

Mineral Industry Surveys

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IRON ORE IN DECEMBER 2007

U.S. mine production of iron ore in December 2007, on a daily average basis, was slightly less than that for the prior month, according to the U.S. Geological Survey (USGS). Average daily production, at 140,000 metric tons (t), was 3,000 t less than that of November 2007.

Average daily shipments in December 2007, at 160,000 t, were 1,000 t less than those of November. Mine stocks at the end of December were 637,000 t less than stocks held on November 30, a 9% decrease. U.S. imports of iron ore in November 2007 were 20% greater than exports, with net imports of 156,000 t.

Domestic Exploration and Development.—Steel Dynamics, Inc. (Fort Wayne, IN) announced the purchase of approximately 2,400 hectares (6,000 acres) of land with associated mineral rights at Hoyt Lakes, MN, from Cleveland-Cliffs Inc for \$18 million. Steel Dynamics plans to re-open a mine operated by the former LTV Steel Mining Company and construct an iron ore concentrator, which would feed the Mesabi Nugget facility currently under construction (See Iron Ore September 2007.). The mine and concentrator are expected to cost approximately \$165 million and begin operating about yearend 2009 (Bloomquist, 2007; Steel Dynamics, Inc., 2007).

Domestic Production.—Cleveland-Cliffs announced 2007 production for its North American operations. Mine production was as follows (United States, unless otherwise specified): Empire, 5.0 million metric tons (Mt); Hibbing Taconite, 7.5 Mt; Northshore, 5.3 Mt; Tilden, 7.3 Mt; United Taconite, 5.4 Mt; and Wabush (Canada), 4.7 Mt. Cliffs' share of the total production, 35.2 Mt, was 22.1 Mt. Total Cliffs' North American production share for the year increased 5% compared with that of 2006, and overall iron ore sales revenue increased 12% compared with that of 2006 to \$1,745.4 million (Cleveland-Cliffs Inc, 2008, p. 3, 4).

World Production.—Rio Tinto plc announced full-year production figures for 2007. Rio Tinto's share of saleable quantities of iron ore plus pellets were as follows (Australia, unless otherwise specified)—Channar (60% owned), 6.3 Mt; Corumba (Brazil), 1.8 Mt; Eastern Range, 6.9 Mt; Hamersley, 94.6 Mt; Hope Downs (50% owned), 32,000 t; Iron Ore

Company of Canada (58.7% owned), 7.8 Mt; and Robe River (53% owned), 27.3 Mt. Rio Tinto's share of total world mine production was 144.7 Mt, a 9% increase from that of 2006 (Rio Tinto plc, 2008, p. 64).

BHP Billiton Limited announced full-year production figures for 2007. BHP Billiton's share of saleable quantities of iron ore (wet) were as follows (Australia, unless otherwise specified)—Area C Joint Venture (JV) (85% owned), 21.3 Mt; Goldsworthy JV (85% owned), 0.6 Mt; Jumblebar (85% owned), 4.9 Mt; Mt. Newman JV (85% owned), 30.4 Mt; Samarco (Brazil) (50% owned), 8.0 Mt; and Yandi JV (85% owned), 37.5 Mt. BHP Billiton's share of total world mine production was 102.9 Mt, a 4% increase from that of 2006 (BHP Billiton Limited, 2008, p. 4).

In 2007, Brazil's Companhia Vale do Rio Doce (CVRD) reported record iron ore production of 295.9 Mt (includes CVRD's Samarco joint venture)—an increase of 12% compared with that of 2006. CVRD pellet production in 2007 was 36.0 Mt—an increase of 8% compared with that of 2006 (Companhia Vale do Rio Doce, 2008, p. 2, 3).

Transportation.—The Lake Carriers' Association reported that the heaviest cargo of iron ore in December was 14% less than the maximum load through the Soo Locks on the Great Lakes. Continued lack of dredging and falling water levels have reduced payloads in recent months (Lake Carriers' Association, 2008).

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Steel Dynamics, Inc., 2007, Steel Dynamics completes purchase of Minnesota iron mine: Fort Wayne, IN, Steel Dynamics, Inc. press release, December 3, 1 p. (Accessed June 6, 2008, via <http://www.steeldynamics.com>.)

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
2006:				
December	3,970	52,900	5,680	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
September	4,350	38,600	5,100	36,600
October	4,820	43,400	5,130	41,700
November	4,280	47,700	4,830	46,600
December	4,320	52,000	4,960	51,500

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 DECEMBER^{1,2}

(Thousand metric tons)

State	Production		Shipments ³		Stocks ⁴	
	2007	2006	2007	2006	2007	2006
Michigan	846	1,050	1,390	1,110	2,540	1,790
Minnesota	3,480	2,920	3,570	4,570	3,950	4,090
Total	4,320	3,970	4,960	5,680	6,490	5,880

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

²Excludes byproduct ore.

³Includes rail and vessel.

⁴Includes 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 end of November for Minnesota have been revised to 4,040 thousand metric tons.

TABLE 3
CANADA: SHIPMENTS OF IRON ORE^{1, 2}

(Thousand dry metric tons)

Period	Newfoundland and Labrador	Quebec	British Columbia	Total
2006:				
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	1,040	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
August	2,150	1,150	6	3,310
September	1,410	1,400	6	2,820
October	1,860	1,600	6	3,460
November	2,110	1,470	7	3,590

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

²Includes 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
FURNACE¹

(Thousand metric tons)

Period	Pig iron production, blast furnace		Raw steel production			
	Monthly	Year to date	Basic oxygen furnace ²		Electric furnace	
	Monthly	Year to date	Monthly	Year to date	Monthly	Year to date
2006:						
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
July	3,080	20,800	3,420	23,300	4,860	33,500
August	3,010	23,800	3,370	26,600	4,970	38,400
September	3,010	26,900	3,370	30,000	4,600	43,000
October	3,200	30,100	3,540	33,500	4,940	48,000
November	2,940	33,000	3,280	36,800	4,920	52,900

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

²Raw 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^{1, 2}

(Thousand metric tons)

Country of destination and type of product	2006	2007				
		1st quarter	2nd quarter	3rd quarter	October	November
Algeria	340	--	213	332	25	--
Canada	7,610	885	2,360	1,910	638	728
China	100	1	286	762	50	28
Colombia	--	1	6	--	--	(3)
Mexico	215	1	1	64	2	20
Peru	--	--	5	(3)	--	(3)
Romania	--	--	87	--	--	--
Sweden	--	--	--	2	--	--
Other	10	1	4	(3)	(3) ^r	(3)
Total	8,270	889	2,960	3,070	716	776
Pellets	8,060	885	2,930	3,010	712	752
Concentrates	59	1	8	31	1	2
Briquettes	23	--	--	-- ^r	1 ^r	(3)
Sinter	77	(3)	(3)	(3) ^r	(3) ^r	10
Direct shipping ores - coarse	6	(3)	2	1	--	1
Direct shipping ores - fines	42	3	14	29	3	1
Roasted pyrites	1	(3)	(3)	(3) ^r	(3) ^r	10
Total	8,270	889	2,960	3,070	716	776

^rRevised. -- Zero.

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

²Includes agglomerates.

³Less than ½ 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	2007					2006
	November		Year to date			January-November Thousand metric tons
	Thousand metric tons	Value ³ (thousand dollars)	Thousand metric tons	Value ³ (thousand dollars)	Value ³ (dollars per ton)	
Australia	--	--	--	--	--	8
Brazil	309	15,800	2,950	168,000	56.98	4,280
Canada	574	37,000	5,050	300,000	59.40	5,780
Chile	--	--	279	15,700	56.21	283
China	--	--	--	--	--	(4)
Finland	--	--	8	385	48.13	6
Greece	--	--	--	--	--	15
Greenland	--	--	(4)	3	197.65	--
India	--	--	(4)	6	5,690.00	(4)
Italy	--	--	--	--	--	(4)
Mexico	1	25	35	1,630	46.46	15
Norway	--	--	8	365	45.63	--
Peru	--	--	108	3,320	30.69	52
Sweden	47	2,160	141	8,960	63.54	(4)
Trinidad and Tobago	--	--	--	--	--	299
Ukraine	--	--	--	--	--	(4)
United Kingdom	--	--	(4)	25	213.64	(4)
Venezuela	--	--	34	1,640	48.35	23
Total	932	55,000	8,620	500,000	58.06	10,800
Concentrates	233	12,000	1,280	57,500	44.92	2,250
Coarse ores	47	2,160	166	9,690	58.39	--
Fine ores	77	3,990	1,590	74,700	47.01	2,370
Pellets	503	33,200	5,480	354,000	64.55	6,120
Other agglomerates	72	3,550	87	3,930	45.11	15
Roasted pyrites	--	--	11	511	46.45	7
Total	932	55,000	8,620	500,000	58.06	10,800

-- 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 ½ unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE IN NOVEMBER 2007^{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	204	--	77	28	--	--	309
Canada	29	--	--	475	71	--	574
Mexico	--	--	--	--	1	--	1
Sweden	--	47	--	--	--	--	47
Total	233	47	77	503	72	--	932

-- Zero.

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

²Includes agglomerates.

Source: U.S. Census Bureau.

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

Country of origin	2007					2006
	November		Year to date			January-November
	Thousand metric tons	Value ² (thousand dollars)	Thousand metric tons	Value ² (thousand dollars)	Value ² (dollars per ton)	Thousand metric tons
Brazil	28	1,460	1,170	79,400	68.06	1,570
Canada	475	31,800	4,230	269,000	63.67	4,520
Mexico	--	--	19	1,220	64.37	--
Peru	--	--	9	404	44.89	--
Sweden	--	--	24	1,870	77.75	--
Trinidad and Tobago	--	--	--	--	--	15
Venezuela	--	--	34	1,640	48.35	23
Total	503	33,200	5,480	354,000	64.55	6,130

-- 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.

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.)	November	January-November	
	2007	2007	2006
Baltimore, MD (13)	364	2,830	3,720
Buffalo, NY (09)	--	--	1
Charleston, SC (16)	--	3	1
Chicago, IL (39)	246	1,280	1,590
Cleveland, OH (41)	272	2,820	2,790
Detroit, MI (38)	--	(3)	102
Houston-Galveston, TX (53)	--	65	50
Los Angeles, CA (27)	--	--	(3)
Mobile, AL (19)	--	33	5
New Orleans, LA (20)	--	1,470	2,470
Nogales, AZ (26)	1	16	22
Ogdensburg, NY (07)	1	1	(3)
Philadelphia, PA (11)	--	8	6
Port Arthur, TX (21)	47	71	--
Providence, RI (05)	--	8	--
Savannah, GA (17)	--	(3)	--
St. Albans, VT (02)	(3)	(3)	--
St. Louis, MO (45)	--	--	(3)
Tampa, FL (18)	--	13	--
Wilmington, NC (15)	--	--	(3)
Total	932	8,620	10,800

-- Zero.

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

²Includes agglomerates.

³Less than ½ 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.)	November	January-November	
	2007	2007	2006
Baltimore, MD (13)	148	1,170	1,520
Chicago, IL (39)	84	392	279
Cleveland, OH (41)	272	2,760	2,790
Detroit, MI (38)	--	(2)	102
Houston - Galveston, TX (53)	--	65	35
New Orleans, LA (20)	--	1,070	1,400
Port Arthur, TX (21)	--	24	--
Total	503	5,480	6,130

-- Zero.

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

²Less than ½ unit.

Source: U.S. Census Bureau.