

# 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

**Internet:** <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

## COBALT IN JULY 2022

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in July 2022 was 36% more than that imported during June 2022. For the first 7 months of 2022, the amount of cobalt contained in imports was 19% more than that imported during the same period in 2021 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in July 2022 was 5% less than that exported during June 2022 and during the first 7 months of 2022, the amount exported was essentially unchanged from that exported during the same period in 2021 (table 4).

## Prices

During the past 2 years, London Metal Exchange (LME) stocks trended downward and cobalt prices generally trended upward through April 2022 before sharply declining during the last several months (fig. 1, table 1). In July, the monthly average U.S. spot cobalt price decreased by 20% from that in June 2022 and was 14% higher than that in July 2021. The monthly

average LME cash mean price decreased by 22% from that in June 2022 and was 9% higher than that in July 2021. The following listed prices are for cobalt metal in July, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	25.55–31.80	27.94
LME cash mean <sup>2</sup>	22.57–31.64	25.37

<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 99.3% cobalt briquettes, cathode, ingot, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

## Industry News

PolyMet Mining Corp. entered into an agreement with Teck American Inc. (a subsidiary of Teck Resources Ltd. of Canada) to form a 50:50 joint venture to develop PolyMet's NorthMet copper-nickel-platinum-group metal project and to study

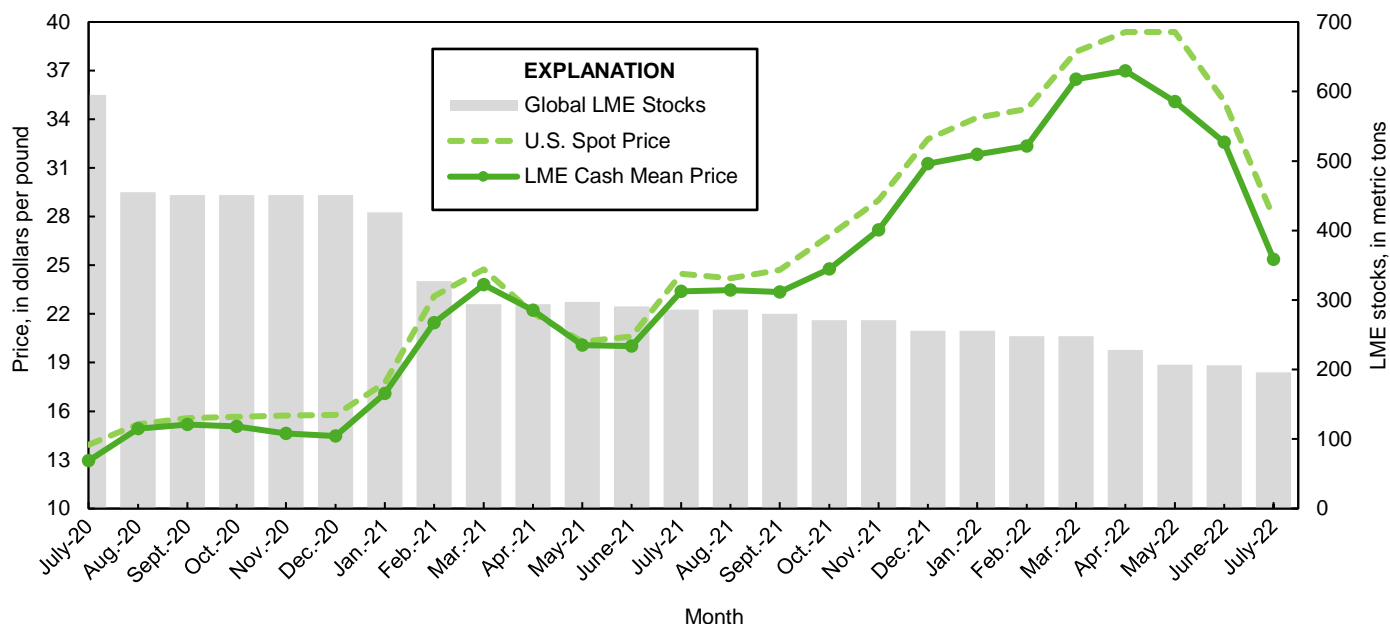


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for July 2020 through July 2022. Sources: S&P Global Platts Metals Week and London Metal Exchange.

development options for Teck’s Mesaba copper–nickel–precious metals project. Both projects are in Minnesota’s Duluth Complex and reportedly represent approximately one-half of the complex’s known resources of cobalt, copper, nickel, and platinum-group metals. Under the agreement, PolyMet Mining Corp. and Teck American Inc. will become equal partners of PolyMet Mining, Inc. (a subsidiary of PolyMet Mining Corp.), which will be renamed NewRange Copper Nickel LLC (PolyMet Mining Corp., 2022).

## Reference Cited

PolyMet Mining Corp., 2022, PolyMet strikes 50–50 joint venture agreement with Teck Resources—Joint Venture to develop NorthMet, further study Mesaba opportunity: St. Paul, MN, PolyMet Mining Corp. news release, July 20, 11 p. (Accessed December 5, 2022, at <https://polymetmining.com/investors/news/polymet-strikes-5050-joint-venture-agreement-with-teck-resources/>.)

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TABLE 1  
REPORTED STOCKS OF COBALT METAL, END OF PERIOD

(Metric tons, contained cobalt)

Period	U.S. Government <sup>2</sup>	LME <sup>1</sup>		Total
		U.S. warehouse	Non-U.S. warehouse	
2021:				
July	302	50	236	286
August	302	50	236	286
September	302	50	230	280
October	302	50	221	271
November	302	50	221	271
December	302	50	206	256
2022:				
January	302	50	206	256
February	302	54	194	248
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

<sup>1</sup>London Metal Exchange.

<sup>2</sup>Data from Defense Logistics Agency Strategic Materials.

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>4</sup>		Oxides and hydroxides		Salts and compounds <sup>5</sup>		Total cobalt content for the period <sup>2</sup> (metric tons)	Cobalt content, year to date <sup>2,3</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)		
2021:								
July	437	\$20,700	202	\$6,600	318	\$3,260	672	5,690
August	801	37,800	187	6,620	216	2,300	1,000	6,690
September	577	28,500	174	6,590	199	3,070	766	7,460
October	722	35,200	168	6,040	269	3,710	926	8,380
November	475	25,500	267	10,100	230	3,310	736	9,120
December	440	25,500	169	6,410	410	5,070	679	9,800
January–July	4,200	171,000	1,260	39,000	2,000 <sup>r</sup>	22,900 <sup>r</sup>	5,690	XX
January–December	7,210	323,000	2,220	74,700	3,320	40,400	9,800	XX
2022:								
January	754	44,600	84	3,540	148	2,860	859	859
February	440	24,800	161	7,460	382	3,790	667	1,530
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:								
Australia	--	--	--	--	--	--	--	48
Belgium	--	--	10	676	18	352	12	147
Brazil	--	--	4	157	62	758	25	166
Canada	141	7,690	--	--	--	--	141	758
China	10	562	--	--	2	50	11	103
Finland	63	5,890	85	4,730	802	3,080	341	1,660
France	--	--	--	--	--	--	--	3
Germany	8	900	--	--	23	91	15	73
Hong Kong	--	--	--	--	--	--	--	49
Italy	--	--	--	--	--	--	--	4
Japan	40	2,570	--	--	--	--	40	748
Korea, Republic of	--	--	--	--	--	--	--	31
Madagascar	42	3,620	--	--	--	--	42	199
Malaysia	--	--	--	--	--	--	--	3
Mexico	--	--	3	128	--	--	2	30
Morocco	40	2,900	--	--	--	--	40	95
Netherlands	--	--	--	--	--	--	--	6
Norway	288	24,200	--	--	--	--	288	1,590
Russia	25	1,490	--	--	--	--	25	316
South Africa	22	176	--	--	211	812	79	108
Taiwan	--	--	5	316	181	1,020	50	160
Turkey	--	--	--	--	--	--	--	24
United Kingdom	6	496	86	4,490	132	1,020	99	401
Zambia	--	--	--	--	--	--	--	46
Other	--	--	--	--	--	--	--	3
Total	685	50,500	193	10,500	1,430	7,190	1,210	6,770
January–July	4,270	293,000	1,260	62,400	5,780	36,700	6,770	XX

<sup>7</sup>Revised. 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>Estimated from gross weights.

<sup>3</sup>May include revisions to previously published data.

<sup>4</sup>Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

<sup>5</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<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)
2021:						
July	13	\$648	136	\$1,870	25	\$4,230
August	3	120	128	1,680	51	4,530
September	11	476	99	1,590	34	4,790
October	20	1,110	160	2,300	27	4,470
November	17	838	188	2,710	24	4,150
December	30	1,460	135	1,200	32	4,710
January–July	130	5,800	845	10,300	146	22,800 <sup>r</sup>
January–December	210	9,800	1,560	19,800	315	45,500
2022:						
January	51	2,440	163	1,840	53	5,770
February	19	1,020	79	1,390	16	3,060
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:						
Belgium	10	744	1	22	1	53
China	--	--	1	13	6	476
France	--	--	6	190	1	197
India	--	--	2	68	2	221
Ireland	--	--	16	10	(3)	8
Japan	--	--	19	323	1	132
Norway	--	--	--	--	3	166
Spain	--	--	6	73	--	--
Tunisia	--	--	5	51	--	--
United Kingdom	19	1,020	40	1,300	20	1,750
Other	--	--	2	10	4	1,080
Total	29	1,760	99	2,060	38	4,080
January–July	175	9,870	1,050	15,500	263	30,600

<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>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>5</sup>		Total cobalt content for the period <sup>3</sup> (metric tons)	Cobalt content, year to date <sup>3,4</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)		
2021:								
July	367	\$13,100	1	\$25	1	\$32	368	3,050
August	285	9,810	2	79	6	58	288	3,340
September	339	11,500	1	32	--	--	340	3,680
October	493	15,600	2	85	(7)	10	494	4,170
November	424	10,400	2	101	--	--	426	4,600
December	333	10,000	2	96	--	--	335	4,930
January–July	3,020	81,600	33	672 <sup>7</sup>	3	65	3,050	XX
January–December	4,900	139,000	43	1,060	9	133	4,930	XX
2022:								
January	454	14,400	2	83	--	--	456	456
February	293	11,600	1	50	--	--	293	749
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
January–July	3,000	100,000	19	799	(7)	11	3,010	XX

<sup>1</sup>Revised. 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>Estimated from gross weights.

<sup>4</sup>May include revisions to previously published data.

<sup>5</sup>Cobalt acetates and cobalt chlorides.

<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)
2021:				
July	213	\$17,700	--	--
August	191	16,300	--	--
September	121	10,900	(3)	\$8
October	274	22,500	--	--
November	139	13,400	--	--
December	217	18,600	(3)	4
January–July	879 <sup>r</sup>	88,400 <sup>r</sup>	2	14
January–December	1,820	170,000	2	26
2022:				
January	139	15,400	--	--
February	103	13,300	--	--
March	105	15,300	--	--
April	204	19,200	(3)	4
May	143	16,600	--	--
June	164	16,400	--	--
July	201	23,000	--	--
January–July	1,060	119,000	(3)	4

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.