



MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON, D.C. 20241



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Iron Ore, Monthly

IRON ORE IN JUNE 1982

U.S. mine production of iron ore declined by 42% in June compared with the previous month, according to the Bureau of Mines, U.S. Department of the Interior. The decline was due to low demand for iron ore, which led to temporary closure of three mines and cutbacks in production at three others during the month. Mine shipments of ore declined only 6% compared with May, but stocks of ore at consuming plants rose by 2.7 million tons during the month as imports increased and consumption declined.

Data for the first 6 months of 1982 indicated declines of 29% in mine output, 46% in mine shipments, 41% in consumption, and more than 40% in exports and imports of iron ore compared with the same period of 1981.

On the Mesabi Range, U.S. Steel Corp. closed its Minntac operation on June 6. On the same date, Oglebay Norton Co. reduced production at Eveleth Mines to about 80% of capacity. In mid-June, the closure of National Steel Pellet Co. was extended by 2 months, to the end of September. Reserve Mining Co. suspended operations on June 19, until December 5. The Minorca and Butler Taconite operations were idle for the entire month. More than 8,000 employees were laid off by monthend.

In California, Kaiser Steel Corp. permanently closed its iron ore pelletizing plant at Eagle Mountain on June 4. About 100 employees were laid off. Annual production capacity of the plant was about 2.4 million tons of pellets. Production of hematite concentrates was continued, however. In Wyoming, U.S. Steel Corp. temporarily closed its Atlantic City mine and pelletizing plant on June 6; operations were scheduled to resume on August 22. In Utah, there was no production in the Iron Springs district during June but U.S. Steel Corp. continued to ship ore from stockpiles at Desert Mound.

In Michigan, Cleveland-Cliffs Iron Co. (CCI) acquired an additional 40% interest in the Empire Iron Mining Partnership by assuming the shares of the partnership's long term debt owed by McLouth Steel Corp. and International Harvester Co. CCI's share in the venture was thereby increased to 60%.

Note: Selected tables of iron ore statistics, to be published in Volume I of the 1981 Minerals Yearbook, are included with this issue of Mineral Industry Surveys.

Prepared in the Division of Ferrous Metals, August 26, 1982.

Table 1.--U.S. production and shipments of iron ore, by districts 1/
(Exclusive of ore containing 5% or more manganese)
(Thousand long tons)

	Lake Superior	Other U.S.	Total <u>2/</u>	
			1982	1981
Production:				
1981-----	67,462	5,712	--	73,174
1982:				
1st Quarter---	14,511	1,670	16,180	18,812
April-----	4,794	553	5,347	6,280
May-----	3,807	551	4,358	7,265
June-----	2,103	422	2,525	7,525
Shipments:				
1981-----	65,222	6,959	--	72,181
1982:				
1st Quarter---	2,095	1,594	3,689	6,372
April-----	1,722	543	2,265	3,938
May-----	4,844	462	5,306	8,906
June-----	4,565	399	4,964	9,626

1/ Includes byproduct ore.

2/ Data may not add to totals shown because of independent rounding.

Table 2.--U.S. mine production, shipments, and stocks of iron ore 1/
(Exclusive of ore containing 5% or more manganese)
(Thousand long tons)

	Production June		Shipments June		Mine stocks June 30	
	1982	1981	1982	1981	1982	1981
Lake Superior:						
Michigan-----	--	1,778	882	1,979	6,486	5,355
Minnesota-----	2,103	5,022	3,683	6,951	15,690	13,612
Wisconsin-----	--	82	--	79	51	7
Other U.S.-----	422	643	399	617	4,153	<u>r/</u> 6,635
Total-----	2,525	7,525	4,964	9,626	26,380	25,609

r/ Revised.

1/ Includes byproduct ore.

Table 3.--U.S. exports of iron ore
(Thousand long tons)

	Canada	Other	Total <u>1/</u>	
			1982	1981
1981-----	5,529	17	--	5,546
1982:				
1st Quarter-----	2	2	4	109
April-----	236	(2/)	236	699
May-----	390	(2/)	391	866
June-----	603	1	604	710

1/ Data may not add to totals shown because of independent rounding.

2/ Less than one-half unit.

Source: U.S. Bureau of the Census.

Table 4. - Canada: Shipments of iron ore
(Thousand long tons)

	Newfound- land	Quebec	Ontario	British Columbia	1982 total <u>1/</u>	1981 total <u>1/</u>
1981-----	25,363	17,667	5,297	585	--	48,912
1982:						
1st Quarter-----	1,320	3,273	1,227	171	5,991	6,305
April-----	1,057	1,517	386	50	3,011	4,266
May-----	1,722	1,503	359	103	3,687	<u>r/</u> 5,961
June-----	NA	NA	NA	NA	NA	5,363

r/ Revised.

NA Not available.

1/ Data may not add to totals shown because of independent rounding.

Source: Statistics Canada - Ministry of Industry, Trade and Commerce.

Table 5. - U.S. imports for consumption of iron ore, by countries
(Exclusive of ore containing 10% or more manganese)

	June 1982		Year to date 1982			Year to date 1981 (thousand long tons)
	Thousand long tons	Value 1/ (thousand dollars)	Thousand long tons	Value 1/		
				Thousand dollars	Per ton	
Brazil-----	28	971	454	13,830	\$30.46	1,151
Canada-----	1,512	52,541	3,856	153,875	39.91	7,059
Chile-----	47	673	47	673	14.32	180
Liberia-----	205	3,552	1,351	23,390	17.31	1,378
Peru-----	--	--	35	1,057	30.20	46
South Africa, Rep. of-----	--	--	52	1,083	20.83	--
Venezuela-----	73	4,437	1,337	43,182	32.30	2,583
Other-----	--	--	(2/)	3	63.56	(2/)
Total 3/-	1,865	62,175	7,132	237,094	33.24	12,398

1/ The market price of the merchandise in the principal marketplace of the foreign country at the time of exportation in terms of U.S. dollars and excludes inland freight ocean freight, and other charges incurred after the merchandise leaves the principal marketplace. This market price is either the market price of the export to the United States or the market price for domestic consumption, whichever is higher. Certain unusually high prices are believed paid for iron ore for use in paints or for research purposes.

2/ Less than one-half unit.

3/ Data may not add to totals shown because of independent rounding.

Source: U.S. Bureau of the Census.

Table 6. - U.S. consumption and stocks of iron ore and agglomerates
at consuming plants and production of pig iron
(Thousand long tons)

	Consumption			Stocks June 30		
	June 1982	Year to date				
		1982	1981	1982	1981	
Alabama, Kentucky, Tennessee						
Texas, Missouri-----	310	2,675	4,564	2,095	2,287	
California, Colorado, Utah-----	239	1,843	3,582	811	630	
Delaware, Maryland, West Virginia-----	379	2,669	4,186	2,643	1,642	
Illinois, Indiana-----	1,428	r/10,243	15,568	8,470	6,694	
Michigan, Minnesota-----	410	r/3,204	3,711	1,501	2,652	
New York, Ohio, Pennsylvania, New Jersey, Rhode Island-----	1,576	9,856	20,271	11,389	9,576	
Total 1/-----	4,342	30,489	51,882	26,909	23,480	
Stocks at U.S. receiving/transfer docks-----				5,168	4,663	
	Consumption by process			Pig iron produced		
	June 1982	Year to date		June 1982	Year to date	
		1982	1981		1982	1981
Blast furnaces-----	3,740	25,941	43,295	3,210	22,095	35,701
Steel furnaces-----	50	133	192	--	--	--
Agglomerating plants 2/-	497	4,345	8,342	--	--	--
Miscellaneous 3/-----	55	70	53	--	--	--
Total 1/-----	4,342	30,489	51,882	3,210	22,095	35,701

r/ Revised.

1/ Data may not add to totals shown because of independent rounding.

2/ Iron ore and iron ore concentrates consumed in agglomerating plants not located at the mine site.

3/ Sold to nonreporting companies or used for purposes not listed.

Source: American Iron Ore Association.
American Iron and Steel Institute.

Table 7. - U.S. imports for consumption of iron ore, by customs districts
(Exclusive of ore containing 10% or more manganese)
(Thousand long tons)

Customs district	June 1982	Year to date	
		1982	1981
Baltimore-----	496	1,540	1,953
Buffalo-----	98	98	189
Charleston-----	--	--	--
Chicago-----	401	1,017	1,453
Cleveland-----	433	766	1,952
Detroit-----	23	46	139
Houston-----	13	314	330
Los Angeles-----	--	--	--
Mobile-----	194	794	1,941
New Orleans-----	--	81	105
Philadelphia-----	166	2,347	3,950
Portland, Oreg.-----	--	--	--
Wilmington, N.C.-----	--	76	278
Other-----	40	52	108
Total <u>1/</u> -----	1,865	7,132	12,398

1/ Data may not add to totals shown because of independent rounding.

Table 8. Salient iron ore statistics
(Thousand long tons and thousand dollars)

	1977	1978	1979	1980	1981
United States:					
Iron ore (usable, 1/ less than 5% manganese):					
Production-----	55,750	81,583	85,716	69,613	73,174
Shipments2/-----	54,053	83,207	86,218	69,594	72,181
Value2/-----	\$1,422,696	\$2,401,387	\$2,814,440	\$2,544,121	\$2,915,239
Average value at mines per ton-----	\$26.32	\$28.86	\$32.64	\$36.56	\$40.39
Exports-----	2,143	4,213	5,148	5,689	5,546
Value-----	\$62,760	\$136,721	\$178,749	\$230,568	\$244,685
Imports for consumption-----	37,905	33,616	33,776	25,058	28,328
Value-----	\$956,584	\$845,039	\$923,426	\$772,844	\$947,977
Consumption (iron ore and agglomerates)-----	116,034	124,797	125,431	98,879	104,385
Stocks, Dec. 31:					
At mines3/-----	14,811	12,359	11,266	r/11,725	12,734
At consuming plants-----	42,271	39,301	38,969	35,706	36,203
At U.S. docks-----	2,979	3,569	5,416	6,095	6,571
Manganiferous iron ore (5% to 35% manganese):					
Shipments-----	193	279	215	155	157
World: Production-----	r/827,816	r/833,894	r/889,988	881,720	847,184

r/ Revised.

1/ Direct shipping ore, concentrates, agglomerates, and byproduct ore.

2/ Includes byproduct ore.

3/ Excludes byproduct ore.

PRELIMINARY

Table 9.-Crude iron ore mined in the United States in 1981, by district, State, and variety
(Thousand long tons and exclusive of ore containing 5% or more manganese)

District and State	Number of mines	Hematite	Limonite ¹ / ₂	Magnetite	Total quantity
Lake Superior:					
Michigan-----	4	W	--	W	45,131
Minnesota-----	14	4,099	--	160,851	164,950
Wisconsin-----	1	--	--	2,367	2,367
Total reportable-----	19	4,099	--	163,218	212,448
Other States:					
Missouri-----	1	--	--	1,695	1,695
Other ² / ₃ -----	12	W	3/W	W	12,858
Total reportable-----	13	--	--	1,695	14,553
Total withheld-----	--	23,958	3/W	34,030	--
Grand total ⁴ / ₅ -----	32	28,057	3/W	198,943	227,001

W Withheld to avoid disclosing company proprietary data; included with "Total withheld" and "Total quantity."

- 1/ Includes siderite ore.
- 2/ Includes California, Colorado, Montana, Nevada, New York, Texas, Utah, and Wyoming.
- 3/ Included with hematite ore.
- 4/ Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 10.--Usable iron ore produced in the United States in 1981,
by district, State, and type of product
(Thousand long tons and exclusive of ore containing 5% or more manganese)

District and State	Direct shipping ore	Concen- trates	Agglom- erates	Average Iron content (natural), percent
Lake Superior:				
Michigan-----	W	--	W	64.3
Minnesota-----	--	1,698	49,327	63.7
Wisconsin-----	--	--	854	65.3
Total reportable-----	--	1,698	50,181	63.9
Other States:				
Missouri-----	--	W	1,080	66.2
Other <u>1</u> /-----	W	W	W	59.0
Total reportable-----	--	--	1,080	66.0
Total withheld-----	194	1,330	18,690	--
Grand total <u>2</u> /-----	194	3,029	69,952	63.6

W Withheld to avoid disclosing company proprietary data; included with
"Total withheld."

1/ Includes California, Colorado, Montana, Nevada, New York, Texas, Utah,
and Wyoming.

2/ Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 11.--Shipments of usable iron ore from mines in the United States in 1981
(Thousand long tons and thousand dollars exclusive of ore containing 5% or more manganese)

District and State	Gross weight of ore shipped				Iron content of ore shipped			
	Direct- shipping ore	Concen- trates	Agglom- erates	Total quantity 1/ quantity 1/	Direct- shipping ore	Concen- trates	Agglom- erates	Total quantity 1/ value 1/
Lake Superior:								
Michigan-----	W	--	W	14,193	W	--	W	9,099
Minnesota-----	--	2,719	47,457	50,176	--	1,490	30,339	31,829
Wisconsin-----	--	--	853	853	--	--	555	555
								W
								2,062,118
								W
								W
Total reportable 1/----	--	2,719	48,311	65,222	--	1,490	30,894	41,483
Other States:								
Missouri-----	--	52	1,291	1,344	--	35	848	882
Other 2/ 3/-----	W	1,514	W	5,615	W	870	W	3,291
								W
								134,206
Total reportable 1/----	--	1,566	1,291	6,959	--	904	848	4,173
Total withheld-----	1,012	--	17,283	--	558	--	10,962	--
								190,344
								662,777
Grand total 1/ 3/-----	1,012	4,285	66,885	72,181	558	2,395	42,704	45,656
								2,915,239

W Withheld to avoid disclosing company proprietary data; included with "Total withheld."

1/ Data may not add to totals shown because of independent rounding.

2/ Includes California, Colorado, Nevada, New Jersey, New Mexico, New York, Texas, Utah, Virginia, and Wyoming.

3/ Includes byproduct ore.

PRELIMINARY

Table 12.--Consumption of iron ore and agglomerates in the United States in 1981
(Thousand long tons and exclusive of ore containing 5% or more manganese)

State	Iron ore and concentrates <u>1/</u>		Agglomerates <u>2/</u>		Miscellaneous <u>3/</u>	Total reportable <u>4/</u>
	Blast furnaces	Steel furnaces	Blast furnaces	Steel furnaces		
Alabama, Kentucky, Texas-----	418	W	8,179	W	W	8,597
California, Colorado, Utah-----	357	W	5,240	--	W	5,597
Ohio and West Virginia-----	165	W	18,795	W	W	18,960
Illinois, Indiana, Michigan-----	672	W	38,821	W	W	39,493
Maryland, New York, Pennsylvania-----	1,905	169	27,716	39	W	29,829
Undistributed-----	--	40	--	470	1,399	1,909
Total <u>4/</u> -----	3,516	209	98,752	510	1,399	104,385

W Withheld to avoid disclosing company proprietary data; included in "Undistributed."

1/ Not including pellets or other agglomerated products.

2/ Includes 63,679,034 tons of pellets produced at U.S. mines and 11,364,870 tons of foreign pellets.

3/ Includes iron ore consumed in production of cement, direct-reduced iron, and iron ore shipped for use in manufacture of paint, ferrites, heavy media, cattle feed, refractory and weighting materials, and in lead blast furnaces.

4/ Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 13.--Iron ore consumed in production of agglomerates at
iron and steel plants in 1981, by State
(Thousand long tons)

State	Iron ore consumed <u>1/</u>	Agglomerates produced
Alabama, Kentucky, and Texas-----	1,701	2,849
California, Colorado, and Utah-----	1,370	845
Ohio and West Virginia-----	755	1,787
Illinois, Indiana, and Michigan-----	3,975	8,594
Maryland, New York, and Pennsylvania-----	6,348	9,838
Total <u>2/</u> -----	14,149	23,914

1/ Includes domestic and foreign ores.

2/ Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 14.--Production of iron ore agglomerates ^{1/}
in the United States, by type
(Thousand long tons)

Type	Agglomerates produced	
	1980	1981
Sinter-----	2/24,351	3/24,327
Pellets-----	64,218	69,538
Total-----	88,569	93,865

^{1/} Production at mines and consuming plants.
^{2/} Includes 10,840,615 tons of self-fluxing sinter.
^{3/} Includes 10,683,505 tons of self-fluxing sinter.

PRELIMINARY

Table 15.--U.S. exports of iron ore, by country
(Thousand long tons and thousand dollars)

Country	1979		1980		1981	
	Quantity	Value	Quantity	Value	Quantity	Value
Canada-----	5,108	177,069	5,652	228,868	5,529	243,527
France-----	1/	7	1/	48	1/	2
Germany, Federal Republic of-----	2	162	1	42	1/	3
Japan-----	1/	4	1/	6	1/	2
Mexico-----	24	914	25	1,212	11	720
Norway-----	--	--	--	--	1/	59
Taiwan-----	1/	9	1/	3	--	--
United Kingdom-----	3	197	1/	10	1/	21
Other-----	11	386	11	379	5	351
Total 2/-----	5,148	178,749	5,689	230,568	5,546	244,685

1/ Less than one-half unit.

2/ Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 16.--U.S. imports for consumption of iron ore, by country
(Thousand long tons and thousand dollars)

Country	1979			1980			1981		
	Quantity	Value		Quantity	Value		Quantity	Value	
Australia-----	183	2,936		1/	1		--	--	
Brazil-----	3,095	81,446		1,995	62,889		1,738	52,267	
Canada-----	22,602	683,286		17,311	581,759		18,845	707,974	
Chile-----	245	4,458		322	10,293		342	6,329	
India-----	54	1,332		--	--		--	--	
Liberia-----	2,190	38,112		1,590	27,612		2,160	35,505	
Norway-----	44	561		--	--		--	--	
Peru-----	456	14,126		193	6,678		77	2,402	
South Africa, Republic of-----	106	2,551		6	82		--	--	
Sweden-----	171	4,568		33	917		87	2,318	
U.S.S.R.-----	--	--		--	--		--	--	
Venezuela-----	4,563	87,613		3,602	80,981		5,071	140,931	
Other-----	65	2,437		6	1,632		8	251	
Total 2/-----	33,776	923,426		25,058	772,844		28,328	947,977	

1/ Less than one-half unit.

2/ Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 17.--U.S. imports for consumption of iron ore, by customs district
(Thousand long tons and thousand dollars)

Customs district	1979			1980			1981		
	Quantity	Value		Quantity	Value		Quantity	Value	
Baltimore-----	6,763	207,840		5,230	185,445		5,421	212,960	
Buffalo-----	1,482	41,322		592	10,756		629	13,096	
Charleston-----	--	--		--	--		--	--	
Chicago-----	5,013	141,691		2,811	102,566		3,854	128,320	
Cleveland-----	5,367	135,439		4,333	124,893		4,995	179,616	
Detroit-----	668	16,255		547	8,751		765	25,303	
Galveston-----	--	--		212	5,979		123	2,579	
Houston-----	1,075	35,053		944	34,633		775	30,809	
Los Angeles-----	695	15,388		107	2,745		--	--	
Mobile-----	4,933	130,231		3,675	113,050		3,847	131,445	
New Orleans-----	856	14,641		180	3,465		237	5,177	
Philadelphia-----	6,087	164,775		6,005	166,943		7,218	203,969	
Portland, Oreg.-----	199	3,536		--	--		--	--	
Wilmington, N.C.-----	638	17,227		406	13,140		425	13,428	
Other-----	<u>1</u>	27		16	478		38	1,275	
Total <u>2</u> /-----	33,776	923,426		25,058	772,844		28,328	947,977	

1/ Less than one-half unit.

2/ Data may not add to totals shown because of independent rounding.

PRELIMINARY