

# Mineral Industry Surveys

## For information, contact:

Kim B. Shedd, Cobalt Commodity Specialist  
National Minerals Information Center  
Telephone: (703) 648-4974  
Email: kshed@usgs.gov

Annie Hwang (Data)  
Telephone: (703) 648-7952  
Email: ahwang@usgs.gov

Text prepared by:  
Samantha Ewing, Mineral Commodity Specialist (Cobalt backup)

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## COBALT IN MARCH 2023

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in March 2023 was 61% more than that imported during February 2023. For the first 3 months of 2023, the amount of cobalt contained in imports was essentially unchanged from that imported during the same period in 2022 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in March 2023 was 64% more than that exported during February 2023 and during the first 3 months of 2023, the amount exported was 5% less than the amount exported during the same period in 2022 (table 4).

## Prices

During the past 2 years, London Metal Exchange (LME) cobalt stocks trended downward until October 2022 and remained essentially unchanged through December 2022. Beginning in 2023, LME cobalt stocks resumed their downward trend. Cobalt stocks in March 2023 were 16% less than those of February 2023. Monthly average cobalt prices generally trended up into the second quarter of 2022 before sharply declining through August. From September to December 2022, monthly

average LME cash mean prices remained unchanged then declined in 2023. In March 2023, the LME cash mean price decreased by 10% compared with that in February 2023 and was 58% lower than that in March 2022. Monthly average U.S. spot prices reported by S&P Global Platts Metals Week trended upward from August to October 2022, then declined through February 2023. The March 2023 monthly average U.S. spot cobalt price increased slightly from that in February 2023 and was 56% lower than that in March 2022 (fig.1, table 1). The following listed prices are for cobalt metal in March, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	15.50–18.35	16.94
LME cash mean <sup>2</sup>	15.19–15.54	15.23

<sup>1</sup>Source: S&P Global Platts Metals Week, minimum 99.8% cobalt cathode.

<sup>2</sup>London Metal Exchange, mean of the cash buyer and cash seller price, minimum 99.8% cobalt briquettes, cathode, coarse grain powder, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

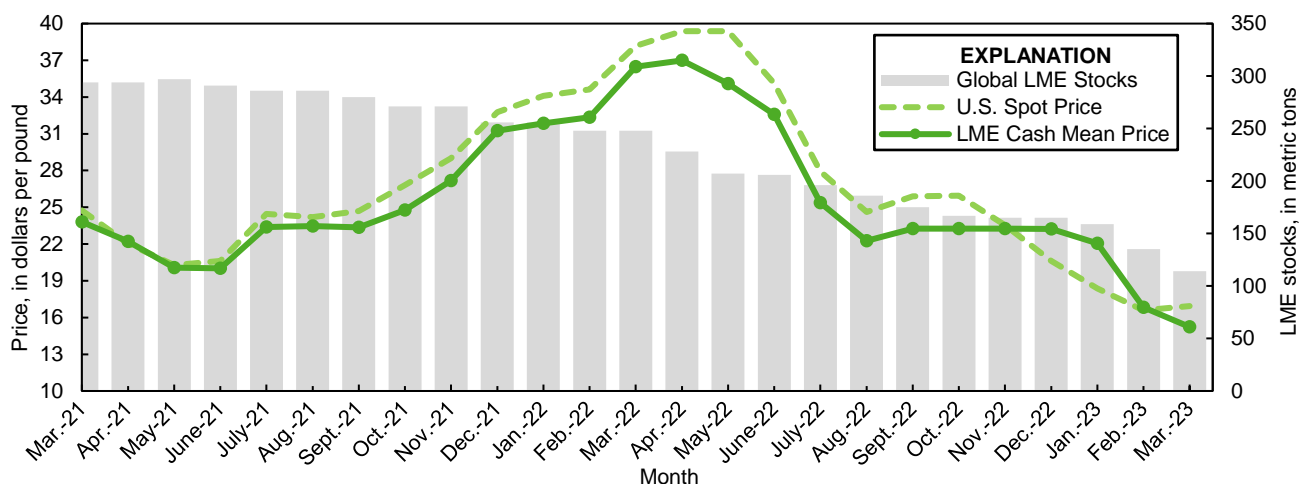


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for March 2021 through March 2023. Sources: S&P Global Platts Metals Week and London Metal Exchange.

## Industry News

In late March 2023, Jervois Global Ltd. (Australia) suspended construction and concentrator commissioning at its Idaho Cobalt Operations (ICO) near Salmon, ID, citing low cobalt prices and increased construction costs from inflation. Jervois began plant commissioning in October 2022 and before the suspension the company had commissioned process water systems for the mill and scheduled full concentrator commissioning in April. Underground stoping activities had commenced and generated more than 27,000 metric tons (t) of ore, which were stored for processing. Jervois intended to finish construction and concentrator commissioning when cobalt prices recover. In the meantime, the company planned to continue drilling and studies to increase ICO mineral resources and reserves and to assess construction of a U.S. cobalt refinery. Jervois reported that these efforts were expected to be backed by a U.S. Department of Defense, Defense Production Act Title III award in the amount of \$15M, subject to the company's successful completion of required documentation and agreement to terms and conditions (Jervois Global Ltd., 2022b; 2023b, 2023c).

As of December 31, 2022, the ICO measured and indicated mineral resources totaled 5.2 million metric tons (Mt) with 0.44% cobalt. ICO's proven and probable reserves totaled 2.5 Mt with 0.55% cobalt. Production guidance was previously estimated at 1,500 to 1,700 t of cobalt in concentrate in 2023 and 1,900 to 2,100 t of cobalt in concentrate in 2024. The mine will be one of only two mines in the world where cobalt is the principal product (Jervois Global Ltd., 2022a, p. 25; 2023a, p. 44–45).

The decline in cobalt prices since May 2022 has been attributed to reduced consumption growth coinciding with new supply coming to the market. Growth in cobalt consumption has slowed with the increase in global market share of non-cobalt battery chemistries for electric vehicles. New cobalt supply was

anticipated from the restart of capacity in Congo (Kinshasa) and from increases in cobalt mine and plant capacity in Indonesia (Home, 2023).

## References Cited

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TABLE 1  
REPORTED STOCKS OF COBALT METAL, END OF PERIOD

(Metric tons, contained cobalt)

Period	U.S. Government <sup>1</sup>	LME <sup>2</sup>		Total
		U.S. warehouse	Non-U.S. warehouse	
2022:				
March	302	54	194	248
April	302	54	174	228
May	302	39	168	207
June	302	39	167	206
July	302	39	157	196
August	302	39	147	186
September	302	34	141	175
October	302	34	133	167
November	302	34	131	165
December	302	34	131	165
2023:				
January	302	34	125	159
February	302	34	101	135
March	302	34	80	114

<sup>1</sup>Data from Defense Logistics Agency Strategic Materials.

<sup>2</sup>London Metal Exchange.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY OR LOCALITY<sup>1</sup>

Period and country or locality of origin	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>4</sup> (metric tons)	Cobalt content, year to date <sup>4,5</sup> (metric tons)
	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)		
2022:								
March	648	\$42,400	256	\$11,400	1,040	\$6,200	1,110	2,640
April	343	24,000	193	10,100	487	4,040	624	3,260
May	900	68,900	211	10,800	1,290	6,910	1,410	4,670
June	504	38,300	160	8,640	992	5,750	890	5,560
July	685	50,500	193	10,500	1,430	7,190	1,210	6,770
August	530	36,900	134	6,130	153	2,010	671	7,440
September	578	34,600	200	7,120	310	4,410	827	8,270
October	579	29,600	117	5,030	200	2,550	725	8,990
November	571	29,100	109	4,990	260	2,810	721	9,710
December	678	34,400	100	3,400	197	1,700	805	10,500
January–March	1,840	112,000	501	22,400	1,570	12,900	2,640	XX
January–December	7,210	458,000	1,920	89,100	6,900	50,200	10,500	XX
2023:								
January	593	27,700	184	6,160	262	3,760	803	803
February	559	26,200	94	3,220	243	1,870	694	1,500
March:								
Australia	--	--	--	--	--	--	--	7
Belgium	6	224	2	58	--	--	7	16
Brazil	--	--	--	--	18	329	7	28
Canada	129	5,060	--	--	--	--	129	524
China	(7)	17	(7)	5	25	247	7	9
Finland	8	494	265	6,500	163	2,150	252	547
France	--	--	--	--	--	--	--	5
Germany	4	433	--	--	--	--	4	22
Japan	106	4,340	--	--	--	--	106	248
Madagascar	82	2,980	--	--	--	--	82	187
Morocco	10	334	--	--	--	--	10	40
Netherlands	--	--	--	--	--	--	--	7
Norway	436	16,800	--	--	--	--	436	742
Russia	50	1,850	--	--	--	--	50	50
South Africa	--	--	--	--	--	--	--	58
Taiwan	--	--	--	--	19	214	5	28
United Kingdom	5	376	20	652	--	--	20	92
Other	1	101	(7)	4	(7)	4	1	3
Total	838	33,000	287	7,220	226	2,940	1,120	2,610
January–March	1,990	86,900	564	16,600	730	8,570	2,610	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>Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

<sup>3</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>4</sup>Estimated from gross weights.

<sup>5</sup>May include revisions to previously published data.

<sup>6</sup>Customs value.

<sup>7</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY OR LOCALITY<sup>1</sup>

Period and country or locality of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
2022:						
March	6	\$326	189	\$2,980	44	\$4,830
April	21	1,240	192	2,830	27	3,200
May	24	1,400	175	2,340	42	4,720
June	25	1,690	155	2,070	44	4,980
July	29	1,760	99	2,060	38	4,080
August	33	1,730	152	2,530	27	3,940
September	35	1,780	200	2,850	33	4,210
October	32	1,730	133	2,200	42	3,790
November	31	1,670	114	1,640	33	4,490
December	39	1,970	90	1,990	36	4,780
January–March	76	3,780	431	6,220	113	13,700
January–December	344	18,800	1,740	26,700	434	51,800
2023:						
January	61	3,180	150	2,350	26	3,850
February	19	1,240	140	2,210	36	5,740
March:						
Belgium	4	175	6	137	--	--
Canada	(3)	2	16	160	3	1,160
China	--	--	6	7	2	654
France	--	--	26	697	14	426
Ireland	--	--	35	109	(3)	54
Japan	--	--	20	109	(3)	46
Taiwan	--	--	6	232	(3)	9
Tunisia	--	--	6	56	--	--
United Kingdom	27	1,330	25	711	20	2,030
Other	--	--	--	--	2	451
Total	30	1,510	146	2,220	42	4,830
January–March	111	5,930	435	6,780	103	14,400

-- Zero.

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

<sup>2</sup>Customs value.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF COBALT MATERIALS<sup>1</sup>

Period	Unwrought cobalt, powders, matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>4</sup> (metric tons)	Cobalt content, year to date <sup>4,5</sup> (metric tons)
	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)		
2022:								
March	597	\$16,600	3	\$94	--	--	599	1,350
April	378	13,200	1	44	(7)	\$5	379	1,730
May	493	17,600	7	304	--	--	498	2,220
June	400	12,200	2	79	(7)	6	402	2,630
July	381	14,600	3	145	--	--	384	3,010
August	410	12,000	7	297	(7)	4	416	3,430
September	344	12,200	7	298	--	--	349	3,780
October	584	16,900	2	64	--	--	585	4,360
November	529	13,900	7	281	--	--	535	4,890
December	460	13,600	1	31	--	--	460	5,360
January–March	1,340	42,600	6	227	--	--	1,350	XX
January–December	5,320	169,000	43	1,770	1	16	5,360	XX
2023:								
January	408	13,000	3	114	(7)	4	411	411
February	327	12,500	1	41	--	--	328	738
March	535	15,300	6	202	--	--	539	1,280
January–March	1,270	40,800	10	357	(7)	4	1,280	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>May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

<sup>3</sup>Cobalt acetates and cobalt chlorides.

<sup>4</sup>Estimated from gross weights.

<sup>5</sup>May include revisions to previously published data.

<sup>6</sup>Free alongside ship (f.a.s.) value.

<sup>7</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,  
AND CONCENTRATES<sup>1</sup>

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
2022:				
March	105	\$15,300	--	--
April	204	19,200	(3)	\$4
May	143	16,600	--	--
June	164	16,400	--	--
July	201	23,000	--	--
August	114	18,500	--	--
September	185	25,500	(3)	8
October	121	17,200	--	--
November	181	24,300	--	--
December	182	21,000	--	--
January–March	348	44,100	--	--
January–December	1,840	226,000	(3)	12
2023:				
January	186	27,000	--	--
February	118	19,300	(3)	4
March	126	18,500	(3)	7
January–March	430	64,800	(3)	11

-- Zero.

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

<sup>2</sup>Free alongside ship (f.a.s.) value.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.