

# Mineral Industry Surveys

## For information, contact:

John D. Jorgenson, Iron Ore Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4912, Fax: (703) 648-7757  
E-mail: jjorgenson@usgs.gov

Alan D. Ray (Data)  
Telephone: (703) 648-7938  
Fax: (703) 648-7792  
E-mail: aray@usgs.gov

**Internet:** <http://minerals.usgs.gov/minerals>

## IRON ORE IN JULY 2007

U.S. mine production and shipments of iron ore in July 2007, on a daily average basis, were slightly less than that for the prior month, according to the U.S. Geological Survey. Average daily production, at 151,000 metric tons (t), was 2,370 t less than that of June 2007. Average daily shipments in July 2007, at 168,000 t, were 2,540 t less than those of June.

Mine stocks at the end of July were 529,000 t less than the stocks held on June 30, a 5% decrease.

U.S. exports of iron ore in June 2007 were 9% greater than imports, with net exports at 81,000 t.

**Prices.**—In spite of iron ore price increases, continued rising costs have reduced margins at Rio Tinto plc (Australia). Global shortages of skilled labor, contractors, and materials have increased production costs in the booming resources industry (Bell and Wilson, 2007).

Forecasts by leading bankers indicate that iron ore prices may rise between 17.5% and 25% in the 2008 contract year. Chinese iron ore imports are expected to grow by 20% in the coming year, while domestic production is expected to slow. This would be the seventh straight year for price increases in the world iron ore market (Mining Journal, 2007b).

**Exploration and Development.**—Official contracts were signed by the Governments of Bolivia and Senegal for the development of large iron ore deposits in those countries. Bolivia signed a formal contract with India's Jindal Steel and Power Ltd. (JSPL) for the development of the Mutún iron ore deposit (See Iron Ore in August 2006.), a 450-megawatt natural gas-fired power plant, and a 1.7-million-metric-ton-per-year (Mt/yr) steel production complex. JSPL anticipated the production of 10 Mt/yr of iron ore pellets within 5 years from the development of the \$2.1 billion project (Garside, 2007).

The Senegalese Government signed a formal contract with ArcelorMittal SA to develop the Faleme iron ore project (See Iron Ore in February 2007.). ArcelorMittal planned to invest \$2.2 billion to develop an iron ore mine, construct a new port near Dakar, and build 750 kilometers of railroad to link the mine and port. At full production, the mine has been designed to produce 25 Mt/yr of high grade iron ore from 750 million metric tons of magnetite-hematite reserves contained in four deposits

(Mining Journal, 2007a).

**World Production.**—Chile's Compañía de Aceros del Pacífico S.A. approved an investment of \$637 million for a new iron ore mine and a new steel plant. The iron ore mine was expected to produce 4 Mt/yr of pellet feed. The projects were estimated to come on line in 2010 (Skillings Mining Review, 2007).

**Mergers and Acquisitions.**—MittalArcelor reached agreement to sell its Sparrows Point steel mill (Baltimore, MD) for an estimated \$1.35 billion, following a mandate by the U.S. Department of Justice (DOJ). Esmark Inc. (Chicago) formed a joint venture with Brazil's Companhia Vale do Rio Doce (CVRD) and Industrial Union of Donbass Corp. (Ukraine) for the purchase. DOJ had required the sale to alleviate antitrust concerns related to Mittal's acquisition of Arcelor in 2006 (Matthews, 2007).

Brazil's Companhia Siderúrgica Nacional (CSN) acquired Companhia de Fomento Mineral e Participações (CFM) for \$440 million. CFM's operations are located near CSN's principal iron ore asset, Casa de Pedra, and expand CSN's production capacity by 8 Mt/yr. Casa de Pedra is currently producing about 16 Mt/yr and planned to expand capacity to 53 Mt/yr (Metal Bulletin, 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:				
July	4,710	31,100	5,490	27,500
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

<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>	
	2007	2006	2007	2006	2007	2006
Michigan	1,100	821	876	1,060	3,120	2,260
Minnesota	3,580	3,890	4,340	4,430	6,230	7,090
Total	4,690	4,710	5,210	5,490	9,340	9,350

<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
2006:				
June	1,550	1,180	10	2,740
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
2007:				
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 <sup>r</sup>	1,650	8	3,380
June	1,650	1,310	7	2,960

<sup>r</sup>Revised.

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

<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
2006:						
June	3,330	19,800	3,790	22,100	4,790	28,600
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
2007:						
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

<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	April	May	June	2nd quarter
Algeria	340	--	88	49	76	213
Canada	7,610	885	736	941	681	2,360
China	100	1	73	108	104	285
Colombia	--	--	4	1	1	6
Mexico	215	1	(3)	1	(3)	1
Peru	--	--	--	--	5	5
Romania	--	--	--	--	87	87
Other	10	1	1	2	1	5
<b>Total</b>	<b>8,270</b>	<b>889</b>	<b>903</b>	<b>1,100</b>	<b>955</b>	<b>2,960</b>
Pellets	8,060	885	895	1,090	948	2,930
Concentrates	59	1	5	1	1	7
Briquettes	23	--	--	--	--	--
Sinter	77	(3)	(3)	(3)	(3)	(3)
Direct shipping ores - coarse	6	(3)	(3)	2	(3)	3
Direct shipping ores - fines	42	3	2	7	5	14
Roasted pyrites	1	(3)	(3)	--	(3)	(3)
<b>Total</b>	<b>8,270</b>	<b>889</b>	<b>903</b>	<b>1,100</b>	<b>955</b>	<b>2,960</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	2007					2006
	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
Brazil	125	6,280	1,380	82,900	59.88	2,120
Canada	658	40,100	2,070	124,000	59.90	2,800
Chile	50	2,930	183	10,000	54.69	142
Finland	3	145	5	269	53.80	3
Greece	--	--	--	--	--	15
Mexico	2	40	28	1,440	51.50	7
Norway	--	--	8	365	45.63	--
Peru	38	1,050	90	2,740	30.40	38
Sweden	(4)	17	57	2,410	42.30	(4)
Trinidad and Tobago	--	--	--	--	--	284
United Kingdom	--	--	(4)	25	213.64	--
Total	874	50,500	3,820	224,000	58.61	5,420
Concentrates	148	8,180	394	18,500	47.01	1,070
Coarse ores	--	--	82	3,160	38.57	--
Fine ores	133	5,320	705	31,500	44.61	1,540
Pellets	589	36,800	2,630	170,000	64.87	2,810
Other agglomerates	2	40	9	219	24.33	7
Roasted pyrites	3	145	7	339	48.43	3
Total	874	50,500	3,820	224,000	58.61	5,420

-- 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 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	--	70	27	--	--	125
Canada	71	--	25	562	--	--	658
Chile	50	--	--	--	--	--	50
Finland	--	--	--	--	--	3	3
Mexico	--	--	--	--	2	--	2
Peru	--	--	38	--	--	--	38
Sweden	(3)	--	--	--	--	--	(3)
Total	148	--	133	589	2	3	874

-- 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
	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	27	1,390	791	54,500	68.94	787
Canada	562	35,500	1,780	112,000	63.00	2,020
Mexico	--	--	19	1,220	64.37	--
Peru	--	--	9	404	44.89	--
Sweden	--	--	24	1,870	77.75	--
Total	589	36,800	2,630	170,000	64.87	2,810

-- 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	
	2007	2007	2006
Baltimore, MD (13)	288	1,210	2,060
Buffalo, NY (09)	--	--	(3)
Charleston, SC (16)	(3)	2	(3)
Chicago, IL (39)	140	320	579
Cleveland, OH (41)	355	1,160	1,040
Detroit, MI (38)	--	(3)	102
Houston-Galveston, TX (53)	--	38	15
Mobile, AL (19)	--	33	5
New Orleans, LA (20)	87	1,020	1,600
Nogales, AZ (26)	2	9	14
Ogdensburg, NY (07)	--	--	(3)
Philadelphia, PA (11)	3	5	3
Port Arthur, TX (21)	--	24	--
Providence, RI (05)	--	8	--
Savannah, GA (17)	(3)	(3)	--
St. Louis, MO (45)	--	--	(3)
Total	874	3,820	5,420

-- 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	
	2007	2007	2006
Baltimore, MD (13)	146	540	923
Chicago, IL (39)	88	136	26
Cleveland, OH (41)	355	1,140	1,040
Detroit, MI (38)	--	(2)	102
Houston - Galveston, TX (53)	--	38	--
New Orleans, LA (20)	--	754	716
Port Arthur, TX (21)	--	24	--
Total	589	2,630	2,810

-- 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.