

# Mineral Industry Surveys

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## IRON ORE IN AUGUST 2007

U.S. mine production of iron ore in August 2007, on a daily average basis, was 5% less than that for the prior month, according to the U.S. Geological Survey. Average daily production, at 144,000 metric tons (t), was 7,650 t less than that of July 2007.

Average daily shipments in August 2007, at 164,000 t, were 3,870 t less than those of July. Mine stocks at the end of August were 644,000 t less than the stocks held on July 31, a 7% decrease. U.S. exports of iron ore in July 2007 were 35% greater than imports, with net exports at 316,000 t.

**Prices.**—A shortage of fines for sintering drove the spot price of iron ore pellets sold to China by India up to as much as \$150 per metric ton—a week-on-week increase of 7%. A slight increase in price for fines mainly reflected the recent increase in freight costs owing to high demand for transport (Li, 2007).

**Exploration and Development.**—Chinese investment continued toward the goal of increased ownership of foreign iron ore sources by Chinese steelmakers. Shagang Group Co. Ltd. bought a 90% share in the Savage River Mine and plant from Stemcor Group (United Kingdom), owner of a 2.5-million-metric-ton-per-year (Mt/yr) iron ore mine and pelletizing facility in Tasmania, Australia. Based on recent feasibility studies, the mine's production life was extended from 2010 to 2023 with the subsequent production of an additional 30 million metric tons (Mt) of pellets over that period (Metal Bulletin, 2007).

CITIC Pacific Ltd., formerly part of the China International Trust and Investment Co., planned to develop a third 1,000-Mt iron ore project near Balmoral in the Pilbara region of Western Australia. The project is adjacent to Australasia Resources Ltd's \$2.1 billion Balmoral South iron ore project currently under development with partner Shougang Corp. CITIC, currently developing another iron ore deposit in the area, expected a cost of \$1.75 billion for 24 Mt/yr of capacity, including mine, rail, and port facilities, being built under contract with China Metallurgical Group Corp. (Mining Journal, 2007).

**North American Production.**—Cleveland-Cliffs Inc announced intentions to construct an iron nugget production facility at the Empire Mine in Palmer, MI. Production of 0.5 Mt/yr of high-purity iron nuggets containing more than 96%

iron was expected to start in 2010. The joint venture with Kobe Steel Ltd. was expected to take advantage of increasing demand by steel's growing minimill sector. It was anticipated that the construction of the nugget plant would extend the life of the Empire Mine (Cleveland-Cliffs Inc, 2007).

**Mergers and Acquisitions.**—Dofasco Inc., owned by ArcelorMittal SA, exercised the option to buy out the other two partners in the Wabush Mines joint venture—Stelco Inc. and Cleveland-Cliffs. Exercising this option, for over \$64 million plus certain existing liabilities, took precedence over the previous bid by Consolidated Thompson Iron Mines Ltd. to purchase the 71% stake in the joint venture. Wabush Mines has an annual capacity of 4.8 Mt/yr of iron ore pellets and includes a mine, pelletizing plant, port, and other ancillary facilities in Quebec, Canada (CBC News, 2007).

United States Steel Corporation agreed to pay about \$1.1 billion for Canada's Stelco, which owns the Lake Erie and Hamilton Works in Ontario, Canada, and joint venture interests in iron ore operations and a hot-dip galvanizing line. Stelco emerged from bankruptcy protection in 2006, reduced its workforce by 15%, and settled a new 4-year contract with the United Steelworkers' union. The deal was expected to close by yearend, following review by United States and Canadian regulators (United States Steel Corporation, 2007).

## References Cited

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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
2006:				
August	4,780	35,900	5,370	32,900
September	4,610	40,500	5,280	38,200
October	4,440	45,000	4,420	42,600
November	3,920	48,900	4,430	47,000
December	3,970	52,900	4,800	51,800
2007:				
January	4,260	4,260	2,810	2,810
February	3,350	7,620	574	3,390
March	3,800	11,400	2,110	5,490
April	4,330	15,700	5,150	10,600
May	4,740	20,500	5,450	16,100
June	4,610	25,100	5,120	21,200
July	4,690	29,800	5,210	26,400
August	4,450	34,200	5,090	31,500

<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 AUGUST<sup>1,2</sup>

(Thousand metric tons)

State	Production		Shipments <sup>3</sup>		Stocks <sup>4</sup>	
	2007	2006	2007	2006	2007	2006
Michigan	1,070	1,090	876	1,310	3,310	2,050
Minnesota	3,380	3,680	4,220	4,060	5,380	6,710
Total	4,450	4,780	5,090	5,370	8,700	8,760

<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>2006:</b>				
July	2,040	1,220	8	3,270
August	1,740	1,740	8	3,490
September	949	1,340	8	2,300
October	2,280	963	10	3,250
November	2,590	1,010	8	3,610
December	1,960	1,250	6	3,220
Year total	19,800	13,600	105	33,600
<b>2007:</b>				
January	609	616	5	1,230
February	874	571	6	1,450
March	1,030	867	8	1,910
April	1,210	1,450	5	2,660
May	1,720	1,650	8	3,380
June	1,650	1,310	7	2,960
July	2,070	1,340	7	3,420

<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
<b>2006:</b>						
July	3,210	23,000	3,660	25,800	4,800	33,400
August	3,200	26,200	3,620	29,400	4,840	38,200
September	3,220	29,400	3,670	33,100	4,750	43,000
October	3,090	32,500	3,460	36,500	4,640	47,600
November	2,780	35,300	3,080	39,600	4,330	51,900
December	2,640	37,900	2,860	42,500	4,180	56,100
<b>2007:</b>						
January	2,850	2,850	3,090	3,090	4,450	4,450
February	2,610	5,450	2,940	6,040	4,690	9,140
March	3,040	8,490	3,450	9,490	4,880	14,000
April	3,010	11,500	3,370	12,900	4,840	18,900
May	3,130	14,600	3,530	16,400	5,000	23,900
June	3,120	17,800	3,470	19,900	4,770	28,600
July	3,080	20,800	3,420	23,300	4,860	33,500

<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	2006	2007		
		1st quarter	2nd quarter	July
Algeria	340	--	213	138
Canada	7,610	885	2,360	719
China	100	1	286	342
Colombia	--	--	6	--
Mexico	215	1	1	12
Peru	--	--	5	(3)
Romania	--	--	87	--
Other	10	1	4	1
<b>Total</b>	<b>8,270</b>	<b>889</b>	<b>2,960</b>	<b>1,210</b>
Pellets	8,060	885	2,930	1,200
Concentrates	59	1	8 <sup>r</sup>	1
Briquettes	23	--	--	--
Sinter	77	(3)	(3)	(3)
Direct shipping ores - coarse	6	(3)	2 <sup>r</sup>	(3)
Direct shipping ores - fines	42	3	14	8
Roasted pyrites	1	(3)	(3)	--
<b>Total</b>	<b>8,270</b>	<b>889</b>	<b>2,960</b>	<b>1,210</b>

<sup>r</sup>Revised. -- 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	2007					2006
	July		Year to date <sup>3</sup>			January-July
	Thousand metric tons	Value <sup>4</sup> (thousand dollars)	Thousand metric tons	Value <sup>4</sup> (thousand dollars)	Value <sup>4</sup> (dollars per ton)	Thousand metric tons
Australia	--	--	--	--	--	8
Brazil	230	13,000	1,610	95,900	59.39	2,520
Canada	602	33,300	2,670	157,000	58.87	3,380
Chile	50	2,910	232	12,900	55.69	190
Finland	--	--	5	269	53.80	6
Greece	--	--	--	--	--	15
Greenland	--	--	(5)	3	197.65	--
India	--	--	--	--	--	(5)
Mexico	1	32	29	1,470	50.83	8
Norway	--	--	8	365	45.63	--
Peru	--	--	90	2,740	30.40	38
Sweden	13	1,530	70	3,940	56.30	(5)
Trinidad and Tobago	--	--	--	--	--	284
United Kingdom	--	--	(5)	25	213.64	(5)
Venezuela	--	--	--	--	--	23
<b>Total</b>	<b>897</b>	<b>50,800</b>	<b>4,720</b>	<b>275,000</b>	<b>58.24</b>	<b>6,470</b>
Concentrates	169	5,780	563	24,300	43.17	1,240
Coarse ores	13	1,520	95	4,690	49.33	--
Fine ores	138	7,020	843	38,500	45.64	1,680
Pellets	576	36,400	3,200	207,000	64.58	3,530
Other agglomerates	1	32	10	251	25.10	8
Roasted pyrites	--	--	7	339	48.43	6
<b>Total</b>	<b>897</b>	<b>50,800</b>	<b>4,720</b>	<b>275,000</b>	<b>58.24</b>	<b>6,470</b>

-- 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>Includes revisions to previous months' data.

<sup>4</sup>Customs value. Excludes international freight and insurance charges.

<sup>5</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE IN JULY 2007<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	27	--	138	65	--	--	230
Canada	92	--	--	510	--	--	602
Chile	50	--	--	--	--	--	50
Mexico	--	--	--	--	1	--	1
Sweden	(3)	13	--	--	--	--	13
<b>Total</b>	<b>169</b>	<b>13</b>	<b>138</b>	<b>576</b>	<b>1</b>	<b>--</b>	<b>897</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 8  
U.S. IMPORTS FOR CONSUMPTION OF PELLETS, BY COUNTRY<sup>1</sup>

Country of origin	2007					2006
	July		Year to date			January-July
	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	65	4,550	857	59,100	68.94	985
Canada	510	31,900	2,300	144,000	62.86	2,530
Mexico	--	--	19	1,220	64.37	--
Peru	--	--	9	404	44.89	--
Sweden	--	--	24	1,870	77.75	--
Venezuela	--	--	--	--	--	23
Total	576	36,400	3,200	207,000	64.58	3,530

-- 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.)	July	January-July	
	2007	2007	2006
Baltimore, MD (13)	211	1,420	2,280
Buffalo, NY (09)	--	--	(3)
Charleston, SC (16)	(3)	2	(3)
Chicago, IL (39)	149	469	742
Cleveland, OH (41)	408	1,570	1,450
Detroit, MI (38)	--	(3)	102
Houston-Galveston, TX (53)	--	38	50
Mobile, AL (19)	--	33	5
New Orleans, LA (20)	115	1,130	1,820
Nogales, AZ (26)	1	10	16
Ogdensburg, NY (07)	--	--	(3)
Philadelphia, PA (11)	--	5	6
Port Arthur, TX (21)	--	24	--
Providence, RI (05)	--	8	--
Savannah, GA (17)	--	(3)	--
St. Louis, MO (45)	--	--	(3)
Tampa, FL (18)	13	13	--
Total	897	4,720	6,470

-- 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.)	July	January-July	
	2007	2007	2006
Baltimore, MD (13)	73	613	997
Chicago, IL (39)	29	165	65
Cleveland, OH (41)	408	1,540	1,450
Detroit, MI (38)	--	(2)	102
Houston - Galveston, TX (53)	--	38	35
New Orleans, LA (20)	65	820	886
Port Arthur, TX (21)	--	24	--
Total	576	3,200	3,530

-- Zero.

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

<sup>2</sup>Less than ½ unit.

Source: U.S. Census Bureau.