

# Mineral Industry Surveys

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## NICKEL IN NOVEMBER 2003

In November, reported domestic nickel consumption, on a daily average basis, was 3% less than that of October, according to the U.S. Geological Survey. Average daily nickel consumption of cathode, pellets, briquets, and ferronickel for stainless steel was 47.4 metric tons per day (t/d)—21% greater than the 39.3 t/d for October, but 34% less than the 71.3 t/d (revised) for November 2002. Consumption of elemental nickel to make superalloys and corrosion-resistant nickel-base alloys decreased by 24% and 5%, respectively, from October levels, on a daily average basis. Sales to plating companies averaged 27.5 t/d, about 10% less than the October sales figure of 30.5 t/d.

On November 30, U.S. consumer stocks of cathode, pellets, briquets, and powder totaled 1,200 metric tons (t)—4% less than the 1,250 t (revised) on October 31 and 20% less than the 1,500 t (revised) reported for yearend 2002. Stocks in London Metal Exchange (LME) warehouses worldwide totaled 34,392 t—7% less than the 32,052 t on October 31. Preliminary data collected by the International Nickel Study Group indicated that, at the end of October, world nickel producers (excluding those in Austria, China, The Former Yugoslav Republic of Macedonia, Serbia, and the Ural area of Russia) had approximately 88,500 t of nickel in primary products in stock, of which 59,300 t, or 67%, was Class I material. Class I materials are refined products with a nickel content of 99% or greater (electrolytic cathode, pellets, briquets, rondelles, powder, etc.). Class II materials include ferronickel, oxide sinter, and East Asian utility nickel—products with a nickel content of less than 99%.

The United States imported 109,000 t of primary nickel in the first 10 months of 2003, 5% more than the 104,000 t for the corresponding period of 2002. Class I materials accounted for 86% of total primary imports received during the first 10 months of 2003. Trade data for November 2003 will appear in a subsequent report.

### Exploration of the Guatemalan Laterite Belt

Jaguar Nickel Inc. (formerly Chesbar Resources Inc.) has been exploring four nickel-cobalt concessions in the Ophiolitic/Laterite Belt of Guatemala. To date, the Canadian company has identified 133 million metric tons of inferred resources grading 1.51% nickel and 0.08% cobalt. Much of the work has been

done on the Sechol property, which adjoins a nickel mining and smelting complex that Inco Limited mothballed at the end of 1980 because of rising fuel oil prices. Jaguar also has identified several promising deposits on the Marichaj and San Lucas properties, to the northwest of Sechol. Together, the three properties form a boomerang-shaped zone of targets covering 741 square kilometers. Mineral resources identified on the Sechol property prior to 2004 are summarized below:

Category	Million tons	%Ni	%Co	%MgO
Measured	14	1.46	0.08	13.85
Indicated	23	1.34	0.08	11.79
<b>Total</b>	<b>37</b>	<b>1.39</b>	<b>0.08</b>	<b>12.57</b>

Source: Harris, Magee, and Valls, 2003.

In October 2003, Jaguar awarded a 250-hole drilling contract to Major Drilling Group International Inc. The drilling program will focus initially on the El Inicio and Buena Vista areas of the Sechol property. Jaguar was planning to award a second contract to drill in the nearby El Segundo area.

In November 2002, Jaguar hired Hatch Associates Ltd. to evaluate how nickel and cobalt could best be leached from the Sechol ores. As part of the study, Hatch has been evaluating Jaguar's Atmospheric Chloride Leaching Process, which would use a solution of hydrochloric acid (HCl) and magnesium chloride (MgCl<sub>2</sub>) to recover the two metals. The novel process would produce a nickel-cobalt hydroxide precipitate for export. Based on preliminary designs, the proposed processing plant would produce 10,000 to 20,000 metric tons per year of nickel in mixed hydroxide (De Mori, Dessureault, and Krysa, 2004).

### References Cited

- De Mori, Andrea, Dessureault, Yves, and Krysa, Brian, 2004, Jaguar Nickel Inc.—Sechol nickel laterite project, Guatemala—Extended summary of metallurgical scoping study: Mississauga, Ontario, Canada, Hatch Associates, Ltd., January 19, 13 p.
- Harris, Bryn, Magee, John, and Valls, Ricardo, 2003, Beyond PAL—The Chesbar option, AAL: Nickel/Cobalt-9, ALTA 2002, Perth, Australia, May 18-20, 2003, Presentation, 15 p.

TABLE 1  
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE<sup>1</sup>

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder		Oxide-sinter, salts, and other forms	Total	Total year to date
		Ferronickel			
2002:					
November	4,640	632	58	5,330	64,000
December	4,550	505	53	5,110	69,100
January-December	57,800	9,080	2,270	69,100	XX
2003:					
January	4,820	529	75	5,420	5,420
February	4,410	390	23	4,820 <sup>r</sup>	10,200 <sup>r</sup>
March	4,350 <sup>r</sup>	653	42	5,040 <sup>r</sup>	15,300 <sup>r</sup>
April	4,790	400	46	5,230	20,500 <sup>r</sup>
May	4,330	524	25 <sup>r</sup>	4,870 <sup>r</sup>	25,400 <sup>r</sup>
June	4,130	498 <sup>r</sup>	43	4,670 <sup>r</sup>	30,100 <sup>r</sup>
July	3,700	667 <sup>r</sup>	24	4,390 <sup>r</sup>	34,500 <sup>r</sup>
August	3,730	628	28	4,380 <sup>r</sup>	38,800 <sup>r</sup>
September	3,520 <sup>r</sup>	274	29	3,820 <sup>r</sup>	42,700 <sup>r</sup>
October	4,060	354	33	4,450	47,100 <sup>r</sup>
November:					
Steel:					
Stainless and heat resisting	797	625	W	1,420	17,600
Alloy (excludes stainless)	268	--	W	268	2,260
Superalloys	686	--	W	686	9,160
Copper-nickel alloys	W	--	--	W	W
Electric, magnetic, and expansion alloys	9	--	--	9	119
Other nickel & nickel alloys	W	--	W	W	W
Cast iron	W	--	--	W	W
Electroplating (sales to platers)	824	--	--	824	9,600
Chemical and chemical uses	W	--	--	W	W
Other uses	968	--	19	989	12,600
Total reported	3,550 <sup>2</sup>	625	19	4,200	51,300
Total all companies (calc) <sup>3</sup>	XX	XX	XX	6,540	78,900
2003: January-November	45,400	5,540	387	51,300	XX
2002: January-November	53,300	8,570	2,220	64,000	XX

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

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

<sup>2</sup>Of consumption, 2,910 metric tons was consumed as cathodes and pellets, the remainder as briquets and powder.

<sup>3</sup>Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (65.01%) to apparent primary consumption for 2001.

TABLE 2  
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS, BY FORM AND USE<sup>1,2</sup>

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder		Ferronickel	Oxide-sinter, salts, and other forms	Total
2002:					
November		1,610	93	84	1,790
December		1,500	60	81	1,640
2003:					
January		1,360	100	44	1,500
February		1,430	54	34	1,520
March		1,230	148	43	1,430 <sup>r</sup>
April		1,440	49	47	1,540
May		1,430	58	41	1,530
June		1,750 <sup>r</sup>	101	71	1,920
July		1,470 <sup>r</sup>	91 <sup>r</sup>	56	1,610 <sup>r</sup>
August		1,580 <sup>r</sup>	140 <sup>r</sup>	49	1,760 <sup>r</sup>
September		1,180 <sup>r</sup>	101	49	1,330 <sup>r</sup>
October		1,250 <sup>r</sup>	114	56	1,420 <sup>r</sup>
November:					
Steel (stainless, heat resisting and alloy)		274	(3)	(3)	274
Nonferrous alloys <sup>4</sup>		912	(3)	(3)	912
Foundry (cast irons)		(3)	--	--	(3)
Chemical (catalysts, ceramics, plating salt, etc.) and unspecified uses		17	176	57	250
Total		1,200	176	57	1,440

<sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>Stocks held by companies that consume nickel in more than one end use category are credited to the major category. Stocks are subject to revisions owing to inventory adjustments.

<sup>3</sup>Included in the "Chemical and unspecified uses" category.

<sup>4</sup>Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3  
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE<sup>1</sup>

(Metric tons, nickel content)

Period	Consumption			Stocks		
	Ferrous scrap <sup>2</sup>	Nonferrous scrap <sup>3</sup>	Total scrap	Ferrous scrap <sup>2</sup>	Nonferrous scrap <sup>3</sup>	Total scrap
2002:						
November	4,590	506	5,100	3,240	104	3,350
December	3,870	641	4,510	3,210	101	3,310
January-December	61,600	8,070	69,700	XX	XX	XX
2003:						
January	4,710	645	5,350	3,420	107	3,530
February	4,030	758	4,790	3,080	96	3,180
March	6,430	649	7,080	2,930	105	3,040
April	5,310	674	5,980	3,210	93	3,310
May	4,920	773	5,700	3,150	102	3,250
June	4,040	645	4,680	3,100	109	3,210
July	4,340	682	5,020	3,370	105	3,480
August	4,780	755	5,530	3,310	115	3,430
September	3,810	739	4,550	3,290	108	3,400
October	5,360	763 <sup>r</sup>	6,120 <sup>r</sup>	3,110	101	3,210
November	4,960	667	5,630	2,950	97	3,050
2003: January-November	52,700	7,750	60,400	XX	XX	XX
2002: January-November	57,800	7,430	65,200	XX	XX	XX

<sup>r</sup>Revised. XX Not applicable.

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

<sup>2</sup>Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

<sup>3</sup>Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY<sup>1</sup>

(Metric tons, nickel content)<sup>2</sup>

Period and country of origin	Cathodes pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total <sup>3</sup>	Total year to date <sup>4</sup>	Wrought nickel
2002:										
October	5,140	609	1,010	11	230	564	183	7,740	111,000	106
November	6,560	684	991	27	181	627	222	9,300	120,000	51
December	6,970	512	750	16	225	530	312	9,310	130,000	70
January-December	97,200	6,970	12,300	1,230	3,030	6,080	2,860	130,000	XX	878
2003:										
January	5,950	928	605	10	341	322	223	8,380	8,380	55
February	7,060	954	916	8	323	424	269	9,960	18,300	115
March	17,400	1,130	1,310	34	420	476	309	21,100	39,400	93
April	7,770	678	1,700	--	496	533	321	11,500	50,900	64
May	6,160	933	1,530	7	412	461	378	9,880	60,800	37
June	10,800	368	692	(5)	226	408	327	12,800	73,600	41
July	6,240	294	1,840	11	352	420	312	9,470	83,000	49
August	7,420	762	913	(5)	477	475	544	10,600	93,600	62
September	9,990	1,030	1,180	(5)	570	744	248	13,800	107,000	48
October:										
Australia	855	20	--	--	--	--	--	875	10,700	1
Brazil	181	--	--	--	10	36	--	227	1,100	--
Canada	3,040	385	--	20	100	438	(5)	3,980	35,600	--
Colombia	--	--	243	--	2	1	--	246	2,550	--
Dominican Republic	--	--	670	--	--	--	--	670	7,140	--
Finland	260	58	--	--	--	1	123	442	6,290	--
France	59	--	--	--	12	--	32	103	2,670	4
Germany	(5)	15	--	--	38	1	12	66	895	12
Japan	--	9	(5)	--	26	--	11	46	542	12
Mexico	--	--	--	--	--	222	--	222	1,730	--
New Caledonia	--	--	100	--	--	--	--	100	1,670	--
Norway	1,560	--	--	--	11	--	--	1,570	14,000	1
Russia	1,090	--	--	--	--	--	--	1,090	27,000	--
South Africa	40	40	--	--	--	--	--	80	258	--
Sweden	--	6	--	--	--	--	1	7	64	--
United Kingdom	73	20	--	(5)	79	--	6	178	2,530	(5)
Venezuela	--	--	--	--	12	6	--	18	39	--
Zimbabwe	120	--	--	--	--	--	--	120	536	--
Other	--	12	--	--	36	10	70	128	2,230	4
Total	7,270	565	1,010	20	326	715	255	10,200	118,000	34
2003: January-October	86,000	7,650	11,700	91	3,940	4,980	3,190	118,000	XX	597
2002: January-October	83,700	5,770	10,600	1,190	2,620	4,920	2,330	111,000	XX	758

XX Not applicable. -- Zero.

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

<sup>2</sup>The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

<sup>3</sup>Excludes wrought nickel.

<sup>4</sup>May include revisions for prior months.

<sup>5</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF NICKEL, BY COUNTRY<sup>1</sup>

(Metric tons, nickel content)<sup>2</sup>

Period and country of destination	Cathodes pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total <sup>3</sup>	Total year to date	Wrought nickel
2002:										
October	113	99	8	34	1,010	1,840	167	3,270	39,600	221
November	64	95	8	6	830	1,470	184	2,650	42,300	181
December	75	65	7	3	983	2,080	423	3,630	45,900	175
January-December	1,740	1,480	46	685	13,700	25,700	2,580	45,900	XX	2,570
2003:										
January	92	58	10	11	853	3,060	267	4,350	4,350	586
February	24	84	13	7	948	5,050	261	6,380	10,700	462
March	46	113	5	13	770	5,150	243	6,340	17,100	629
April	78	86	8	19	894	2,880	466	4,430	21,500	149
May	30	59	11	11	836	2,380	379	3,710	25,200	147
June	90	47	29	33	516	2,310	276	3,300	28,500	143
July	87	95	27	2	510	3,570	393	4,690	33,200	148
August	56	77	37	1	792	3,040	301	4,310	37,500	162
September	107	106	18	51	707	2,350	223	3,560	41,100	148
October:										
Australia	--	--	--	--	5	--	--	5	55	--
Belgium	--	21	--	--	--	1	4	26	273	--
Canada	8	18	--	--	927	204	143	1,300	9,890	3
China	--	(4)	10	--	--	592	26	628	5,110	1
Finland	--	--	--	--	--	513	--	513	4,990	(4)
Germany	1	8	--	--	--	8	3	20	320	5
India	--	(4)	--	--	18	74	--	92	876	--
Italy	1	13	--	--	--	--	--	14	510	--
Japan	--	24	--	1	21	25	18	89	1,260	9
Korea, Republic of	--	5	2	--	--	1,030	25	1,060	6,180	2
Mexico	96	3	--	1	--	14	7	121	651	43
Netherlands	--	1	--	--	--	19	--	20	1,260	1
South Africa	--	--	--	2	--	--	1	3	82	--
Spain	--	--	--	--	--	--	--	--	2,580	--
Sweden	--	--	--	--	--	2	--	2	352	--
Taiwan	(4)	1	--	--	--	621	4	626	8,800	--
United Kingdom	--	20	--	--	22	1	1	44	1,020	--
Other	27	39	--	--	13	166	44	289	1,690	78
Total	133	153	12	4	1,010	3,270	276	4,850	45,900	142
2003: January-October	742	877	170	151	7,830	33,000	3,090	45,900	XX	2,710
2002: January-October	1,600	1,310	31	676	11,900	22,100	1,970	39,600	XX	2,210

XX Not applicable. -- Zero.

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

<sup>2</sup>The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

<sup>3</sup>Excludes wrought nickel.

<sup>4</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY<sup>1</sup>

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2002:									
October	180	150	400	212	28	106	117	1,190	15,700
November	231	279	324	348	28	194	149	1,550	17,200
December	170	192	510	353	21	147	153	1,550	18,800
January-December	2,540	2,640	5,230	3,520	196	2,850	1,810	18,800	XX
2003:									
January	54	252	427	332	(2)	133	91	1,290	1,290
February	167	158	356	264	11	93	140	1,190	2,480
March	129	209	600	308	(2)	148	163	1,560	4,040
April	184	245	697	316	6	204	266	1,920	5,950
May	181	204	504	328	7	206	195	1,630	7,580
June	150	156	579	244	35	292	102	1,560	9,140
July	130	266	554	277	30	305	168	1,730	10,900
August	151	78	469	319	32	322	154	1,530	12,400
September	48	239	406	211	10	115	95	1,120	13,500
October:									
Australia	64	--	--	--	--	--	(2)	64	536
Belgium	--	--	(2)	(2)	--	--	--	(2)	150
Canada	--	1	5	--	--	6	4	16	201
China	--	--	--	1	--	--	10	11	249
France	--	1	71	3	--	2	1	78	1,180
Germany	15	66	116	104	15	50	6	372	5,160
Italy	--	104	18	--	--	4	4	130	925
Japan	5	--	4	--	--	39	1	49	654
Mexico	--	--	--	--	--	--	33	33	657
Netherlands	--	--	--	--	--	--	20	20	189
South Africa	98	--	--	--	--	--	--	98	332
Sweden	--	82	184	6	--	50	--	322	2,280
United Kingdom	22	48	19	192	--	10	3	294	2,100
Other	--	5	26	(2)	(2)	1	13	45	432
Total	204	307	443	306	15	162	95	1,530	15,000
2003: January-October	1,400	2,110	5,040	2,900	146	1,980	1,470	15,000	XX
2002: January-October	2,140	2,160	4,400	2,820	147	2,510	1,510	15,700	XX

XX Not applicable. -- Zero.

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

<sup>2</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY<sup>1</sup>

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2002:									
October	290	507	146	717	3	187	320	2,170	25,100
November	739	418	174	546	10	147	295	2,330	27,400
December	415	316	78	302	14	115	426	1,660	29,100
January-December	8,720	6,020	1,520	6,590	169	1,770	4,290	29,100	XX
2003:									
January	729	375	138	236	12	231	192	1,910	1,910
February	1,160	419	93	215	38	168	374	2,460	4,380
March	226	615	113	399	214	150	307	2,020	6,400
April	600	743	158	315	14	182	292	2,300	8,700
May	857	950	82	295	44	184	256	2,670	11,400
June	180	980	94	521	21	163	280	2,240	13,600
July	750	553	72	223	25	263	216	2,100	15,700
August	708	707	112	344	30	228	201	2,330	18,000
September	597	623	80	281	52	140	271	2,040	20,100
October:									
Australia	--	(2)	(2)	(2)	--	1	2	3	37
Belgium	11	40	1	--	--	1	(2)	53	868
Canada	1	34	22	36	8	47	49	197	2,260
France	60	48	(2)	10	2	(2)	5	125	2,070
Germany	48	84	1	19	4	1	2	159	4,470
India	(2)	5	--	2	--	(2)	2	9	128
Ireland	--	--	(2)	(2)	--	1	(2)	1	17
Italy	4	67	1	4	--	--	3	79	472
Japan	29	46	3	22	39	1	2	142	1,160
Korea, Republic of	(2)	9	(2)	29	(2)	1	3	42	345
Mexico	(2)	20	12	65	(2)	110	112	319	2,750
Netherlands	--	1	--	(2)	(2)	2	3	6	127
Singapore	(2)	51	(2)	--	--	5	1	58	163
Spain	11	--	--	(2)	--	--	1	12	126
Sweden	--	(2)	(2)	2	--	(2)	(2)	2	56
Switzerland	19	2	4	7	(2)	14	(2)	46	448
Taiwan	(2)	6	(2)	22	(2)	1	8	37	345
United Kingdom	17	317	6	68	(2)	14	1	423	3,820
Other	6	72	5	110	2	56	59	309	2,440
Total	206	802	55	396	55	255	253	2,020	22,100
2003: January-October	6,010	6,770	996	3,230	506	1,960	2,640	22,100	XX
2002: January-October	7,560	5,280	1,270	5,740	144	1,510	3,570	25,100	XX

XX Not applicable. -- Zero.

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

<sup>2</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 8  
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
November 2003:		
Stainless and heat resisting steels	68	32
Alloy steels	100	(1)
Superalloys	85	15
Copper-nickel alloys	80	20
Other nickel-base alloys	100	(1)

<sup>1</sup>Less than 1/2 unit.

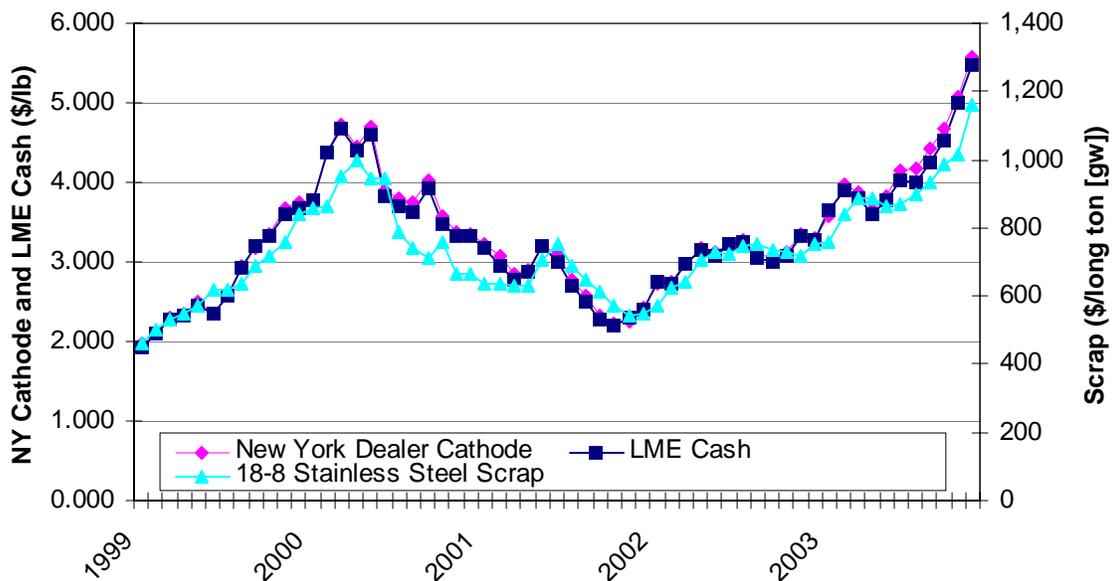
TABLE 9  
NICKEL PRICES

Date	Platts Metals Week				American Metal Market, 18/8 Stainless steel scrap Pittsburgh
	Cathode NY Dealer \$/lb.	LME Cash mean (1) \$/t	LME Cash mean (1) \$/lb.	18/8 Stainless steel scrap Free market \$/long ton (gw)	18/8 Stainless steel scrap Pittsburgh \$/long ton (gw)
2002:					
Average for month of:					
November	3.349	7,313.929	3.318	XX	716
December	3.308	7,193.158	3.263	XX	755
Yearly average	3.095	6,771.751	3.072	XX	703
2003:					
Average for week ending:					
October 3	4.81-4.98	10,328.000	4.685	980-990	980-990
October 10	4.99-5.16	10,758.500	4.880	1,000-1,045	1,015-1,025
October 17	5.14-5.38	11,123.500	5.046	1,045-1,070	1,015-1,025
October 24	5.16-5.39	11,218.500	5.089	1,045-1,075	1,015-1,025
October 31	5.23-5.59	11,454.500	5.196	1,050-1,100	1,015-1,025
November 7	5.59-5.69	11,987.000	5.437	1,100-1,160	1,150-1,170
November 14	5.64-5.81	12,170.000	5.520	1,150-1,170	1,150-1,170
November 21	5.52-5.85	12,093.500	5.486	1,150-1,170	1,150-1,170
November 28	5.52-5.73	12,095.500	5.486	1,150-1,170	1,150-1,170
December 5	5.74-5.98	12,578.000	5.705	1,150-1,170	1,150-1,170
December 12	5.98-6.21	13,192.000	5.984	1,300-1,350	1,225-1,250
December 19	6.26-7.08	14,502.500	6.578	1,250-1,300	1,225-1,250
December 26	6.96-7.25	15,411.667	6.991	1,250-1,300	1,225-1,250
Average for month of:					
January	3.580	8,026.020	3.641	XX	757
February	3.978	8,623.000	3.911	840	840
March	3.865	8,378.810	3.801	886	885
April	3.655	7,910.125	3.588	885	885
May	3.826	8,330.625	3.779	839	861
June	4.155	8,874.762	4.026	874	867
July	4.178	8,797.391	3.990	893	897
August	4.418	9,351.375	4.242	918	935
September	4.668	9,965.341	4.520	978	985
October	5.066	11,047.174	5.011	1,041	1,013
November	5.568	12,086.500	5.482	1,153	1,160
December	6.390	14,162.500	6.424	1,262	1,222
2004:					
Average for week ending:					
January 2	7.01-7.78	16,625.000	7.541	1,250-1,300	1,225-1,250

XX Not applicable.

<sup>1</sup>Mean of the cash buyer price and the cash seller & settlement price.

### 1999-2003 AVERAGE MONTHLY PRICES (Derived from Metals Week and American Metal Market quotations)



### 1999-2003 STOCKS

