

Iron Ore

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World iron ore production exceeded 1009 Mt in 1996, but this was a decrease of 1.4% relative to the record-breaking 1024 Mt produced in 1995. International trade also decreased slightly, but exports at 433.8 Mt were close to the record of 447.3 Mt established in 1995.

Canadian production and shipments approached 36 Mt, while exports were close to 28 Mt. Iron ore pellets accounted for 24.2 Mt and concentrates for 11.4 Mt of shipments. There are three mining operations in the Labrador Trough area of northern Quebec and Labrador, and these account for over 96% of Canadian iron ore production. These mines belong to the Iron Ore Company of Canada (IOC), Quebec Cartier Mining Company (QCM), and Wabush Mines. There is also one mine in Ontario, the Algoma Ore Division (AOD) of Algoma Steel Inc.; a new magnetite mine in Newfoundland operated by Lodestone Limited; and by-product recovery of magnetite from two base-metal concentrators in British Columbia. Although not included in the iron ore industry, QIT-Fer et Titane Inc. mines ilmenite, an iron-titanium ore, near Havre-Saint-Pierre, Quebec, and produces pig iron as a co-product of titanium slag.

The three companies in the Labrador Trough reached three-year labour agreements with their locals of the United Steelworkers of America union. The agreement followed a 40-day strike by 1400 employees at the IOC mine at Carol Lake.

In December 1996, IOC announced a \$75 million investment plan for its facilities in Labrador City and Sept-Îles, and for the Quebec North Shore & Labrador Railway. A major part of the investment will be directed to producing iron ore pellets suitable for use in direct reduction furnaces. Expenditures are also planned for environmental projects for mine waste and for reducing the quantity of dust released during grinding.

In February, QCM purchased Normine's pellet plant for \$105 million. QCM has been operating the plant since 1985 and, since then, has raised its production capacity from 6 to 8.4 Mt/y.

Wabush Mines increased its shipments of pellets in 1996 relative to 1995. The 5.3 Mt shipped during the year was another step up from the 4.6-Mt/y operating level of the early 1990s.

Lodestone Limited, which started mining in 1995 from the Bishop deposits in western Newfoundland, used magnetic separation to produce a magnetite concentrate for use as ballast on the Hibernia Gravity Base Structure. The contract, for over 300 000 t of ballast, will run through part of 1997.

In Ontario, the AOD produced 846 000 t of sinter, including 493 000 t of superfluxed sinter at its sinter plant near Wawa. About half of the iron units for the sinter come from the siderite ore in the McLeod mine and the remaining material is recycled reverts and oxides from steel mills. The AOD has prolonged the economic life of its mine and sinter plant by devoting a major part of its production to recycled material.

OUTLOOK

For Canadian iron ore mines the prospect is for another year with shipments around 36 Mt. The industry is adjusting to changes in market demand by making the investments necessary to produce the iron ore products demanded at costs that will be competitive internationally.

Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 70. (2) Information in this review was current as of January 31, 1996.

TABLE 1. CANADA, IRON ORE PRODUCTION AND TRADE, 1995 AND 1996

Item No.	1995		1996p		
	(tonnes) ¹	(\$000)	(tonnes) ¹	(\$000)	
PRODUCTION (mine shipments)					
	Newfoundland	19 969 252	795 838	20 709 000	838 402
	Quebec	15 990 267	x	14 856 000	x
	Ontario	585 603	x	376 613	x
	British Columbia	82 815	1 887	88 357	2 012
	Total ²	36 627 937	1 291 474	36 029 970	1 310 529
IMPORTS					
2601.11	Iron ore concentrates, non-agglomerated				
	Brazil	-	-	53 668	2 450
	United States	101 344	2 540	37 107	840
	South Africa	-	-	201	7
	Greenland	-	-	81	3
	Norway	33 183	1 602	-	-
	Turkey	2 580	85	-	-
	Venezuela	362	12	-	-
	Mexico	5	..	-	-
	Total	137 474	4 239	91 057	3 300
2601.12	Iron ore, agglomerated				
	United States	5 336 434	235 466	6 193 084	299 944
	Brazil	449 103	19 652	589 365	27 576
	Sweden	45 432	2 157	-	-
	Japan	270	15	-	-
	Germany	130	7	-	-
	Total	5 831 369	257 297	6 782 449	327 520
EXPORTS					
2601.11	Iron ore concentrates, non-agglomerated				
	Germany	2 051 442 ^r	47 867 ^r	2 694 890	65 255
	United Kingdom	2 412 576	52 533	2 059 364	49 779
	France	2 004 867	42 473	1 484 402	34 633
	Netherlands	1 502 544 ^r	24 465 ^r	1 280 928	20 594
	Japan	1 239 028	19 329	1 005 061	15 591
	United States	933 948	28 772	520 373	15 258
	South Korea	755 005	12 250	662 830	11 662
	Philippines	180 142	2 810	338 655	5 632
	China, People's Republic of	142 952	2 563	248 246	5 172
	Spain	151 709	3 522	161 956	3 587
	Belgium	189 215	5 355	90 851	1 876
	Australia	63 450	1 268	-	-
	Portugal	9 000	218	-	-
	Total	11 635 878 ^r	243 425 ^r	10 547 556	229 039
2601.12	Iron ore, agglomerated				
	United States	8 164 463 ^r	352 194 ^r	9 229 247	425 812
	Germany	1 859 809 ^r	74 865 ^r	1 776 495	68 640
	Italy	1 023 789	47 984	1 425 248	60 918
	United Kingdom	1 205 120	44 468	1 621 953	57 107
	Belgium	1 536 817	53 039	1 306 540	47 153
	Netherlands	1 400 347 ^r	39 076 ^r	593 173	16 963
	China, People's Republic of	279 296 ^r	9 498 ^r	475 187	16 002
	Mexico	-	-	77 334	13 931
	Spain	423 109	17 978	264 456	11 824
	Taiwan	321 493	9 147	241 150	7 465
	South Korea	96 194	3 121	216 363	6 026
	Portugal	185 950	5 670	124 456	4 958
	Iceland	-	-	21 002	585
	Turkey	262 321	9 484	-	-
	Norway	175 262	4 881	-	-
	Australia	64 418 ^r	2 764 ^r	-	-
	Dominican Republic	50 000	1 387	-	-
	France	21 950	969	-	-
	South Africa	118	8	-	-
	Total	17 070 456 ^r	676 533 ^r	17 372 604	737 384

TABLE 1 (cont'd)

Item No.	1995		1996 ^p	
	(tonnes) ¹	(\$000)	(tonnes) ¹	(\$000)
EXPORTS (cont'd)				
Total exports, all classes				
United States	9 098 411 ^r	380 966 ^r	9 749 620	441 070
Germany	3 911 251 ^r	122 732 ^r	4 471 385	133 895
United Kingdom	3 617 696	97 001	3 681 317	106 886
Italy	1 023 789	47 984	1 425 248	60 918
Belgium	1 726 032	58 394	1 397 391	49 029
Netherlands	2 902 891 ^r	63 541 ^r	1 874 101	37 557
France	2 026 817	43 442	1 484 402	34 633
China, People's Republic of	422 248 ^r	12 061 ^r	723 433	21 174
South Korea	851 199	15 371	879 193	17 688
Japan	1 239 028	19 329	1 005 061	15 591
Spain	574 818	21 500	426 412	15 411
Mexico	—	—	77 334	13 931
Taiwan	321 493	9 147	241 150	7 465
Philippines	180 142	2 810	338 655	5 632
Portugal	194 950	5 888	124 456	4 958
Iceland	—	—	21 002	585
Turkey	262 321	9 484	—	—
Norway	175 262	4 881	—	—
Australia	127 868	4 032	—	—
Dominican Republic	50 000	1 387	—	—
South Africa	118	8	—	—
Total	28 706 334 ^r	919 958 ^r	27 920 160	966 423
Consumption of iron ore at Canadian iron and steel plants	13 445 000	..	14 308 000	..

Sources: Natural Resources Canada; Statistics Canada; American Iron Ore Institute.

— Nil; .. Not available; ^p Preliminary; ^r Revised; ^x Confidential.

¹ Dry tonnes for production (shipments) by province, natural weight for imports and exports. ² Total iron ore shipments include shipments of by-product iron ore.

TABLE 2. CANADA, IRON ORE SHIPMENTS, 1993-96

Company and Location	Ore Mined	Product Shipped	1993	1994	1995	1996 ^p
			(000 tonnes, natural or wet)			
Algoma Ore Division Algoma Steel Inc. Wawa, Ontario	Siderite	Sinter ¹	1 074	788	997	733
Iron Ore Company of Canada Schefferville, Quebec	Hematite, goethite and limonite	Direct shipping	65	—	—	—
Carol Lake, Labrador	Specular hematite and magnetite	Concentrate	5 640	5 475	4 634	4 038
		Acid pellets	6 161	6 547	3 121	2 430
		Fluxed pellets	2 010	3 484	7 084	8 075
		Chips	11	—	188	169
Quebec Cartier Mining Company Mount Wright, Quebec	Specular hematite	Concentrate	7 782	8 206	7 759	6 882
		Acid pellets	3 237	3 763	4 884	7 853
		Fluxed pellets	2 622	3 379	3 449	..
		Low Si pellets	1 055	1 025	—	..
Wabush Mines Wabush, Labrador and Pointe-Noire, Québec	Specular hematite and magnetite	Acid pellets	2 847	3 035	3 322	3 155
		Fluxed pellets	1 982	1 670	1 866	2 158
		Concentrate	142	369	135	—
		Chips	51	2	105	24
British Columbia producers	Magnetite	Concentrate	57	74	83	88
Total			34 736	37 817	37 627	35 605

Source: Natural Resources Canada.

— Nil; .. Not available; ^p Preliminary.

¹ Includes about 400 000 t of iron-bearing material not from the mine.

TABLE 3. RECEIPTS, CONSUMPTION AND INVENTORIES OF IRON ORE AT CANADIAN IRON AND STEEL PLANTS, 1995 AND 1996

	1995	1996
	(000 tonnes)	
Receipts imported	5 875	6 947
Receipts from domestic sources	7 817	7 477
Total receipts at iron and steel plants	13 692	14 424
Consumption of iron ore	13 445	14 308
Inventory at docks, plants, mines and furnace yards, December 31	8 341	9 414
Inventory change	1 163	1 073

Source: American Iron Ore Association.

TABLE 4. WORLD IRON ORE PRODUCTION, 1994-96

	1994	1995	1996
	(000 tonnes, natural)		
China	239 032	250 390	246 000
Brazil	167 810	178 380	179 870
Australia	128 662	146 210	147 200
Russian Federation	73 302	70 734	67 328
India	58 388	66 750	66 610
United States	58 382	62 490	62 500
Ukraine	54 400	51 306	48 835
Canada	36 416	38 847	37 202
Republic of South Africa	32 321	32 650	30 830
Sweden	19 909	21 660	21 290
Venezuela	17 973	18 950	18 720
Mauritania	10 443	11 330	11 400
Kazakstan	10 100	12 960	12 336
North Korea	9 000	8 000	8 000
Other countries	56 647	53 089	52 010
Total	972 785	1 023 746	1 010 132

Sources: Natural Resources Canada; UNCTAD Intergovernmental Group of Experts on Iron Ore; UNCTAD Trust Fund Project on Iron Ore Information.

TABLE 5. SELECTED PRICES OF IRON ORE BOUND FOR JAPAN AND EUROPE, 1987-96

Ore	Market	Source	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
(US¢/Fe Unit Dmt, f.o.b.)												
Fines (including concentrate)	Europe	CVRD	24.50	23.50	26.56	30.80	33.25	33.10	29.09	26.47	28.38	30.00
		Iscor	–	20.55	20.70	24.75	22.61	20.60	21.79	23.10
		Kiruna	25.25	26.00	30.00	35.70	37.10	36.50	30.50	28.10	30.85	32.70
		Carol Lake	24.03	23.69	27.00	31.78	34.60	33.15	28.50	26.15	27.70	30.00
		Mt. Wright	24.03	23.69	27.00	31.78	34.60	33.15	28.50	26.15	27.70	30.00
	Japan	CVRD	21.89	20.90	23.61	27.38	30.05	28.11	25.02	22.65	23.96	25.39
		Iscor	18.85	17.75	20.37	23.62	25.49	24.24	21.57	19.52	20.65	21.89
		Hamersley ²	24.28	23.31	26.34	30.54	32.96	31.35	27.90	25.26	26.72	28.33
		Carol Lake	20.93	19.93	22.52	26.11	28.18	27.26	24.26	21.96	23.23	24.63
Lump	Europe	Iscor	23.50	22.34	–	33.00	34.72	32.29	29.38	28.00	30.39	32.13
		Hamersley ¹	33.15	36.00	43.00	49.97	50.25	48.28	42.06	40.28	45.15	46.82
	Japan	CVRD	21.89	21.89	25.20	29.22	30.96	29.00	25.91	24.38	26.31	27.63
		Iscor	21.99	21.86	26.05	30.21	32.01	30.27	27.60	26.15	28.74	30.50
		Hamersley ²	28.33	27.88	33.23	38.53	40.83	38.23	34.78	32.74	35.32	37.09
Pellets	Europe	CVRD	36.70	40.35	47.33	51.60	52.15	48.47	43.64	43.64	49.14	52.40
		Kiruna	41.15	46.35	53.50	59.00	57.50	53.48	45.70	45.60	52.40	55.80
		Carol Lake	37.15	39.95	48.35	52.58	53.00	49.35	44.25	44.00	50.05	53.80
		Mt. Wright	37.15	39.95	48.35	52.58	53.00	49.35	44.25	44.00	50.05	53.80
	Japan	CVRD										
		(Nibrasco)	35.04	37.93	44.49	48.50	49.03	45.57	41.03	41.03	46.19	49.26
		Savage River	34.17	35.89	42.10	45.90	46.39	43.12	38.83	38.83	43.72	46.62

Source: *The Tex Report*.

– Nil; . . Not available; Dmt Dry metric tonne; f.o.b. Free on board.

¹ c.i.f. Rotterdam; ² f.o.b. Dampier.

Note: Price is reported in cents, U.S. currency, for each percentage point of iron in a tonne of ore, e.g., at 30¢/Fe unit, ore grading 65% iron would bear a price of 65 x 30¢ = US\$19.50/t.