

Classification on the Genesis of Iron Resources in Hokkaido

Type of ore deposits		Kind of ores	Explanatory notes	Main mines (producing districts)	
Sedimentary deposits	(Weathering) Residual deposits	Siderite	Serpentine	Wassamu, Numaushi	
		Limonite	Replaced from magnetite, pyrites	Katsuraoka, Abuta	
	Deposits formed by rain water -underground water	Limonite	Replaced from pyrites	Abuta	
		Hematite	Replaced from pyrites	Kamaya	
	Chemical precipitation deposits	Siderite	Tertiary	Yūbari, Numata, Yoshioka, Kushiro	
		Limonite (Pyrite)	Quaternary volcanic zone	Tokushumbetsu,* Abuta,* Shōjingawa, Karurusu, Kutchan,* Nakadōya*	
		Limonite (Powder hematite)	Quaternary volcanic zone	Akanuma, Konai,* Akagawa	
		Limonite (Jarosite)	Quaternary volcanic zone	Shiretoko peninsula, Tokachidake	
		Limonite (Sulphur)	Quaternary volcanic zone	Akan, Daisetsu, Iwao	
		Limonite	Quaternary	Shari, Memambetsu, Tokachishimizu, Bannaguro, Oyafure, Biei	
	Mechanical sedimentary deposits	Titaniferous magnetite placer	Tertiary, Cretaceous	Shibun, Hobetsu, Ashibetsu	
		Titaniferous magnetite placer	Diluvium	Muroran,* Shikabe, Toyotsu,* Kushiro	
		Titaniferous magnetite placer	Alluvium	Volcano bay,* Shirikishinai,*Hakodate, Washibetsu,* Okhotsk sea, Tarukishi	
	Mineral deposits of magmatic origin	Orthomagmatic deposits	Magnetite	Serpentine	Nukabiragawa, Chisaka
			Magnetite	Gabbro	Oshimaōsawa
Pyrrhotite			Gabbro	Oshirabetsu, Horoman, Okushibetsu	
Pyrometasmatic -hydrothermal deposits		Magnetite, Hematite, Pyrrhotite	Pre-Cretaceous altered rocks, Diorite	Katsuraoka*	
		Magnetite, Pyrrhotite	Pre-Tertiary hornfels	Furano, Shikaribetsu	
		Pyrrhotite	Pre-Tertiary hornfels	Tokushibetsu, Meppu	
Hydrothermal deposits		Magnetite	Pre-Cretaceous	Era	
		Hematite, Pyrite	Neogene Tertiary	Kamaya*	
		Magnetite	Diorite, Neogene Tertiary	Osappe, Kutō, Menagawa	
Sub-volcanic deposits		Mesothermal -epithermal deposits	Hematite	Pre-Tertiary, Rhyolite	Kamiikutawara
			Pyrrhotite, Pyrite	Slate, Neogene Tertiary	Toyoha, Takinoue, Okusetose, Otoshi- be, Oshamambe, Suttu, Kitami, Yoichi, Oe
			Hematite, (Limonite)	Neogene Tertiary, Quaternary volcanic rocks	Asari, Shokambetsu, Mitsumori, Naganori
	Hematite		Diorite, Propylite	Sannai	
Exhalation deposits	Marine exhalation deposits	Hematite	Pre-Tertiary, Diabasic rocks	Shukushubetsu, Mitsuishigawa	
		Manganiferous hematite	Pre-Tertiary, Diabase, chert	Kokuriki,* Nikura, Fukuyama	
		Hematite, Limonite	Neogene Tertiary	Yunotai	
	Land exhalation -hot spring's deposits	Pyrite	Tertiary-Quaternary volcanic rocks	Horobetsu,* Shimeigawa,* Abuta,* Shōjingawa	
		Hematite	New type's volcanic rocks	Ayumikotan, Esan	
Metamorphic deposits	Wide areal metamorphic deposits	Magnetite	Pre-Tertiary, Hornblende schist	Mitsuishi	
		Magnetite, Pyrrhotite	Pre-Tertiary, Hornblendite	Kōryū	
		Pyrrhotite, Pyrite	Diabase, Slate	Shimokawa,* Tomuraushi, Shintoku, Kuroda, Bushi	

* Working mine