICT<sup>1</sup>

(Thousand metric tons)

Customs district (code no.)	June	January-June	
	2006	2006	2005
Baltimore, MD (13)	283	923	655
Chicago, IL (39)	26	26	53
Cleveland, OH (41)	330	1,040	876
Detroit, MI (38)	26	102	80
Houston-Galveston, TX (53)	--	--	36
Mobile, AL (19)	--	--	61
New Orleans, LA (20)	147	716	1,200
Total	811	2,810	2,960

-- Zero.

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

Source: U.S. Census Bureau.