



MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
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Iron Ore Monthly

IRON ORE IN AUGUST 1981

Mine production and shipments of iron ore declined 4% in August compared with the previous month, according to the Bureau of Mines, U.S. Department of the Interior. However, production and shipments for the first 8 months of 1981 increased by 9% and 11%, respectively, compared with the same period in 1980. Mine stocks of ore declined by 2.4 million tons during August, but stocks at consuming plants rose by 4 million tons as imports increased and consumption was unchanged compared with July. Consumption of iron ore during the first 8 months of 1981 was 13% more than in the comparable period of 1980, while imports were up 20% and exports increased 4%.

In Michigan, production of pellets at the Republic Mine was resumed during the week of August 10 after being shut down since July 5. One of two pelletizing lines was reactivated. At the Empire Mine, production was to be reduced beginning August 31; a work force reduction of 25% was expected to last through October.

Cutbacks in production of iron ore pellets were scheduled to begin in October at the Minntac and Minorca facilities on the Mesabi Range, according to announcements by United States Steel Corp.'s Minnesota Ore Operations, and Inland Steel Mining Co. Production at Minntac was to be reduced to about 40% of plant capacity beginning the week of October 11, for an indefinite period. The Minorca facility was scheduled to be closed from October 4 to November 11, except for maintenance and construction work. Temporary layoffs of about 1,500 workers at Minntac and 250 workers at Minorca were expected.

Note: Selected tables of iron ore statistics, to be published in Volume I of the 1980 Minerals Yearbook, are included with this issue of Mineral Industry Surveys.

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 2/	
			1981	1980
Production:				
1980 P/-----	62,282	7,331	--	69,613
1981:				
1st Quarter-----	16,916	1,897	18,812	19,956
2nd Quarter-----	19,285	1,785	21,070	19,317
July-----	6,626	485	7,112	5,326
August-----	6,230	631	6,860	4,368
Shipments:				
1980 P/-----	62,046	7,548	--	69,594
1981:				
1st Quarter-----	4,475	1,898	6,372	6,163
2nd Quarter-----	20,591	1,877	22,470	23,958
July-----	9,213	491	9,703	7,021
August-----	8,708	592	9,300	5,536

P/ Preliminary.

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 August		Shipments August		Mine stocks August 31	
	1981	1980	1981	1980	1981	1980
Lake Superior:						
Michigan-----	1,133	228	1,795	1,126	4,397	3,631
Minnesota-----	5,022	4,095	6,840	4,365	9,517	9,297
Wisconsin-----	75	46	74	45	3	3
Other U.S.-----	631	367	592	515	6,668	6,826
Total <u>2/--</u>	6,860	4,735	9,300	6,052	20,586	19,757

1/ Includes byproduct ore.

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

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

	Canada	Other	Total <u>1/</u>	
			1981	1980
1980-----	5,652	38	--	5,691
1981:				
1st Quarter-----	103	6	109	436
2nd Quarter-----	2,266	9	2,276	2,071
July-----	593	1	594	318
August-----	679	<u>2/</u>	680	728

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

2/ Less than one-half unit.

Source: U.S. Bureau of Census.

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

	Newfound- land	Quebec	Ontario	British Columbia	1981 total <u>1/</u>	1980 total <u>1/</u>
1980-----	24,291	17,235	7,265	589	--	49,381
1981:						
1st Quarter-	2,124	2,707	1,371	104	6,307	<u>r/</u> 6,323
2nd Quarter-	8,132	5,942	1,377	138	15,590	14,888
July-----	2,897	1,969	479	12	5,356	5,637
August-----	NA	NA	NA	NA	NA	5,148

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)

	August 1981		Year to date 1981			Year to date 1980 (thousand long tons)
	Thousand long tons	Value <u>1/</u> (thousand dollars)	Thousand long tons	Value <u>1/</u>		
				Thousand dollars	Per ton	
Brazil-----	111	3,339	1,424	43,730	\$30.71	1,355
Canada-----	3,002	103,593	12,458	459,661	36.90	11,006
Chile-----	23	505	237	4,268	18.01	271
Liberia-----	330	4,983	1,907	31,391	16.46	811
Peru-----	--	--	46	1,450	31.52	129
Sweden-----	45	1,257	45	1,257	27.93	33
Venezuela-----	594	19,172	3,444	91,520	26.57	2,730
Other-----	8	198	8	206	25.75	6
Total <u>2/</u> ---	4,113	133,046	19,570	633,484	32.37	16,340

1/ The market price of the merchandise in the principal market place 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 market place. 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/ 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 August 31	
	August 1981	Year to date			
		1981	1980	1981	1980
Alabama, Kentucky, Tennessee, Texas, Missouri-----	638	5,901	6,182	2,873	2,269
California, Colorado, Utah--- Delaware, Maryland, West Virginia-----	499	4,599	4,777	554	612
Illinois, Indiana-----	713	5,655	4,934	2,486	2,706
Michigan, Minnesota-----	2,445	20,331	16,211	9,734	10,374
New York, Ohio, Pennsylvania, New Jersey, Rhode Island---	661	4,993	4,676	3,006	3,000
	3,070	26,449	23,241	13,278	13,992
Total <u>1/</u> -----	8,024	67,929	60,021	31,931	32,953
Stocks at U.S. receiving/transfer docks-----				6,238	4,835

	Consumption by process			Pig iron produced		
	August 1981	Year to date		August 1981	Year to date	
		1981	1980		1981	1980
Blast furnaces-----	6,781	56,868	48,474	5,589	46,977	40,985
Steel furnaces-----	31	249	365	--	--	--
Agglomerating plants <u>2/</u> -	1,206	10,743	11,151	--	--	--
Miscellaneous <u>3/</u> -----	6	69	31	--	--	--
Total <u>1/</u> -----	8,024	67,929	60,021	5,589	46,977	40,985

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	August 1981	Year to date	
		1981	1980
Baltimore-----	697	3,065	3,526
Buffalo-----	197	482	362
Charleston-----	--	--	--
Chicago-----	857	2,771	1,773
Cleveland-----	588	3,272	2,505
Detroit-----	106	341	280
Houston-----	115	540	708
Los Angeles-----	--	--	107
Mobile-----	395	2,791	2,673
New Orleans-----	31	169	156
Philadelphia-----	1,079	5,705	3,898
Portland, Oreg.-----	--	--	--
Wilmington, N.C.-----	39	317	197
Other-----	9	117	155
Total <u>1</u>/-----	4,113	19,570	16,340

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

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

	1976	1977	1978	1979	1980
United States:					
Iron ore (usable, ^{1/} less than 5% manganese):					
Production ^{2/}	79,993	55,750	81,583	85,716	69,613
Shipments ^{2/}	77,076	54,053	83,207	86,218	69,594
Value ^{2/}	\$1,871,114	\$1,422,696	\$2,401,387	\$2,814,440	\$2,544,121
Average value at mines per ton	\$24.28	\$26.32	\$28.86	\$32.64	\$36.56
Exports	2,913	2,143	4,213	5,148	5,689
Value	\$82,192	\$62,760	\$136,721	\$178,749	\$230,568
Imports for consumption	44,390	37,905	33,616	33,776	25,058
Value	\$980,348	\$956,584	\$845,039	\$923,426	\$772,844
Consumption (iron ore and agglomerates)	125,424	116,034	124,797	125,431	98,879
Stocks Dec. 31:					
At mines	13,993	14,811	12,359	11,266	10,636
At consuming plants	56,246	42,271	39,301	38,969	35,706
At U.S. docks	4,763	2,979	3,569	5,416	6,095
Manganiferous iron ore (5% to 35% manganese): Shipments	229	193	279	215	155
World: Production	¥/885,098	¥/828,334	¥/835,359	¥/897,099	873,633

¥/ Revised.

^{1/} Direct shipping ore, concentrates, agglomerates, and byproduct ore.

^{2/} Includes byproduct ore.

PRELIMINARY

Table 9.--Crude ore mined in the United States in 1980, by district
State, and mining method
(Thousand long tons and exclusive of ore containing 5% or more manganese)

District and State	Open pit	Under- ground	Total quantity
Lake Superior:			
Michigan-----	47,479	--	47,479
Minnesota-----	145,479	--	145,479
Wisconsin-----	1,996	--	1,996
Total-----	194,954	--	194,954
Other States:			
Utah-----	1,326	--	1,326
Other <u>1</u> /-----	13,339	2,442	15,781
Total-----	14,665	2,442	17,107
Grand total-----	209,619	2,442	212,061

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

PRELIMINARY

Table 10.--Usable iron ore produced in the United States in 1980,
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	Agglomerates	Concentrates	Average Iron content (natural), percent
Lake Superior:				
Michigan-----	W	W	--	63.8
Minnesota-----	--	43,112	2,050	63.4
Wisconsin-----	--	699	--	64.8
Total reportable-----	--	43,811	2,050	63.5
Other States:				
Utah-----	W	--	W	53.9
Other <u>1/</u> <u>2/</u> -----	W	W	W	59.7
Total reportable-----	--	--	--	59.0
Total withheld-----	1,189	20,940	1,623	--
Grand total <u>3/</u>-----	1,189	64,751	3,673	63.0

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

1/ Includes California, Colorado, Missouri, Nevada, New Mexico, New York, Texas and Wyoming.

2/ Includes byproduct ore.

3/ 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 1980
(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				Total quantity 1/ value 1/
	Direct- shipping ore	Agglom- erates	Concen- trates	Total quantity 1/ value 1/	Direct- shipping ore	Agglom- erates	Concen- trates	Total quantity 1/ value 1/	
Lake Superior:									
Michigan-----	W	W	--	15,896	W	W	--	10,051	634,355
Minnesota-----	W	43,101	W	45,472	W	27,485	W	28,769	1,686,839
Wisconsin-----	--	679	--	679	--	440	--	440	W
Total reportable-----	--	43,780	--	62,046	--	27,925	--	39,260	2,321,194
Other States:									
Utah-----	W	--	W	1,307	W	--	W	718	W
Other 2/-----	W	W	3/ 1,370	3/ 6,239	W	W	772	3,710	177,030
Total reportable-----	--	--	1,370	7,546	--	--	772	4,428	177,030
Total withheld-----	1,289	20,340	2,814	--	665	12,784	1,542	--	45,896
Grand total 1/-----	1,289	64,120	4,184	3/ 69,594	665	40,709	2,314	43,688	2,544,121

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, Missouri, Nevada, New Mexico, New York, Texas, Virginia, and Wyoming.

3/ Includes byproduct ore.

PRELIMINARY

Table 12.--Consumption of iron ore and agglomerates in the United States in 1980
(Thousand long tons and exclusive of ore containing 5% or more manganese)

State	Iron ore and concentrates ^{1/}			Agglomerates ^{2/}		Miscellaneous ^{3/}	Total reportable ^{4/}
	Blast furnaces	Steel furnaces	Blast furnaces	Steel furnaces			
Alabama, Kentucky, and Texas-----	636	W	7,428	W	W	8,064	
California, Colorado, and Utah-----	1,422	W	4,997	--	W	6,419	
Ohio and West Virginia-----	332	25	17,187	52	W	17,596	
Illinois, Indiana, and Michigan-----	1,643	W	34,817	W	W	36,460	
Maryland, New York, and Pennsylvania-----	2,000	183	26,597	61	W	28,841	
Undistributed-----	--	50	--	314	1,133	1,497	
Total ^{4/} -----	6,034	258	91,026	428	1,133	98,879	

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

^{1/} Not including pellets or other agglomerated products.

^{2/} Includes 56,779,057 tons of pellets produced at U.S. mines and 9,937,205 tons of foreign pellets.

^{3/} Includes iron ore consumed in production of cement, and iron ore shipped for use in manufacture of heavy media, paint, ferrites, 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 1980, by State
(Thousand long tons)

State	Iron ore consumed <u>1/</u>	Agglomerates produced
Alabama, Kentucky, and Texas-----	1,934	2,843
California, Colorado, and Utah-----	1,725	2,001
Ohio and West Virginia-----	1,011	1,882
Illinois, Indiana, and Michigan-----	3,417	7,556
Maryland, New York, and Pennsylvania-----	6,325	10,069
Total-----	14,412	24,351

1/ Includes domestic and foreign ores.

PRELIMINARY

Table 14.--Beneficiated iron ore shipped from mines
in the United States 1/
(Thousand long tons and exclusive of ore containing
5% or more manganese)

Year	Benefi- ciated ore	Total iron ore	Proportion of beneficiated ore to total (percent)
1975-----	73,951	75,695	97.7
1976-----	74,848	76,697	97.6
1977-----	52,061	53,880	96.6
1978-----	80,875	82,826	97.6
1979-----	84,489	86,130	98.1
1980-----	68,272	69,562	98.1

1/ Beneficiated by further treatment than ordinary crushing and screening. Excludes byproduct ore.

PRELIMINARY

Table 15.--Production of iron ore agglomerates 1/
in the United States, by type
(Thousand long tons)

Type	Agglomerates produced	
	1979	1980
Sinter-----	2/ 32,407	3/ 24,351
Pellets-----	77,799	64,218
Total <u>4/</u> -----	110,207	88,569

1/ Production at mines and consuming plants.

2/ Includes 15,558,665 tons of self-fluxing sinter.

3/ Includes 10,840,615 tons of self-fluxing sinter.

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

PRELIMINARY

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

Country	1978		1979		1980	
	Quantity	Value	Quantity	Value	Quantity	Value
Canada-----	4,206	136,277	5,108	177,069	5,652	228,868
France-----	1/	5	1/	7	1/	48
Germany, Federal Republic of-----	1	46	2	162	1	42
Japan-----	--	--	1/	4	1/	6
Mexico-----	2	42	24	914	25	1,212
Taiwan-----	1/	2	1/	9	1/	3
United Kingdom-----	1/	31	3	197	1/	10
Other-----	3	317	11	386	11	379
Total 2/-----	4,213	136,721	5,148	178,749	5,689	230,568

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 country
(Thousand long tons and thousand dollars)

Country	1978		1979		1980	
	Quantity	Value	Quantity	Value	Quantity	Value
Australia-----	264	3,935	183	2,936	1/	1
Brazil-----	3,979	96,773	3,095	81,446	1,995	62,889
Canada-----	19,236	555,657	22,602	683,286	17,311	581,759
Chile-----	390	4,828	245	4,458	322	10,293
India-----	--	--	54	1,332	--	--
Liberia-----	2,170	38,737	2,190	38,112	1,590	27,612
Norway-----	302	6,567	44	561	--	--
Peru-----	818	21,629	456	14,126	193	6,678
South Africa, Republic of-----	94	2,949	106	2,551	6	82
Sweden-----	256	6,055	171	4,568	33	917
U.S.S.R.-----	1/	2	--	--	--	--
Venezuela-----	6,083	107,392	4,563	87,613	3,602	80,981
Other-----	23	515	65	2,437	6	1,632
Total 2/-----	33,616	845,039	33,776	923,426	25,058	772,844

1/ Less than one-half unit.

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

PRELIMINARY

Table 18.--U.S. Imports for consumption of iron ore, by customs district
(Thousand long tons and thousand dollars)

Customs district	1978			1979			1980		
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
Baltimore-----	6,417	184,312	6,763	207,840	5,230	185,445			
Buffalo-----	1,486	37,690	1,482	41,322	592	10,756			
Charleston-----	17	921	--	--	--	--			
Chicago-----	4,200	107,143	5,013	141,691	2,811	102,566			
Cleveland-----	7,156	206,507	5,367	135,439	4,333	124,893			
Detroit-----	540	10,233	668	16,255	547	8,751			
Galveston-----	--	--	--	--	212	5,979			
Houston-----	797	21,728	1,075	35,053	944	34,633			
Los Angeles-----	406	6,526	695	15,388	107	2,745			
Mobile-----	3,340	69,021	4,933	130,231	3,675	113,050			
New Orleans-----	1,559	32,525	856	14,641	180	3,465			
Philadelphia-----	7,062	153,708	6,087	164,775	6,005	166,943			
Portland, Creg.-----	151	2,723	199	3,536	--	--			
Wilmington, N.C.-----	481	11,627	638	17,227	406	13,140			
Other-----	4	376	<u>1</u>	27	16	478			
Total <u>2</u> /-----	33,616	845,039	33,776	923,426	25,058	772,844			

1/ Less than one-half unit.

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

PRELIMINARY