Mineral resources and ore reserves zabaykalsky division as of 01.01.2022[1]		Ore mln t	Contained metal			
			Cu mln t	Au mln oz	Ag mln oz	Fe mln t
TOTAL	Proven and probable reserves	281	2	6	28	42
	Measured and indicated resources	274	2	6	32	49
	Inferred resources	61	0.2	1	5	8

In 2021, the Company updated the mineral resource estimate using 3D modelling data, which resulted in an increase of total reserves and resources by 225 mln t.

An updated resource model was also used to estimate the mineral resources of the Bystrinskoye deposit in line with the JORC Code.

Dynamics of reserves and mineral resources

Item[2]	2019	2020	2021
PROVEN AND PROBABLE RESERVES			
Ore, mln t	757	743	1,293
Nickel, mln t	6.7	6.5	8.7
Copper, mln t	11.9	11.6	15.5
PGMs, Moz	120	118	175
MEASURED AND INDICATED RESOURCES			
Ore, mln t	2,193	2,019	1,824
Nickel, mln t	15.2	13.8	13.5
Copper, mln t	23.2	23.0	22.0
PGMs, Moz	260	258	246
INFERRED RESOURCES			
Ore, mln t	933	575	995
Nickel, mln t	7.4	4.5	5.8
Copper, mln t	8.0	7.9	9.6
PGMs, Moz	78	77	102
TOTAL			
Ore, mln t	3,126	2,594	2,819
Nickel, mln t	22.6	18.3	19.2
Copper, mln t	31.2	30.9	31.6
PGMs, Moz	338	335	348

PROVEN AND PROBABLE RESERVES AT GRK BYSTRINSKOYE'S DEPOSIT AT YEAR-END 2021 WERE 281 MLN T, AVERAGE METAL CONTENT: CU – 0.6%, FE IN MAGNETITE CONCENTRATE – 14.9%, AND AU – 0.63 G/T.

Existing deposits

Nornickel is well-positioned to maintain a high level of economic ore reserves given the significant mineral resources within its existing deposits. The depleted proven and probable reserves at the existing mines are replaced through the development of measured, indicated and inferred resources. The Company plans to ramp up its production by tapping into new rich ore deposits and gradually developing disseminated and cuprous ore horizons.

1 In 2021, CSA Global completed an estimate of mineral resources of the Bystrinskoye deposit in line with the JORC Code based on an updated resource model, which reflects both complexity and diversity of the deposit's ore types.

2 Data on mineral resources and ore reserves are based on the JORC Code, excluding GRK Bystrinkoye's deposits. The 2019 data include the Honeymoon Well project.

NORILSK DIVISION

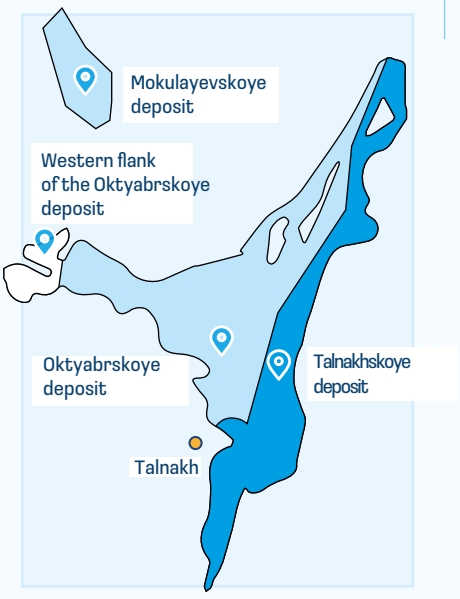
Talnakh Ore Cluster

The Talnakh Ore Cluster is located in the Norilsk Industrial District in the north of the Krasnoyarsk Region, on the right bank of the Norilskaya River. Geologically, the Talnakh Ore Cluster is located on the north-western margin of the Siberian Craton and includes the world's largest Oktyabrskoye and Talnakhskoye copper-nickel deposits. In the early 1960s, multiple deposits of high-grade, cuprous and disseminated ores were discovered within the area. Nornickel is still well supplied with base and noble metals from the uniquely rich and vast resource base of the Talnakh Ore Cluster developed through mining operations of its Norilsk Division. In 2021, SRK Consulting (Russia) developed a methodology for estimating mineral resources and ore reserves and re-estimated the mineral resource base of the Talnakh Ore Cluster using 3D modelling data. With models updated as of 1 January 2022, the mineral resources of all ore types were adjusted to add 232 mln t to the previous estimate, including 11 mln t in rich ores, 38 mln t in cuprous ores and 183 mln t in disseminated ores. Proven and probable reserves increased by 452 mln t due to new mining project launches and the development of design documents.

Reserves and resources

Item	2019	2020	2021
PROVEN AND PROBABLE RESERVES			
Ore, mln t	631	623	1,108
Nickel, mln t	6.0	5.9	8.0
Copper, mln t	11.4	11.2	15.0
PGMs, Moz	112	110	158
MEASURED AND INDICATED RESOURCES			
Ore, mln t	1,554	1,546	1,368
Nickel, mln t	11.3	11.2	10.9
Copper, mln t	21.6	21.4	20.4
PGMs, Moz	234	232	221
INFERRED RESOURCES			
Ore, mln t	437	433	842
Nickel, mln t	3.7	3.6	4.9
Copper, mln t	7.6	7.5	9.1
PGMs, Moz	78	76	100
TOTAL			
Ore, mln t	1,991	1,979	2,210
Nickel, mln t	15.0	14.8	15.8
Copper, mln t	29.2	28.9	29.5
PGMs, Moz	312	308	321

PROVEN AND PROBABLE RESERVES INCREASED BY 452 MLN T DUE TO NEW MINING PROJECT LAUNCHES AND THE DEVELOPMENT OF DESIGN DOCUMENTS.



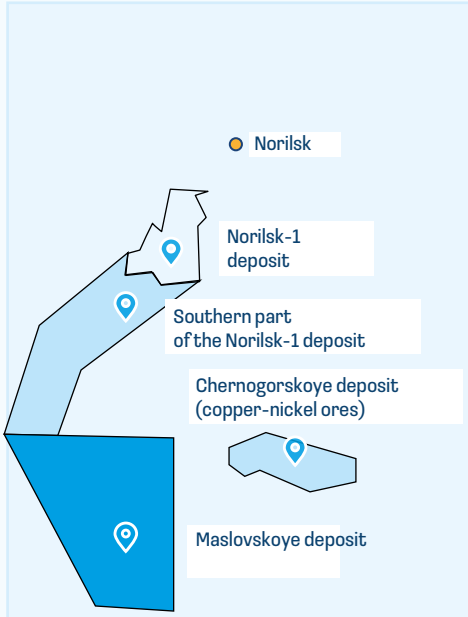
Norilsk Ore Cluster

The Norilsk ore cluster is also located in the Norilsk Industrial District. Brownfields within the NID include the northern part of the Norilsk-1 deposit producing disseminated copper and nickel sulphide ores since the 1930s. In 2020, the resource estimate for deposit was updated against new permanent exploratory standards for open-pit and underground mining. A feasibility study of permanent exploratory standards and a reserve statement for the Norilsk-1 deposit (northern part) were approved by the State Commission for Mineral Reserves of the Russian Ministry of Natural Resources and included into the State Register of Mineral Reserves. In 2021, SRK Consulting completed an estimate of mineral resources and ore reserves. The estimate of the deposit's ore reserves was based on the feasibility study, which drove an increase in proven and probable reserves.

Design documentation providing for the development of the deposit's remaining reserves took into account the additional resource potential not covered by earlier project solutions, enabling us to add 104 mln t of disseminated ore to Nornickel's proven and probable reserves.

To raise additional external investments in brownfield expansion in the northern part of the Norilsk-1 deposit, Nornickel has launched the South Cluster project, which is currently ongoing.

A licence to develop the Norilsk-1 deposit, as well as some of the Polar Division assets, were transferred to Medvezhy Ruchey, a wholly owned subsidiary established specifically to implement the expansion project. Medvezhy Ruchey includes Norilsk Concentrator, an open-pit and an underground mine at Zapolyarny Mine, and tailing dumps No. 1 and Lebyazhye.



Reserves and resources

Item	2019	2020	2021
PROVEN AND PROBABLE RESERVES			
Ore, mln t	42	40	144
Nickel, mln t	0.1	0.1	0.3
Copper, mln t	0.2	0.2	0.4
PGMs, Moz	8	8	19
MEASURED AND INDICATED RESOURCES			
Ore, mln t	145	157	147
Nickel, mln t	0.4	0.4	0.4
Copper, mln t	0.6	0.6	0.5
PGMs, Moz	25	26	23
INFERRED RESOURCES			
Ore, mln t	1	-	12
Nickel, mln t	0,003	-	0.03
Copper, mln t	0,003	-	0.04
PGMs, Moz	0.3	-	2
TOTAL			
Ore, mln t	146	157	159
Nickel, mln t	0.4	0.4	0.4
Copper, mln t	0.6	0.6	0.5
PGMs, Moz	25	26	25

PROVEN AND PROBABLE RESERVES OF OF DISSEMINATED ORE INCREASED BY 104 MLN T DUE TO REVALUATION.

KOLA DIVISION

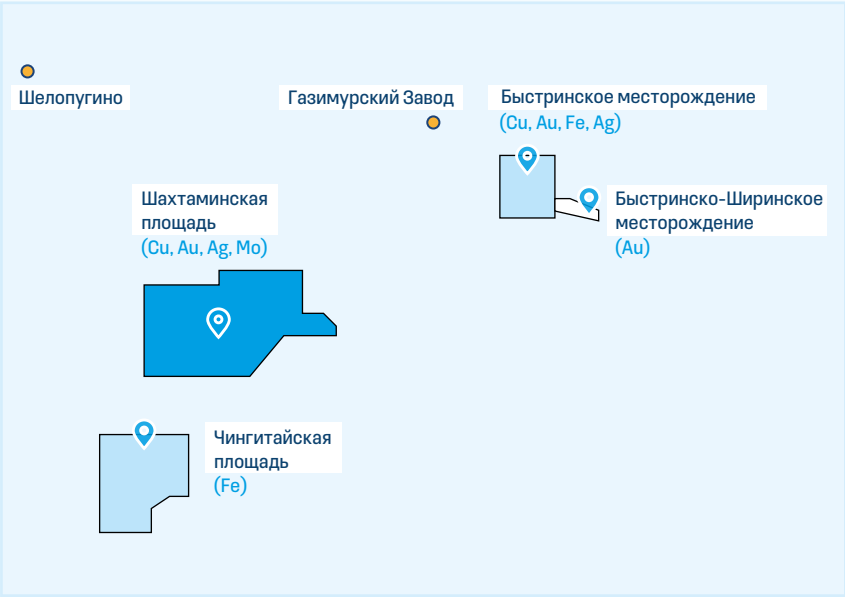
The Kola Division develops deposits located within a 25 km stretch between Nikel and Zapolyarny in the west of the Murmansk Region and grouped into two ore clusters: Western (Kotselvaara and Semiletka deposits) and Eastern (Zhdanovskoye, Zapolyarnoye, Bystrinskoye, Tundrovoye, Sputnik, and Verkhneye deposits). The deposits in the Western and Eastern clusters have been developed since the 1930s and 1960s, respectively.

Reserves and resources

Item	2019	2020	2021
PROVEN AND PROBABLE RESERVES			
Ore, mln t	85	80	74
Nickel, mln t	0.5	0.5	0.5
Copper, mln t	0.3	0.2	0.2
PGMs, Moz	0.1	0.1	0.1
MEASURED AND INDICATED RESOURCES			
Ore, mln t	321	316	310
Nickel, mln t	2.2	2.2	2.1
Copper, mln t	1.1	1.1	1.0
PGMs, Moz	0.8	0.8	0.8
INFERRED RESOURCES			
Ore, mln t	144	142	141
Nickel, mln t	0.9	0.9	0.9
Copper, mln t	0.4	0.4	0.4
PGMs, Moz	0.3	0.3	0.3
TOTAL			
Ore, mln t	465	458	451
Nickel, mln t	3.1	3.1	3.0
Copper, mln t	1.5	1.5	1.4
PGMs, Moz	1.1	1.1	1.1

TRANS-BAIKAL DIVISION

The Trans-Baikal Division develops the Bystrinskoye deposit located 16 km east of Gazlmursky Zavod in the Zabaykalsky Region. Nornickel owns 50.01% of GRK Bystrinskoye which develops gold-iron-copper ores. In 2021, CSA Global completed an estimate of mineral resources of the Bystrinskoye deposit in line with the JORC Code based on an updated resource model, which reflects both complexity and diversity of the deposit's ore types. In 2021, Nornickel obtained an exploration licence to prospect for, and appraise, flanks of the Bystrinskoye deposit.



Reserves and resources

Item	Ore	Copper	Gold	Silver	Iron
Proven and probable reserves	281.3 mln t	1.7 mln t	176 t (5.6 Moz)	870 t (28 Moz)	42.0 mln t
Measured and indicated resources	273.5 mln t	1.9 mln t	182 t (6.4 Moz)	990 t (32 Moz)	48.5 mln t
Inferred resources	60.7 mln t	243 kt	30 t (1 Moz)	163 t (5.2 Moz)	8 mln t