

# Mineral Industry Surveys

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#### **IRON ORE IN OCTOBER 2008**

U.S. mine production of iron ore in October 2008, on a daily average basis, was slightly greater than that for the prior month, but was 6% less than that of October 2007, according to the U.S. Geological Survey (USGS). Average daily production, at 146,000 metric tons (t), was 2,700 t greater than that of September 2008.

Average daily shipments in October 2008, at 157,000 t, were 26,600 t less than those of the prior month, and 8,800 t less than those of October 2007. Mine stocks at the end of October 2008 were 314,000 t less than the revised stocks held on September 30, a 5% decrease. U.S. net exports of iron ore in September 2008 were 141,000 t, with exports 16% greater than imports.

**Price.**—Following indications early in the month that falling spot prices might reflect "seasonal pessimism" related to the coming negotiating season, prices for 63.5% iron content fines continued to fall from more than \$100 per metric ton to about \$60 per metric ton by the end of the month (Marais, 2008; Metal Bulletin, 2008b).

North American Production.—Cleveland-Cliffs Inc (Cleveland, OH) officially changed its name to Cliffs Natural Resources Inc. to better represent its goal of becoming a more diversified resource company. Cliffs announced three new supply agreements for the sale of a minimum tonnage of almost 5.0 million metric tons (Mt) of iron ore pellets between 2008 and 2013. The agreed price was defined as the annual "Eastern Canada Pellet Price" at the time of settlement. In spite of these additional sales, Cliffs had to idle three pellet lines—one at United Taconite and two at its Northshore Mining facilities—representing about 300,000 t of monthly pellet capacity (The TEX Report, 2008; Cleveland-Cliffs Inc, 2008).

North American Acquisition.—Tata Steel Ltd. (Mumbai, India) entered into an agreement to acquire about 20% in New Millennium Capital Corp. (Calgary, Alberta, Canada), owner of 80% of the LabMag Iron Ore project in Newfoundland and Labrador and of 100% of the KéMag Iron ore project in Quebec, Canada. The New Millennium asset base includes 9.1 billion metric tons (Gt) of iron ore resources, including 100 Mt of direct shipping ore in the Quebec project (Skillings Mining Review, 2008).

World Exploration.—China announced discovery of a massive iron ore deposit with greater than 1 Gt of iron ore. Chinese geologists indicated the ore block, with a grade of between 26.0% and 31.7% iron, was located between 1,020 meters and 2,200 meters below the surface. The deposit is located near Jining City in Shandong Province (Metal Bulletin, 2008a).

#### **References Cited**

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Skillings Mining Review, 2008, Tata to buy 20% in Quebec iron ore company: Skillings Mining Review, v. 97, no. 11, November, p. 45.

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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)

	Pro	Production		pments
Period	Monthly	Year to date	Monthly	Year to date
2007:				
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
2008:				
January	4,170	4,170	3,730	3,730
February	3,990	8,160	1,090	4,830
March	4,780	12,900	2,190	7,020
April	4,130	17,100	5,220	12,200
May	4,860	21,900	6,230	18,500
June	4,870	26,800	5,450	23,900
July	4,960	31,800	6,160	30,100
August	4,840	36,600	6,100	36,200
September	4,310	40,900	5,500	41,700
October	4,540	45,400	4,860	46,500

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits.

 $\label{eq:table 2} \textbf{U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF IRON ORE IN OCTOBER$^{1,\,2}$}$ 

#### (Thousand metric tons)

	Produ	Production		Shipments <sup>3</sup>		Stocks <sup>4</sup>	
State	2008	2007	2008	2007	2008	2007	
Michigan	1,100	1,170	1,110	1,110	2,550	3,370	
Minnesota	3,440	3,650	3,750	4,020	3,260	4,290	
Total	4,540	4,820	4,860	5,130	5,800	7,660	

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

Note: Minnesota stocks at end of September were revised to 3,560,000 metric tons.

<sup>&</sup>lt;sup>2</sup>Excludes byproduct ores.

<sup>&</sup>lt;sup>2</sup>Excludes byproduct ore.

<sup>&</sup>lt;sup>3</sup>Includes rail and vessel.

<sup>&</sup>lt;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.

 $\label{eq:table 3} {\sf CANADA: \ SHIPMENTS \ OF \ IRON \ ORE}^{1,\,2}}$ 

#### (Thousand dry metric tons)

	Newfoundland		British	
Period	and Labrador	Quebec	Columbia	Total
2007:				
September	1,410	1,400	6	2,820
October	1,860	1,600	6	3,460
November	2,110	1,470	7	3,590
December	1,180	1,450	5	2,640
Year total	17,900	14,900	75	32,800
2008:				
January	1,210	816	6	2,030
February	1,120	833	4	1,950
March	1,140	855	4	2,000
April	1,680	984	4	2,670
May	2,670	1,330	7	4,010
June	1,580	1,380	9 <sup>r</sup>	2,970
July	1,820	1,370	8	3,200
August	2,270	1,200	9 <sup>r</sup>	3,470
September	1,310	1,050	8	2,370

rRevised.

Source: Natural Resources Canada.

TABLE 4 PRODUCTION OF PIG IRON AND RAW STEEL IN THE UNITED STATES, BY TYPE OF  $$\mathrm{FURNACe}^1$$ 

#### (Thousand metric tons)

	Pig iron	production,	Raw steel production					
	blast	furnace	Basic oxy	gen furnace <sup>2</sup>	Electri	ic furnace		
Period	Monthly	Year to date	Monthly	Year to date	Monthly	Year to date		
2007:								
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		
December	3,160	36,200	3,550	40,400	4,900	57,800		
2008:								
January	2,900	2,900	3,550	3,550	5,100	5,100		
February	3,110	6,010	3,470	7,020	4,750	9,850		
March	3,280	9,290	3,700	10,700	4,900	14,800		
April	3,240	12,500	3,560	14,300	4,820	19,600		
May	3,210	15,700	3,650	17,900	5,080	24,700		
June	3,020	18,800	3,450	21,400	4,930	29,600		
July	3,090	21,800	3,460	24,800	5,060	34,600		
August	3,290	25,100	3,680	28,500	4,990	39,600		
September	2,900	28,000	3,290	31,800	4,560	44,200		

<sup>&</sup>lt;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.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes production from steel plant waste oxides.

<sup>&</sup>lt;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.

 ${\rm TABLE}~5$  U.S. EXPORTS OF IRON ORE, BY COUNTRY OF DESTINATION AND TYPE  $^{1,\,2}$ 

### (Thousand metric tons)

Country of destination		2008					
and type of product	2007	1st quarter	2nd quarter	July	August	September	
Algeria	570		28	52		1	
Belgium		57	161				
Canada	7,340	1,460	2,290	1,200	1,080	892	
China	1,130	23	7		2	2	
Colombia	7	1	3	1	(3)	1	
Czech Republic			83				
France					54		
Germany			79		(3)		
Japan	7						
Malaysia		24					
Mexico	148	66	101	24	35	34	
Peru	5						
Poland				50	53		
Romania	87		76	52			
Serbia						51	
Slovakia			50				
Spain			77			25	
Sweden	2	1		2			
Other	8	6	9	1	1	1	
Total	9,310	1,630	2,960	1,380	1,220	1,010	
Pellets	9,170	1,570	2,910	1,350	1,200	936	
Concentrates	51	21	39	13	8	1	
Briquettes	1	16					
Sinter	22				(3)	(3)	
Direct shipping ores - coarse	6	3	14	1	4	9	
Direct shipping ores - fines	51	28	3	10	9	60	
Roasted pyrites	11			(3)		(3)	
Total	9,310	1,630	2,960	1,380	1,220	1,010	

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

TABLE 6 U.S. IMPORTS FOR CONSUMPTION OF IRON ORE, BY COUNTRY AND TYPE  $^{1,\,2}$  (Exclusive of ore containing 20% or more manganese)

			2008			2007
	Septe	ember		Year to date		January-September
	Thousand	Value <sup>3</sup>	Thousand	Value <sup>3</sup>	Value <sup>3</sup>	Thousand
Country of origin	metric	(thousand	metric	(thousand	(dollars	metric
and type of product	tons	dollars)	tons	dollars)	per ton)	tons
Bosnia and Herzegovina	23	1,570	23	1,570	67.81	
Brazil	251	23,600	1,990	163,000	81.99	2,300
Canada	570	68,600	4,490	477,000	106.38	3,830
Chile			173	12,400	71.55	279
China			14	266	19.07	
Finland			6	233	41.84	5
Italy	1	27	1	43	47.99	
Japan			(4)	7	793.89	
Mexico			25	1,650	65.94	31
Netherlands			1	22	18.00	
Norway						8
Peru			39	2,120	54.60	107
Russia			66	8,010	121.94	
Spain	1	15	1	45	42.40	
Sweden			46	1,950	42.27	94
Switzerland			70	5,410	77.72	
Venezuela	20	1,210	68	4,210	61.84	34
Total	866	95,100	7,010	679,000	96.79	6,690
Concentrates	140	9,940	965	65,400	67.79	907
Coarse ores			37	1,800	48.08	119
Fine ores	103	8,110	1,280	92,200	72.01	1,240
Pellets	623	77,000	4,720	519,000	109.95	4,400
Briquettes			(4)	30	127.39	
Other agglomerates						13
Roasted pyrites	1	27	12	537	45.43	7
Total	866	95,100	7,010	679,000	96.79	6,690

<sup>--</sup> Zero.

<sup>&</sup>lt;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>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;sup>3</sup>Customs value. Excludes international freight and insurance charges.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE IN SEPTEMBER 2008<sup>1, 2</sup> (Exclusive of ore containing 20% or more manganese)

#### (Thousand metric tons)

			Type of	f product			
					Briquettes		
		Coarse	Fine		and other	Roasted	
Country of origin	Concentrates	ores	ores	Pellets	agglomerates	pyrites	Total
Bosnia and Herzegovina				23			23
Brazil	85		99	68			251
Canada	55		3	512			570
Italy						1	1
Spain			1				1
Venezuela				20			20
Total	140		103	623		1	866

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

 $\label{eq:table 8} \text{U.s. IMPORTS FOR CONSUMPTION OF PELLETS}, \ \text{BY COUNTRY}^{\text{I}}$ 

-			2008			2007	
	September			Year to date		January-September	
	Thousand	Value <sup>2</sup>	Thousand	Value <sup>2</sup>	Value <sup>2</sup>	Thousand	
Country	metric	(thousand	metric	(thousand	(dollars	metric	
of origin	tons	dollars)	tons	dollars)	per ton)	tons	
Bosnia and Herzegovina	23	1,570	23	1,570	67.81		
Brazil	68	8,700	596	63,200	106.04	1,100	
Canada	512	65,500	4,010	449,000	111.89	3,220	
Mexico						19	
Peru			18	736	42.03	9	
Sweden						24	
Venezuela	20	1,210	68	4,210	61.84	34	
Total	623	77,000	4,720	519,000	109.95	4,400	

<sup>--</sup> Zero.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;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>&</sup>lt;sup>2</sup>Customs value. Excludes international freight and insurance charges.

## $\label{eq:table 9} \mbox{U.S. IMPORTS FOR CONSUMPTION OF IRON ORE,} \\ \mbox{BY CUSTOMS DISTRICT}^{1,2}$

(Exclusive of ore containing 20% or more manganese)

#### (Thousand metric tons)

	September	January-September	
Customs district (code no.)	2008	2008	2007
Baltimore, MD (13)	220	2,830	2,110
Buffalo, NY (09)	1	1	
Charleston, SC (16)		20	2
Chicago, IL (39)	167	818	822
Cleveland, OH (41)	364	2,300	2,160
Detroit, MI (38)	(3)	(3)	(3)
Houston-Galveston, TX (53)	1	31	38
Mobile, AL (19)		50	33
New Orleans, LA (20)	111	946	1,470
New York City, NY (10)		1	
Nogales, AZ (26)			13
Norfolk, VA (14)		4	
Ogdensburg, NY (07)	3	9	
Philadelphia, PA (11)		6	5
Port Arthur, TX (21)			24
Providence, RI (05)			8
Savannah, GA (17)			(3)
Tampa, FL (18)			13
Total	866	7,010	6,690
7000			

<sup>--</sup> Zero

Source: U.S. Census Bureau.

TABLE 10  $\mbox{U.s. IMPORTS FOR CONSUMPTION OF PELLETS,} \\ \mbox{BY CUSTOMS DISTRICT}^1$ 

#### (Thousand metric tons)

	September	January-September		
Customs district (code no.)	2008	2008	2007	
Baltimore, MD (13)	148	1,570	879	
Chicago, IL (39)		174	266	
Cleveland, OH (41)	364	2,270	2,130	
Detroit, MI (38)			(2)	
Houston - Galveston, TX (53)		30	38	
Mobile, AL (19)		18		
New Orleans, LA (20)	111	658	1,070	
Port Arthur, TX (21)			24	
Total	623	4,720	4,400	

<sup>--</sup> Zero

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

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

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

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.