

# Mineral Industry Surveys

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## IRON ORE IN JANUARY 2010

U.S. mine production of iron ore in January 2010, on a daily average basis, was 5% less than that for the prior month and slightly greater than that of January 2009, according to the U.S. Geological Survey (USGS). Average daily production, at 97,900 metric tons (t), was 4,700 t less than that of December 2009.

Average daily shipments in January 2010, at 77,400 t, were 39% less than those of the prior month but 49,200 t greater than those of January 2009. Mine stocks at the end of January 2010 were 637,000 t greater than the stocks held on December 31, 2009, a 20% increase. U.S. net imports of iron ore in December 2009 were 54,000 t, with imports 11% greater than exports.

**North American Production.**—Steel Dynamics, Inc. (Fort Wayne, IN) announced the production of the first batch of iron nuggets at its Mesabi Nugget facility in Hoyt Lakes, MN. This was the world's first commercial production of greater than 96% iron nuggets using the ITmk3 process developed by Kobe Steel Ltd. (Kobe, Japan). The plant startup completed 2 years of construction activity and will, at anticipated capacity, produce 500,000 metric tons of nuggets per year, much of which will be feedstock to Steel Dynamics own electric arc furnaces in Indiana (Steel Dynamics, Inc., 2010).

**North American Development.**—Consolidated Thompson Iron Mines Ltd. (Montreal, Quebec, Canada) announced that it had entered into an offtake agreement with a subsidiary of SK Group (Seoul, Republic of Korea) for the purchase of 1 million metric tons per year (Mt/yr) of iron ore concentrates for a 10-year period. Consolidated Thompson was developing the Bloom Lake iron ore deposit in the Quebec/Labrador trough. The expected initial production rate of the project is 8 Mt/yr (Consolidated Thompson Iron Mines Ltd., 2010).

Essar Steel Minnesota LLC [a subsidiary of Essar Steel Holdings Ltd. (Mumbai, India)] received a \$1.4 million federal grant to provide water and sewer services to its \$1.6 billion iron ore and steelmaking project already under construction (See Iron Ore in April 2007). Iron pellet production from the project was expected to begin in 2011 (Skillings Mining Review, 2010).

**World Development.**—London Mining plc (London, United Kingdom) released an updated feasibility study for the Wadi

Sawawin iron ore project in northwest Saudi Arabia. London Mining estimated that capital expenditures for the 5-Mt/yr project would total \$2 billion, which would include a power and desalinization plant. Operating costs were estimated to be \$47.4 per metric ton of direct reduced iron (DRI) pellets produced. The project was a 50-50 joint venture between London Mining and Saudi-based National Mining Co. Further feasibility work was planned to raise the resource estimate and to increase annual capacity to 10 Mt/yr of DRI pellets (Mining Journal, 2010).

**Mergers and Acquisitions.**—ArcelorMittal (Luxembourg) and BHP Billiton Ltd. (Melbourne, Australia) were discussing the possibility of combining iron ore assets in Liberia and Guinea. The discussions included BHP Billiton's 41.3% share of the Nimba project and exploration leases in Guinea, as well as four leases in Liberia. The merger of assets would include ArcelorMittal's five Liberian leases and rights to upgrade an existing railway and Panamax port (Hotter, 2010).

**Transportation.**—In 2009, shipments of iron ore on the Great Lakes decreased to their lowest level in 71 years. Iron ore cargos totaled 28.8 million metric tons (Mt) the lowest shipments since 1938. These were down from the peak of 97.4 Mt in 1953 (Lake Carriers' Association, 2010).

## 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
2009:				
January	2,990	2,990	874	874
February	2,660	5,650	440	1,310
March	2,240	7,890	663	1,980
April	1,700	9,590	1,930	3,910
May	850	10,400	2,470	6,380
June	811	11,200	2,440	8,810
July	1,480	12,700	3,080	11,900
August	1,780	14,500	3,190	15,100
September	2,560	17,100	3,120	18,200
October	3,080	20,100	3,370	21,600
November	3,140	23,300	4,380	26,000
December	3,180	26,500	3,960	29,900
2010, January	3,040	3,040	2,400	2,400

<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 JANUARY<sup>1,2</sup>

(Thousand metric tons)

State	Production		Shipments <sup>3</sup>		Stocks <sup>4</sup>	
	2010	2009	2010	2009	2010	2009
Michigan	698	655	912	180	682	2,890
Minnesota	2,340	2,340	1,490	694	3,070	5,790
Total	3,040	2,990	2,400	874	3,760	8,680

<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
2008:				
December	832	737	4	1,570
Year total	18,700	13,400	77	32,100
2009:				
January	1,030	600	3	1,640
February	793	823	2	1,620
March	662	1,450	1	2,120
April	1,630	871	8	2,510
May	2,090	1,260	7	3,350
June	820	1,080	10	1,910
July	1,360	1,430	10	2,800
August	1,480	1,570	8	3,060
September	1,540	1,580	8	3,130
October	2,060	1,510	7	3,580
November	2,010	1,000	8	3,020
December	1,660	1,320	(3)	2,980
Year total	17,100	14,500	73	31,700

<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.

<sup>3</sup>Less than ½ unit.

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		Electric furnace	
			Monthly	Year to date	Monthly	Year to date
2008, December	1,690	34,500	1,390	37,500	2,220	53,100
2009:						
January	1,450	1,450	1,320	1,320	2,630	2,630
February	1,510	2,960	1,180	2,500	2,440	5,070
March	1,630	4,580	1,430	3,930	2,330	7,400
April	1,410	5,990	1,230	5,170	2,390	9,800
May	1,370	7,360	1,070	6,240	2,760	12,600
June	1,380	8,740	1,210	7,440	2,980	15,500
July	1,840	10,600	1,630	9,070	3,200	18,700
August	2,090	12,700	1,810	10,900	3,460	22,200
September	1,930	14,600	2,230	13,100	3,540	25,700
October	2,510	17,100	2,080	15,200	3,480	29,200
November	2,240	19,400	2,000	17,200	3,470	32,700
December	2,410	21,800	2,120	19,300	3,450	36,100

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

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	2008	2009					Total
		1st quarter	2nd quarter	3rd quarter	December	4th quarter	
Algeria	80	--	--	--	--	--	--
Belgium	218	(3)	19	25	53	150	194
Canada	9,030	425	653	1,100	399	877	3,060
China	91	4	3	92	--	(3)	99
Colombia	11	8	7	1	2	3	19
Czech Republic	83	--	--	--	--	--	--
France	210	(3)	74	105	--	(3)	179
Germany	156	--	--	81	--	153	234
Malaysia	25	1	--	--	--	--	1
Mexico	328	12	2	1	33	55	70
Poland <sup>4</sup>	103	--	--	--	--	--	--
Romania	128	--	--	--	--	--	--
Serbia	51	--	--	--	--	--	--
Slovakia	505	--	--	--	--	--	--
South Africa	--	--	--	27	--	25	52
Spain	102	--	--	--	--	--	--
Other <sup>5</sup>	18	1	5	1	(3)	27	10
<b>Total</b>	<b>11,100</b>	<b>450</b>	<b>763</b>	<b>1,430</b>	<b>487</b>	<b>1,270</b>	<b>3,910</b>
Concentrates	142	9	8	101	1	5	123
Coarse ores	46	(3)	1	--	--	4	5
Fine ores	136	10	5	7	(3)	2	24
Pellets	10,800	431	746	1,330	485	1,260	3,760
Briquettes	(3)	--	3	(3)	--	--	3
Other agglomerates	20	--	(3)	(3)	(3)	(3)	(3)
Roasted pyrites	(3)	--	(3)	1	--	(3)	1
<b>Total</b>	<b>11,100</b>	<b>450</b>	<b>763</b>	<b>1,430</b>	<b>487</b>	<b>1,270</b>	<b>3,910</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.

<sup>4</sup>Correction to previous months' information should read Poland, not Peru.

<sup>5</sup>Other includes all countries receiving less than 5,000 metric tons in any month during the two-year period.

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	2009					2008
	December		Year to date			January-December
	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
Bosnia and Herzegovina	--	--	--	--	--	23
Brazil	--	--	188	13,100	69.65	2,620
Canada	488	38,000	3,140	323,000	102.70	5,900
Chile	49	3,530	203	16,100	79.14	215
China	--	--	(4)	2	2,100.00	14
Finland	--	--	6	367	61.17	6
Italy	--	--	--	--	--	1
Japan	--	--	--	--	--	(4)
Mexico	(4)	10	55	4,610	83.73	52
Netherlands	--	--	--	--	--	1
Norway	--	--	4	65	16.25	--
Peru	--	--	34	1,670	49.03	59
Russia	--	--	136	8,240	60.60	127
South Africa	4	271	43	2,980	69.23	--
Spain	--	--	4	159	39.75	2
Sweden	--	--	31	3,190	102.74	88
Switzerland	--	--	--	--	--	70
United Kingdom	--	--	8	1,630	203.75	--
Venezuela	--	--	21	825	39.29	68
Total	541	41,800	3,870	376,000	96.97	9,250
Concentrates	53	3,810	283	22,300	78.95	1,250
Coarse ores	--	--	16	2,330	145.50	48
Fine ores	1	24	466	34,900	74.91	1,980
Pellets	487	37,900	3,100	315,000	101.90	5,960
Briquettes	--	--	4	159	39.75	1
Other agglomerates	--	--	3	104	34.67	--
Roasted pyrites	--	--	6	367	61.17	12
Total	541	41,800	3,870	376,000	96.97	9,250

-- 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 DECEMBER 2009<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	
Canada	--	--	1	487	--	--	488
Chile	49	--	--	--	--	--	49
Mexico	(3)	--	--	--	--	--	(3)
South Africa	4	--	--	--	--	--	4
Total	53	--	1	487	--	--	541

-- 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	2009					2008
	December		Year to date			January-December
	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
Bosnia and Herzegovina	--	--	--	--	--	23
Brazil	--	--	38	3,510	92.26	616
Canada	487	37,900	2,900	303,000	104.46	5,240
Peru	--	--	5	283	56.60	18
Russia	--	--	136	8,240	60.60	--
Venezuela	--	--	21	825	39.29	68
Total	487	37,900	3,100	315,000	101.90	5,960

-- 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.)	December	January-December	
	2009	2009	2008
Baltimore, MD (13)	143	781	3,590
Buffalo, NY (09)	--	--	1
Charleston, SC (16)	--	6	28
Chicago, IL (39)	234	637	1,160
Cleveland, OH (41)	114	1,860	3,160
Detroit, MI (38)	--	--	(3)
Houston-Galveston, TX (53)	--	38	51
Los Angeles, CA (27)	--	(3)	--
Minneapolis, MN (35)	--	--	104
Mobile, AL (19)	--	28	74
New Orleans, LA (20)	49	465	1,020
New York, NY (10)	--	--	1
Nogales, AZ (26)	(3)	3	--
Norfolk, VA (14)	--	--	10
Ogdensburg, NY (07)	1	18	12
Philadelphia, PA (11)	--	6	6
Port Arthur, TX (21)	--	8	--
Seattle, WA (30)	--	28	--
Tampa, FL (18)	--	--	24
Total	541	3,870	9,250

-- 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.)	December	January-December	
	2009	2009	2008
Baltimore, MD (13)	143	771	1,860
Chicago, IL (39)	229	412	240
Cleveland, OH (41)	114	1,850	3,130
Houston - Galveston, TX (53)	--	38	50
Mobile, AL (19)	--	5	18
New Orleans, LA (20)	--	21	658
Total	487	3,100	5,960

-- 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.