

# Mineral Industry Surveys

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## IRON ORE IN FEBRUARY 2007

U.S. mine production of iron ore in February 2007, on a daily average basis, was 13% less than that of the revised figure for the prior month, according to the U.S. Geological Survey. Average daily production, at 120,000 metric tons per day (t/d), was 17,800 t/d less than that of January 2007.

Average daily shipments in February 2007, at 20,500 t/d, were 77% less than those of the revised figure for January. Mine stocks at the end of February were 2.8 million metric tons (Mt) greater than the revised stocks held on January 31, a 38% increase.

U.S. imports of iron ore in January 2007 were 14% less than exports, with net exports at 84,000 metric tons (t).

**Exploration and Development.**—The Arcelor Mittal Group signed agreements with the Senegalese Government to develop the Faleme iron ore project. Kumba Resources Limited had previously obtained the rights to conduct a prefeasibility study with an option to acquire an 80% interest in the project (See Iron Ore in July 2004.). The current agreement with Arcelor Mittal outlines a 15- to 25-million-metric-ton-per-year (Mt/yr) operation, a new port near Dakar, and a 750-kilometer railway linking the mine and the port. Iron ore resources are estimated at 750 Mt from four separate deposits with capital costs of \$2.2 billion and production starting in 2011 (Mining Journal, 2007a).

Australia's Sphere Investments Limited (See Iron Ore in October 2006.) announced the results of a prefeasibility study prepared on the Guelb el Aouj iron ore deposit in Mauritania by Golder Associates. Estimates of capital and operating costs were \$1.44 billion and \$30.33 per metric ton of pellet produced (including royalty), respectively. Proven and probable reserves at 25% iron cut-off were 178 Mt and 294 Mt, respectively—sufficient reserves for a 30-year mine life for a complex to include a 7-Mt/yr pelletizing plant (Mining Journal, 2007b).

Construction began on the Quy Sa Van Ban iron ore mine in Vietnam's Lao Cai Province. The Vietnam-China Minerals and Metallurgy Company scheduled to begin production at the mine in early 2008 at a rate of 1.5 to 3.0 Mt/yr. Plans were to also

build a steel plant in the Bao Thang district in 2008 (Skillings Mining Review, 2007).

**Domestic Development.**—Jiangshu Shagang Group Co. Ltd. (China) signed a letter of intent to purchase 50% of the Palladon Ventures Ltd. Iron Mountain project in Utah. (See Iron Ore in August 2006.) Shagang, the largest private steel company in China, planned to complete due diligence studies before finalizing the agreement (Palladon Ventures Ltd., 2007).

**World Production.**—India, in an attempt to conserve iron ore resources, imposed an export tax of 300 rupees (about \$6.66) per metric ton on all iron ore exported from the country effective March 1. The export tax appeared to be particularly onerous to low-grade ore producers who must pay the tax on a gross weight basis. Several large exporters with long-term contracts may need to absorb the additional costs envisioned by the new tax (Nair, 2007).

**Transportation.**—Rio Tinto plc announced an additional expansion to iron ore export capacity in Western Australia. The capacity of the port at Cape Lambert will be increased from 55 Mt/yr to 80 Mt/yr at a cost of \$860 million. Including the port upgrade, Rio Tinto's has invested \$5 billion in infrastructure development in the Pilbara since 2003 (Rio Tinto plc, 2007).

## References Cited

- Mining Journal, 2007a, Faleme awarded to Arcelor Mittal: Mining Journal, March 2, p. 10.
- Mining Journal, 2007b, Sphere moves on at Guelb el Aouj: Mining Journal, February 10, p. 10.
- Nair, Suresh, 2007, India imposes \$6 per tonne export duty on iron ore: Metal Bulletin, no. 8985, March 5, p. 25.
- Palladon Ventures Ltd., 2007 (February 27), Palladon Ventures Ltd. announces letter of intent for major Chinese steel concern to acquire Luxor Capital partners' interest in Iron Mountain project: Palladon Ventures Ltd. (Accessed May 11, 2007, via <http://www.palladonmining.com>.)
- Rio Tinto plc, 2007 (February 1), Rio Tinto continues iron ore port expansions with Cape Lambert approval: Rio Tinto plc, news release. (Accessed May 11, 2007, via <http://www.riotinto.com/media>.)
- Skillings Mining Review, 2007, Viet Nam iron ore mine under construction: Skillings Mining Review, v. 96, no. 3, March, p. 11.

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:				
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
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 <sup>f</sup>	4,260	4,260	2,810	2,810
February	3,350	7,610	574	3,380

<sup>f</sup>Revised.

<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 FEBRUARY<sup>1,2</sup>

(Thousand metric tons)

State	Production		Shipments <sup>3</sup>		Stocks <sup>4</sup>	
	2007	2006	2007	2006	2007	2006
Michigan	824	851	256	162	2,400	2,350
Minnesota	2,530	2,970	318	790	7,720	7,260
Total	3,350	3,820	574	953	10,100	9,620

<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.

Note: Stocks at the end of January 2007 for Minnesota have been revised to 5,504,000 metric tons.

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

(Thousand dry metric tons)

Period	Newfoundland and Labrador	Quebec	British Columbia	Total
2006:				
January	1,010	705	10	1,720
February	951	730	10	1,690
March	1,210	730	7	1,950
April	1,850	1,180	8	3,030
May	1,670	1,610	12	3,280
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 <sup>r</sup>	1,250	6	3,220 <sup>r</sup>
Year total	19,800 <sup>r</sup>	13,600	105	33,600
2007, January	2,420	616	6	3,040

<sup>r</sup>Revised.

<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
2006:						
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
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

<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	3rd quarter	4th quarter	Total	January
Algeria	--	--	252	88	340	--
Canada	998	2,370	2,410	1,830	7,610	581
China	--	100	--	--	100	(3)
Mexico	13	11	10	180	215	(3)
Other	1	5	2	3	10	--
Total	1,010	2,480	2,670	2,110	8,270	582
Pellets	925	2,420	2,640	2,080	8,060	581
Concentrates	2	53	2	2	59	(3)
Direct shipping ores	2	8	20	17	47	1
Other	83	6	7	7	103	(3)
Total	1,010	2,480	2,670	2,110	8,270	582

-- 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
	January		Year to date			January
	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	140	10,300	140	10,300	73.63	501
Canada	292	15,700	292	15,700	53.82	236
Chile	40	2,150	40	2,150	53.75	46
Mexico	2	38	2	38	19.00	1
Peru	--	--	--	--	--	38
Sweden	24	1,870	24	1,870	77.75	--
Trinidad and Tobago	--	--	--	--	--	284
United Kingdom	(4)	9	(4)	9	261.29	--
Total	498	30,100	498	30,100	60.42	1,110
Concentrates	122	5,680	122	5,680	46.55	256
Fine ores	--	--	--	--	--	554
Pellets	374	24,400	374	24,400	65.16	302
Other agglomerates	2	38	2	38	19.00	1
Total	498	30,100	498	30,100	60.42	1,110

-- 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 JANUARY 2007<sup>1</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	--	--	--	140	--	--	140
Canada	82	--	--	211	--	--	292
Chile	40	--	--	--	--	--	40
Mexico	--	--	--	--	2	--	2
Sweden	--	--	--	24	--	--	24
United Kingdom	(2)	--	--	--	--	--	(2)
Total	122	--	--	374	2	--	498

-- Zero.

<sup>1</sup>Includes agglomerates.

<sup>2</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
	January		Year to date			January
	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	140	10,300	140	10,300	73.63	205
Canada	211	12,200	211	12,200	57.80	98
Sweden	24	1,870	24	1,870	77.75	--
Total	374	24,400	374	24,400	65.16	302

-- 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.)	January	
	2007	2006
Baltimore, MD (13)	71	353
Charleston, SC (16)	(3)	--
Chicago, IL (39)	82	--
Cleveland, OH (41)	140	--
Detroit, MI (38)	--	25
Mobile, AL (19)	--	5
New Orleans, LA (20)	180	721
Nogales, AZ (26)	2	8
Port Arthur, TX (21)	24	--
Total	498	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 10  
 U.S. IMPORTS FOR CONSUMPTION OF PELLETS,  
 BY CUSTOMS DISTRICT<sup>1</sup>

(Thousand metric tons)

Customs district (code no.)	January	
	2007	2006
Baltimore, MD (13)	71	72
Cleveland, OH (41)	140	--
Detroit, MI (38)	--	25
New Orleans, LA (20)	140	205
Port Arthur, TX (21)	24	--
Total	374	302

-- 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.