Table 1. Summary of major metallogenic belts for Northeast Asia (Russian Far East, Yakutia, Siberia, Transbaikalia, Northeastern China, Mongolia, South Korea, and Japan). For each time span, metallogenic belts are listed from west to east, progressing from north to south.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
ARCHEAN (> 2500 Ma) METALLOGENIC BELTS					
West Aldan (WA)	Banded iron formation (BIF, Algoma Fe) (Charskoye, Tarynnakh, Nelyuki, Dagda, Sulumatskoye, Severnoye and Yuzhnoye NizhneSakukan, Sakukannyrskoye and Oleng-Turritakhskoye); Au in shear zone and quartz vein (Lemochi, Olondo)	Russia, Southern Yakutia	West Aldan terrane (Granite-greenstone).	Archean to Paleoproterozoic. Metavolcanic and sedimentary rocks interlayered with BIF have isotopic ages of 2.7 to 3.2 Ga. Age of Au occurrences is Late Archean to Paleoproterozoic.	Belt interpreted as forming in back-arc basin and (or) island arc. Au occurrences mainly in the shear zones cutting metabasalt, amphibilite, and ultramafic rock. Shear zones formed during amalgamation of terranes or during later tectonic events. BIF (magnetite quartzite) forms stratiform layers and lenses in metabasalt and amphibolite, and local siliceous metavolcanic rock and schist.
Sutam (St)	Banded iron formation (BIF, Algoma Fe) (Olimpiyskoe)	Russia, Southern Yakutia	Central Aldan superterrane (Granulite-orthogneiss) containing Sutam terrane with high-T and high-P granulites.	Archean. Gneiss in Sutam block has isotopic age of 2.5 to 3.0 Ga.	Two rock groups with BIF occur in belt. (1) Magnetite-hypersthene and magnetite-pyroxene gneiss interbedded with amphibole-pyroxene and magnetite-pyroxen-plagioclase schist. BIF consists of magnetite and hypersthene-magnetite quartzite occur in outer part of an antiform. (2) Feldspar quartzite interlayered with garnet- and sillimanite-bearing schist with diopside calciphyre. Also occurring are magnetite-hypersthene and garnet-magnetite hypersthene layers.
Sharizhalgaiskiy (Shz)	Banded iron formation (BIF, Algoma Fe); Talc (magnesite) replacement (Sosnovy Baits, Baikalskoye, Savinskoye)	Russia, Southern-Eastern Siberia (East Sayan)	Sharizhalgay terrane (Tonalite-trondhjemite gneiss) and Onot terrane (Granite-greenstone) (too small to show on 10 M scale map)	Archean. Sharyzhalgay series has U-Pb, Rb-Sr, Sm-Nd isotopic ages of 2.42 to 3.12 Ga. Sedimentary rocks in Onot terrane are Paleoproterozoic.	Some deposits (Kitoy group and Baikalskoye deposit) are Archean sequences. Others (Onot group – Sosnovy Baits deposits) are Proterozoic. Layering in ferruginous quartzite and occurrence in two-pyroxene schists are interpreted as derived from ferruginous volcanic and sedimentary rock sequences.
Yanbei (YB)	Metamorphic graphite (Xinghe)	Northern China	Sino-Korean Craton - Erduosi terrane (Granulite-paragneiss)	Interpreted as Late Archean.	Deposits hosted in shallow marine clastic and carbonate sedimentary rocks that formed in a passive Late Archean continental margin and were metamorphosed to granulite facies. Host rocks are part of the Late Archean Upper Jining Group that consists of a khondalite series.
Jidong (JD)	Banded iron formation (BIF, Algoma Fe) (Shuichang); Au in shear zone and quartz vein (Jinchangyu)	Northern China	Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane (Granulite-orthogneiss)	Archean for BIF deposits that have Rb-Sr isotopic age greater than 3,500 Ma. Proterozoic or younger for Au deposits in shear and retrograde metamorphic zones with isotopic ages of 2.5 to 2.6 Ga., 1.7 to 1.8 Ga., or younger.	BIF interpreted as forming in volcanic and sedimentation basin along an unstable proto-continental margin, or in fragment of Archean craton. Au deposits interpreted as forming during retrograde metamorphism to greenschist facies.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Liaoxi (LX)	Banded iron formation (BIF, Algoma Fe) (Baoguosi); Au in shear zone and quartz vein (Paishanlou)	Northeastern China	Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane (Granulite-orthogneiss)	Late Archean. BIF with isotopic ages of about 2,600 to 2,500 Ma.	Belt hosted in Liaoxi greenstone belt with BIF deposits interpreted as as forming in a rift along a Late Archean continental margin. Host rocks consist of the following major units: (1) greenstone belt (Xiaotaziguo, Dayinzi and Waziyiu formations of Jianping; and (2) tonalite-trondhjemite-granodiorite and other units. Au deposits interpreted as forming during retrograde metamorphism to greenschist facies.
Liaoji (LJ)	Banded iron formation (BIF, Algoma Fe) (Gongchangling); Volcanogenic Zn-Pb-Cu massive sulfide (Hongtoushan); Au in shear zone and quartz vein (Jiapigou)	Northeastern China	Sino-Korean Craton, Jilin-Liaoning-East Shandong terrane	Late Archean. Metamorphic age of the Anshan Group hosting BIF is 2,500 to 2,650 Ma. Isotopic age of BIF units probably older than 2,800 Ma. U-Pb zircon isotopic age for trondhjemite (mylonite) is 3,804 Ma.	Host greenstone belt in Northern Liaoning (Hunbei) area interpreted as forming in an active continental margin whereas greenstone belts in Anshan-Benxi and Jiapigou areas interpreted as forming in oceanic rifts along a continental margin. Au deposits interpreted as forming during retrograde metamorphism to greenschist facies.
Wutai (WT)	Banded iron formation (BIF, Algoma Fe) (Baizhiyan)	Northern China	Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane (Granulite-orthogneiss)	Archean. Isotopic ages of >2500 Ma.	Wutai greenstone belt and contained BIF deposits interpreted as forming in non-mature to mature island arc.
PALEOPROTEROZOIC (2500 to 1600 Ma) METALLOGENIC BELTS					
Uguy-Udokanskiy (UU)	Zoned mafic-ultramafic Cr-PGE; Sediment-hosted Cu; Ta-Nb-REE alkaline metasomatite; (Chineyskoye; Udokanskoye, Pravo-Ingamakit, Sakinskoye, Sulbanskoye, Katuginskoye)	Russia, Southern Yakutia	West Aldan terrane (Granite-greenstone)	Paleoproterozoic. Cu sandstone in Udokan deposit is 2.2 to 1.8 Ga. Ta, Nb, REE alkaline metasomatite deposits age is 2.0 to 1.6 Ga	Cr and PGEdeposits in zoned mafic-ultramafic plutons and Cu in the sedimentary rocks interpreted as forming along a passive continental-margin rift. Ta-Nb-REE alkaline metasomatite deposits interpreted as forming during later collision and formation of anatectic granite.
Kalar-Stanovoy (KS)	Au in shear zone and quartz vein (Ledyanoe, Namark, Pravokabaktanskoe)	Russia, Southern Yakutia	Veins in Kalar tectonic melange zone	Interpreted as Paleoproterozoic (about 2,000 Ma)	Belt interpreted as forming during the collision between Tynda and West Aldan terranes in Aldan-Stanovoy region and during subsequent collapse of orogenic belt. Cause of collision was amalgamation of terranes during the formation of the North Asia Craton. Au deposits occur shear zones that cut metamorphosed mafic and ultramafic and plutonic rock.
Amga-Stanovoy (AS)	Au in shear zone and quartz vein (Various occurrences)	Russia, Southern Yakutia	Veins in Amga tectonic melange zone	Interpreted as Paleoproterozoic (about 2,000 Ma).	Belt interpreted as forming during the collision of the West-Aldan and Tynda composite terranes and the Central Aldan superterrane in the Aldan-Stanovoy region and during subsequent collapse of orogenic belt. The reason for collision is unclear. The Au deposits occur in shear zones that cut metamorphosed mafic and ultramafic plutonic rocks and other plutonic rocks.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Upper Aldan (UA)	Piezoquartz (Perekatnoye, Bugarykta)	Russia, Southern Yakutia	Central Aldan superterrane (Granulite-orthogneiss)	Late Paleoproterozoic. Veins of rock crystal have isotopic ages of 1,830 to 1,750 Ma. Rock crystal clasts occur in overlying Vendian conglomerate.	Belt interpreted as forming during a post-collisional tectonic event possibly in a rift. Deposits occur in Late Archean and Paleoproterozoic quartzite strata associated with high-alumina gneiss and mafic schist metamorphosed to granulite facies. Deposits tend to occur at rupture intersections and in flexures and periclines of folds, and in single veins and vein zones. Most important are pipe veins and stockworks that range up to a few tens of meters in width. Rock crystals grow on walls of voids or occur in the lower part of the voids in clay. Voids occur in quartz veins, at the contacts between veins and the host rocks, or in adjacent host rocks that are altered to chlorite, sericite, and epidote.
Nimnyr (NM)	Apatite carbonatite (Seligdar)	Russia, Southern Yakutia	Central Aldan superterrane (Granulite-orthogneiss)	Paleoproterozoic. Carbonatite pluton with isotopic age of 1900 Ma	Carbonatite interpreted as forming during interplate rifting. Deposits consist of apatite-carbonate, apatite-quartz-carbonate, martite-apatite-quartz-carbonate, and martite-apatite-carbonate and apatite-carbonate-quartz ores in carbonatite in asymmetric stocks.
Dyos-Leglier (DL)	Fe skarn (Tayozhnoe 2, Dyosovskoe, Emeldzhak)	Russia, Southern Yakutia	Replacements in Central Aldan (Granulite-orthogneiss) superterrane	Interpreted as Paleoproterozoic (about 2,000 Ma)	Belt interpreted as forming during a late (or post) collisional tectonic event. Deposits consist of magnetite skarn, magnesian skarn, amphibole-diopside rock, calciphyre, and biotite gneiss that are metamorphosed to amphibolite facies). Host rocks are amphibole gneiss and schist and high-alumina gneiss and quartzite-gneiss that are intruded by metamorphosed ultramafic rock, gabbro, and diorite that are metamorphosed to granulite facies. Deposits range from concordant to en-echelon.
Tympton (TM)	Phlogopite skarn (Nadyozhnoe)	Russia, Southern Yakutia	Replacements in Central Aldan superterrane and eastern Amga tectonic melange zone	Paleoproterozoic. Age of deposit is 1.9 to 1.8 Ga. Hosted rocks have isotopic ages of 2.3 to 2.1 Ga.	Belt interpreted as forming during a late (or post) collisional tectonic event. Deposits occur in diopside and phlogopite-diopside schist, marble, and calciphyre that are metasomatized into coarse-grained phlogopite-diopside skarn. Some deposits are controlled by synforms and fold hinges, and cores of superposed transverse folds that are favorable for phlogopite. Deposits consist of phlogopite, diopside, hornblende, scapolite, apatite, and actinolite. Phlogopite forms nest-like accumulations and rarely as thin veins.
Tyrkanda-Stanovoy (TS)	Au in shear zone and quartz vein (Kolchedannyi Utyos)	Russia, Southern Yakutia	Veins in Tyrkanda tectonic melange zone	Interpreted as Paleoproterozoic (about 2,000 Ma).	Belt interpreted as forming during collision between the Tynda composite terrane and Central Aldan and East Aldan superterranes. The reason for collision is unclear. in the Aldan-Stanovoy region and during subsequent collapse of orogenic belt. Au shear zone deposits cut metamorphosed mafic and utramafic bodies and plutonic rocks.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Davangra-Nalurak (DN)	REE placer; Banded Iron formation (BIF, Superior Fe) (Atugey)	Russia, Southern Yakutia	Central Aldan superterrane (Granulite-orthogneiss)	Interpreted as late Paleoproterozoic	Belt interpreted as forming in grabens in a Precambrian intracratonic basin that formed during intracontinental rifting. Source rocks for REE minerals are interpreted as granitoids in the Central Aldan superterrane and alkalic volcanic rocks that erupted during rifting. Placer deposits occur in thick quartz and arkose sandstone, and gravelstone horizons.
Uchur (UH)	Phlogopite skarn (Megyuskan)	Russia, Southern Yakutia	Replacements in East Aldan superterrane - Batomga composite terrane)	Interpreted as Paleoproterozoic (about 2,000 Ma)	Belt interpreted as forming during a late-stage or post-collisional tectonic event as a result of collision between the Central Aldan and East Aldan superterranes. The reason for the collision is unclear.
Kavakta (KV)	Magmatic and metasomatic apatite(?) (Kavakta)	Russia, Southern Yakutia	Mafic-ultramafic plutons in Amga tectonic melange zone	Interpreted as Paleoproterozoic	Belt interpreted forming during rifting related to break up of a hypothetical Late Archean continent at 2.5 to 2.3 Ga.
Baladek (Bal)	Anorthosite apatite-Ti-Fe-P (Bogidenskoe, Gayumskoe, Maimakanskoe, Dzhaninskoe)	Russia, Far East	Baladek terrane (Metamorphic) (too small to show at 15 M scale)	Early Paleoproterozoic. Anorthosite intruded by granite and granodiorite with preliminary U-Pb isotopic age between 2.2 and 2.6 Ga	Anorthosite hosting the belt is interpreted as forming during interplate magmatism.
Mugursk (MG)	Banded iron formation (BIF, Algoma Fe) (Mugurskoye)	Southeast Tuva, Altai-Sayan folded area, Russia	Sangilen terrane (Passive continental margin)	Paleoproterozoic	Belt interpreted as forming in Tuva-Mongolian microcontinent margin as a fragment of Laurasia. BIF deposits occur in metamorphosed Paleoproterozoic sedimentary rocks.
Khan Hohii (KH)	Banded iron formation (BIF, Algoma Fe) (Tomorchuluut)	Northwestern Mongolia	Baydrag terrane (Cratonal), Khan Hohii and North Songino fragments	Interpreted age if Paleoproterozoic. Pb-Pb zircon isotopic age of Songino gneiss is 1,863 Ma	BIF deposits hosted in Paleoproterozoic gneiss, amphibolite, crystalline schist marble and quartzite derived from a volcanic and clastic sedimentary rock basin that is interpreted as forming in a continental margin arc.
Tarvagatai (TA)	Banded iron formation (BIF, Algoma Fe)(Salbart group); Mafic-ultramafic related Ti-Fe (±V) (Salbart uul)	Central Mongolia	Baydrag terrane (Cratonal), Tarvagatai fragment	Paleoproterozoic(?). Host metamorphic complex is intruded by Most uul gabbro and anorthosite complex with isotopic ages of 1,800 to 3,000 Ma. Zircon isotopic ages for anorthosite range from 1800 to 3,000 Ma	BIF occurrences are hosted in lower Proterozoic gneiss, amphibolite, schist marble and quartzite derived from a volcaniclastic and sedimentary rock deposited in a volcaniclastic basin. Anorthosite hosting Ti-Fe occurrences is interpreted as forming in a continental margin arc.
Baydrag (BD)	Banded iron formation (BIF, Algoma Fe) (Baidrag)	Central Mongolia	Baydrag terrane (Cratonal), Baydrag fragment	Paleoproterozoic. K-Ar phlogopite isotopic age for skarn is 1,900 Ma. U-Pb isochron and Pb-Pb thermo-isochron zircon ages range from 2650 to 2800 Ma for tonalite gneiss in Baydrag metamorphic complex, and 2,400 Ma for charnokite in Bombogor intrusive Complex	BIF deposits hosted in Paleoproterozoic gneiss, amphibolite, crystalline schist marble and quartzite derived from a volcanic and clastic sedimentary rock basin. Host rocks intruded by Bombogor intrusive complex that is interpreted as a continental margin arc.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Yinshan (YS)	Banded iron formation (BIF, Algoma Fe) (Sanhemen)	Northern China	Zhangbei-Bayan Obo-Langshan rift-related metasedimentary and metavolcanic rocks	Late Paleoproterozoic. Isotopic age of 1,800 to 1,600 Ma	Deposits are hosted in a marine overlap volcaniclastic assemblage that is interpreted as forming in in an aulacogen.
Qinglong (QL)	Banded iron formation (BIF, Algoma Fe) (Zhalanzhangzhi); Clastic-sediment-hosted Sb-Au (Qinglonghe)	Northern China	Sino-Korean Craton -West Liaoning-Hebei-Shanxi terrane	Paleoproterozoic	BIF hosted in marine volcaniclastic and clastic sedimentary rocks with minor conglomerate that are metamorphosed to amphibolite and greenschist facies. The belt is interpreted as forming in a passive continental margin or aulacogen that was subsequently regionally metamorphosed and thrusted (Zhang Yixia and others, 1986).
Yanliao 1 (YL-1)	Chemical-sedimentary Fe-Mn (Pangjiapu)	Northern China	Lower part of Sino-Korea platform sedimentary cover	Late Paleoproterozoic. Isotopic age of host Changcheng Group is 1,800 to 1,600 Ma.	Belt interpreted as forming during sedimentation in a shallow marine basin (Yanliao Basin) along Late Paleoproterozoic passive contimental margin of Sino-Korean Craton.
Jiliaojiao 1 (JLJ)	Sedimentary-metamorphic borate (Wengquangou); Sedimentary-metamorphic magnesite (Xiafangshen); Talc (magnesite) replacement (Fanjiapuzi); Banded iron formation (BIF, Superior Fe) (Dalizi); Korean Pb-Zn massive sulfide (Qingchengzi); Au in shear zone and quartz vein (Baiyunshan, Nancha)	Northern China and Northeastern China	East Shandong-East Liaoning-East Jilin rift basin	Late Paleoproterozoic. Metamorphism and intense deformation occurred at 1.9 Ga. Paleoproterozoic Dashiqiao Formation is with isotopic age of 1,700 to 1,500 Ma. Marble in Proterozoic Liaohe group has isotopic age of 1,800 Ma.	Belt interpreted as forming in a passive continental margin, possibly as part of the Paleoproterozoic East Shandong-East Liaoning-East Jilin rift. Environment of formation and deposit controls are debated.
Luliangshan (LL)	Banded iron formation (BIF, Superior Fe) (Yuanjiachun); Au in shear zone and quartz vein (Hulishan)	Northern China	Hutuo rift basin	Early Paleoproterozoic. Pb-Pb isotopic age of 2,230 Ma. U-Pb zircon isotopic age of 2,366 Ma.	BIF iron and shear zone Au deposits interpreted as forming in an Paleoproterozoic Hutuo rift that was superposed on the Archean Northern China Craton.
Oryudong-Gapyeong (OM)	Metamorphic graphite (Oryu-dong)	South Korea	South China Craton - Gyenggi terrane (Granulite-paragneiss)	Late Paleoproterozoic and Early Mesoproterozoic. Host rocks with isotopic age of 1800 to 1400 Ma.	Belt is interpreted as forming during metamorphism of marine sedimentary rocks. Belt hosted in Paleoproterozoic metamorphic complex composed of biotite schist, lesser chlorite schist, injection gneiss and marble. Injection gneiss intercalated with banded structure of 10 to 15 m thick. Crystalline graphite mostly associated with biotite schist.
Yangyang (YG)	Regionally metamorphosed BIF (Yangyang)	South Korea	South China Craton - Gyenggi terrane (Granulite-paragneiss)	Paleoproterozoic. Isotopic ages of 2,500 to 1,800 Ma.	Metamorphosed BIF deposits are interpreted as forming during contact metasomatism of BIF and formation of magnetite skarn during intrusion of Jurassic Daebo Granite.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
MESOPROTEROZOIC (1600 to 1000 Ma) METALLOGENIC BELTS					
Ingili (Ing)	Stratiform Zr (Algama type) (Algama)	Russia, Far East	Margins between North Asian Craton and North Asian Craton Margin	Mesoproterozoic	Deposit formed in two stages. Initial chemical-sedimentary deposition of disseminated Zr in shallow marine dolomite. Subsequent concentration during diagenesis, karst formation, and hydrothermal fluids associated with intrusion of rift-related mafic and ultramafic dikes.
Tagulskiy (Tag)	Muscovite pegmatite; REE-Li pegmatite (Vishnyakovskoye); Mafic-ultramafic related Ti-Fe (±V) (Malo-Tagulskoye).	Russia, Southern-Eastern Siberia (East Sayan)	Sayan collisional granitic belt intruding Tumanshet terrane (Paragneiss) and Birusa terrane (Paragneiss)	Mesoproterozoic(?). Interpreted age for magmatic complexes associated with deposits..	Belt interpreted as forming during widespread mafic and siliceous intraplate magmatism. Belt occurs along northwest-striking regional faults that controlled a Proterozoic magmatic and hydrothermal system.
Darvi (DR)	Sedimentary bauxite; Sedimentary Fe-V (Alag Uul)	Mongolia	Baydrag terrane (Cratonal)	Interpreted as Mesoproterozoic	Belt interpreted as forming during bauxite sedimentation in Lower to Middle Riphean sedimentary basin along a passive continental margin.
Tseel (Tse)	Muscovite pegmatite (Bodonch); Banded iron formation (BIF, Algoma Fe) (Ikh Ganga)	Mongolia	Qinghe-Tsel terrane	Age controversy: (1) Pb-Pb zircon age of muscovite pegmatite is 780 Ma; or (2) Pb-Pb zircon age of polymetamorphosed and polydeformed rocks is 2,200 Ma.	Belt related to intrusion of granitoid magmatism during regional metamorphism. Belt is interpreted as forming during Fe sedimentation in early to middle Riphean sedimentary basin and during granitoid magmatism along an active continental margin.
Tsenherman dal-Modot (TsM)	Metamorphic graphite (Zulegt)	Mongolia	Argunsky terrane (Passive continental margin), Ereendavaa fragment	Interpreted as Mesoproterozoic.	Belt interpreted as derived from carbon-and iron - bearing sedimentary rocks that precipitated in basin along Riphean passive continental margin that was regionally metamorphosed in the upper Riphean.
Langshan-Bayan Obo (LB)	Sedimentary exhalative Pb-Zn (SEDEX) (Huogeqi) Polygenic REE-Fe-Nb deposits (Bayan Obo)	Northern China	Layers in Zhangbei-Bayan Obo-Langshan rift-related metasedimentary and metavolcanic rocks.	Mesoproterozoic. Sm-Nd isochron ages for monazite, bastnaesite, riebeckite gains are 1,200 to 1,300 Ma. Th-Pb and Sm-Nd ages of Ba-REE-F carbonates and aeschynite are 474 to 402 Ma.	Bayan Obo deposit interpreted as a SEDEX deposit related to a carbonatite magma and associated hydrothermal activity. Belt hosted in Paleoproterozoic and Mesoproterozoic overlap sedimentary assemblages that formed in a rift along the passive continental margin of the Sino-Korean Craton.
Wenduer-miao (WD)	Volcanogenic-sedimentary Fe (Wenduermiao)	Northern China	Wundurmiao terrane (Accretionary wedge)	Mesoproterozoic through early Neoproterozoic. Sm-Nb isotopic age of host Wenduermiao strata ranges from 1,500 to 850 Ma.	Belt interpreted as forming during Mesoproterozoic volcanism and sedimentation with metamorphism and deformation occurring during accretion of the Wenduermiao terrane.
Yanliao 2 (YL-2)	Chemical-sedimentary Mn (Wafangzi); Sedimentary exhalative Pb-Zn (SEDEX) (Gaobanhe Pb-Zn)	Northern China and Northeastern China	Jixian Group in Sino-Korea platform sedimentary cover	Mesoproterozoic. Age of Jixian Group is 1,400 to 1,100 Ma.	Belt interpreted as forming in a shallow marine basin on the Northern China Platform..

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Fanhe (FH)	Carbonate-hosted Pb-Zn (Mississippi type) (Chaihe)	Northeastern China	Fanhe Mesoproterozoic sedimentary basin (too small to show on 10 M scale map) that comprises part of Sino-Korea platform sedimentary cover	Early to Middle Mesoproterozoic. Isotopic ages of 1600 to 1300 Ma.	Belt interpreted forming in a small Mesoproterozoic aulacogen superposed on the Northern China Craton.
Chungnam (CN)	Banded iron formation (Seosan); Metasomatic U(?) (Kongju)	South Korea	South China Craton - Gyenggi terrane, Ogcheon Group	Late Paleoproterozoic and Early Mesoproterozoic. Isotopic age range of 1,400 to 800 Ma.	Belt hosted in middle Proterozoic Gyeonggi meta complex and Ogcheon Group that consists of graphitic black schist, mica schist, quartz schist and granite gneiss. Graphite deposits occur in zones or lenses in quartz schist. U deposits occur in graphitic black shale. Uranite interpreted as forming in a reducing environment from U that was absorbed in the carbonaceous material, diring circulation of U-bearing ore solution.
Koksung (KO)	Magmatic graphite (Koksung)	South Korea	Sino-Korean Craton - Yeongnam terrane, Yeongnam Metamorphic Complex	Mesoproterozoic and Neoproterozoic. Isotopic age range of 1,400 to 800 Ma.	Belt hosted in Yeongnam Metamorphic Complex that consists of leucogranite gneiss, hornblende plagioclase gneiss, biotite gneiss, and biotite schist. Graphite deposits occur in granite gneiss and graphite bearing biotite schist generally minor graphite.
NEOPROTEROZOIC (1000 to 540 Ma) METALLOGENIC BELTS					
Igarsk (IG)	Sediment-hosted Cu (Graviiskoye)	Russia, Eastern Siberia	North Asian Craton Margin	Vendian to Early Cambrian.	Deposits consist of sulfides in lenses in red-beds and fractures in sedimentary rocks of the North Asian Craton Margin. Deposits are related to zones of lateral pinching of red-bed molasse sedimentary rock that formed in the final stage of development of orogen basin.
Isakovsk (IS)	Volcanogenic-sedimentary Mn (Porozhinskoye 1); Volcanogenic Cu-Zn massive sulfide (Urals type) (Khariuzikhinskoye 1)	Russia, Eastern Siberia (Yenisei Ridge)	Isakov terrane (Island arc)	Middle and Late Riphean. Rb-Sr isotopic age of underlying ophiolite in terrane of about 1,260 Ma.	Volcanogenic Cu-Zn massive sulfide hosted in overlapping metamorphosed rhyolite, andesite, and basalt are interpreted as forming in an island-arc. Mn deposits at Porozhninskoye occur in Late Riphean-Vendian chert, clastic, and carbonate sequence. Ophiolite in terrane contains MORB basalt. Belt hosted in early Middle to Late Riphean island arc and ophiolite complex
Tatarsko-Tyradinsk (TT)	REE-Li pegmatite (Enashiminskoye 3); W-Mo-Be greisen, stockwork, and quartz vein (Oleniya Gora); REE (±Ta, Nb, Fe) carbonatite (Tatarskoye)	Russia, Eastern Siberia (Yenisei Ridge)	Veins and replacements in Central Angara terrane (Passive continental margin) and Isakov terrane (Island arc)	Late Neoproterozoic. Rb-Sr isotopic age of metasomatite is 620 to 660 Ma. U-Th-Pb isotopic age of 625 Ma. K-Ar isotopic age of 626 Ma.	Belt and associated magmatic complexes interpreted as forming in interblock tectonic zones. Coeval granitoid and alkaline deposits, and related magmatic complexes interpreted as forming during collision and local opening of the deep interblock zones that formed during oblique collision.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Vorogovsko-Angarsk (VA)	Sedimentary exhalative Pb-Zn (SEDEX) (Gorevskoye); Carbonate-hosted Pb-Zn (Mississippi valley type) (Moryanikhinskoye); Fe skarn (Enashiminskoye)	Russia, Eastern Siberia (Yenisei Ridge)	West Angara terrane (Passive continental margin)	Early Neoproterozoic. Model Pb-Pb isotopic age for Gorevskoye deposit is 834 to 852 Ma. Pb isotopic age of Moryanikhinskoye deposit is 740 to 849 Ma. Host rocks have isotopic age of 950 Ma.	SEDEX deposits interpreted as forming along transcrustal block-bounding faults in margin of the platform. Carbonate-hosted Pb-Zn deposits hosted in reefs. Fe skarn deposits formed during contact metasomatism of marine volcanic and sedimentary rocks.
Central-Yenisei (CY)	Au in black shale (Olympiada); Au in shear zone and quartz vein (Sovetskoye); Clastic-sediment-hosted Sb-Au (Udereiskoye)	Russia, Eastern Siberia (Yenisei Ridge)	Central Angara terrane (Passive continental margin)	Late Neoproterozoic. K-Ar isotopic age for late-stage hydromica metasomatites in Sb-Au deposit is 605 Ma to 664 Ma. Rb-Sr isotopic age for Tatarsk granitoid is 601 Ma.	Gold deposits interpreted as forming during collisional development of the late Riphean continental margin of the North Asian Craton. Gold initially occurring in black shale was subsequently concentrated and remobilized during collision-related metamorphism, granitoid intrusion, and hydrothermal activity.
Kyllakh (KY)	Carbonate-hosted Pb-Zn (Mississippi valley type) (Sardana, Urui, Pereval'noe)	Russia, Far East	North Asian Craton Margin - Verkhoyansk fold and thrust belt	Vendian	Belt interpreted as forming on passive margin of the North Asian Craton in the Vendian. Economic deposits occur in areas of facial thinning of dolomite.
Angara-Pit (AP)	Sedimentary Fe-oxide (Nizhne-Angarskoye)	Russia, Eastern Siberia (Yenisei Ridge)	North Asian Craton Margin (East Angara fold and thrust belt)	Upper Riphean.	Belt interpreted as forming during pre-orogenic subsidence of the North Asian Craton margin in a back-arc (interland) sedimentary basin.
Kansk (KN)	Au in shear zone and quartz vein (Bogunai); REE-Li pegmatite (Barginskoye), W-Mo-Be greisen, stockwork, and quartz vein (Kanskoye)	Southern Russia, Yenisei Ridge	Veins in Kuzeev terrane (Granulite-orthogneiss)	Early Neoproterozoic . Pb isochron for granitoids is 850±50 Ma; U-Th-Pb isochron of 920±50 Ma.	Belt interpreted as forming during tectonic and magmatic activation of the Angara-Kan block. Au deposits related to small mafic intrusions that occur along the Sayan-Yenisei deep fault zone. W-Mo greisen and REE vein and pegmatite deposits of presumed Late-Riphean age related to early-stage collisional granitoids.
Tonodskiy (Tnd)	Au in black shale (Chertovo Koryto)	Russia, Northern Transbaikalia	Tonod greenschist terrane	Riphean.	Initial gold deposition from hydrothermal-metamorphic processes that occurred during Proterozoic regional metamorphism related to accretion and generation of Chuya-Nechera granitoids. Subsequent economic concentration during late Riphean tectonism and magmatism with intrusion of magmatic rocks along transform microplate boundaries and within plate (plume) environment..
Baikalo-Muiskiy (BM)	Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu); Polymetallic (Pb, Zn, Ag) carbonate-hosted metasomatite; Serpentinite-hosted asbestos (Kholodninskoye, Lugovoye, Molodezhnoye)	Russia, Northern Transbaikalia	Baikal-Muya terrane (Island arc) and Muya terrane (Metamorphic)	Neoproterozoic.	Various deposits in belt interpreted as forming in Baikal-Muya island arc or during Riphean accretion of terrane with Muya metamorphic terrane and Olokit-Delunuran accretionary wedge terrane.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Bodaibin-skiy (Bod)	Au in black shale (Sukhoy Log, Vysochaishi, Dogaldynskoye)	Russia, Northern Transbaikalia	North Asian Craton Margin, Patom fold and thrust belt	Belt formation started in Neoproterozoic with subsequent enrichment in Devonian to Early Carboniferous. Age of gold from Sukhoy Log deposit is about 320 Ma.	Initial gold deposition during sedimentation and later metamorphism and hydrothermal activity. Subsequent Neoproterozoic post-collisional magmatic and hydrothermal activity formed economic deposits. Subsequent formation of gold-silver-sulfosalt deposits during magmatic and hydrothermal activity in middle and late Paleozoic.
Olokitskiy (OL)	Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu) (Kholodninskoye)	Russia, Northern Transbaikalia	Olokit-Delununran terrane (Accretionary wedge)	Neoproterozoic. Isotopic ages of about 1,000 to 740 Ma.	Belt is interpreted as forming in island arc or back arc sequence incorporated into an accretionary wedge.
Mrass (MR)	Sedimentary phosphate (Tamalykskoye)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau Mountains)	Altai-Sayan back-arc basin (Mrassu-Bateni unit)	Vendian to Early Cambrian	Belt interpreted as forming during shallow-water marine sedimentation in a back-arc environment.
Bellyk (BE)	Weathering crust and karst phosphate (Seibinskoye 2); Bedded barite (Tolcheinskoye)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau, East Sayan, Altai-Sayan areas)	Altai-Sayan back-arc basin (Mrassu-Bateni unit)	Vendian to Early Cambrian	Belt formation during shallow-water marine sedimentation in a back-arc environment.
Lysansk (LS)	Mafic-ultramafic related Ti-Fe (±V) (Lysanskoye)	Russia, Southern-Eastern Siberia (East Sayan)	Mafic-ultramafic plutons in Kuvai terrane (Accretionary wedge)	Middle to Late Riphean.	Belt interpreted as forming in a mMiddle to Late Riphean ensialic island arc that was incorporated into an accretionary wedge.
Prisayan-skiy (PrS)	REE (±Ta, Nb, Fe) carbonatite; Mafic-ultramafic related Ti-Fe (±V) (Beloziminskoye) Diamond-bearing kimberlite (Onotskoe) Talc (magnesite) replacement (Ingashinskoye)	Russia, Southern-Eastern Siberia (East Sayan)	Various units associated with the Onot granite-greenstone and Sharizhalgay tonalite-trondhjemite gneiss terranes: (1) mafic-ultramafic plutons in the Ziminsky complex; (2) upper part of Onot terrane that consists of interbedded amphibolite, and magnesite and talc layers; and (3) ultramafic alkaline plutonic rocks that intrude; and (4) sparse micaceous kimberlite dikes. (Various host units are too small to show at 15 M scale.)	Late Neoproterozoic. Rb-Sr isochron age for talc deposit is 633 Ma; Rb-Sr and ^{40}Ar-^{39}Ar age for REE carbonatite deposits is 547 Ma.	Belt occurs in enderbite-gneiss, tonalite-trondjemite, anorthosite-paragneiss formation of terranes that are fragments of Precambrian craton crystalline basement. Host terranes are uplifted parts of North Asian Craton.

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Pribaikal-skiy (PrB)	Carbonate-hosted Pb-Zn (Mississippi Valley type) (Barvinskoye, Lugovoye)	Russia, East Sayan	Sheared margin between Paleoproterozoic Akitkan volcanic-plutonic belt and North Asian Craton Margin, Patom fold and thrust belt.	Riphean.	Belt interpreted as forming along shear zones and faults that occur between an ancient active continental margin along the North Asian Craton.
Bokson-Kitoiskiy (B-K)	Sedimentary bauxite (Boksonskoye); Magmatic nepheline (Botogolskoye); Serpentine-hosted asbestos; Au in shear zone and quartz vein (Zun-Kholba)	Russia, Southern-Eastern Siberia (East Sayan)	Layers in, and veins and plutons intruding or associated with Belaya-Kitoy metamorphic terrane, Hug accretionary wedge terrane, Tunka island arc terrane, Tannuola plutonic belt, and Huvsgol-Bokson sedimentary overlap assemblage.	Neoproterozoic through Silurian. Neoproterozoic sedimentary rocks with Cambrian through Silurian metamorphism, hydrothermal alternation, and plutonic intrusion. Younger of Sumsunur tonalite complex with U-Pb and Rb-Sr isotopics ages of 790 Ma.	Belt hosted in metamorphic, oceanic, accretionary wedge, and tonalite-trondhjemite-gneiss terranes that underwent Cambrian through Silurian metamorphism, hydrothermal alternation, and plutonic intrusion. Deposits formed in multiple events.
Lake (LA)	Volcanogenic Cu-Zn massive sulfide (Urals type) (Borts uul); Volcanogenic-sedimentary Fe; Podiform Cr; Mafic-ultramafic related Ti-Fe (±V); Cu (±Fe, Au, Ag, Mo) skarn; Fe skarn; Granitoid-related Au vein (Khyargas) Cyprus Cu-Zn Massive Sulfide (Naran Davaa); Mafic-ultramafic related Cu-Ni-PGE (Tsagdaltyn Davaa)	Western Mongolia	Lake terrane (Island arc)	Late Neoproterozoic. Khantayshir ophiolite with U-Pb zircon isotopic age of 568±4 Ma. Dariv ophiolite with U-Pb zircon isotopic age of 573 6 Ma.	Various deposits in belt are interpreted as forming during sea floor spreading volcanism and related mafic-ultramafic magmatism, and in subduction-related island arc volcanism and mafic plutonism, and multiple-phase granitic magmatism.
Tsagaa-nolom (TO)	Sedimentary phosphate (Zuun Arts); Volcanogenic-sedimentary Mn (Khagnuur)	Central Mongolia	Huvsgol-Bokson sedimentary overlap assemblage	Vendian through Early Cambrian.	Belt interpreted as forming during sedimentation in carbonate-dominated basin along a continental shelf.
Hugiingol (HG)	Sedimentary exhalative Pb-Zn (SEDEX) (Tsagaan-Uul); Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu); Volcanogenic-sedimentary Fe.	Northern Mongolia	Hug terrane (Accretionary wedge); Sarkhoy terrane (Island arc)	Neoproterozoic. Rb-Sr isochron age of high-pressure metamorphic rocks is 823 Ma. Rb-Sr isochron age of volcanic rocks of the Sarhoi Group overlapping the Hug terrane is 718 Ma. Isotopic age of granite coeval with overlying volcanic rocks is 752 Ma.	Belt interpreted as forming during rifting in backarc basin associated with a subduction-related island arc.

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Hovsgol (HO)	Sedimentary phosphate (Hubsugul); Volcanogenic-sedimentary Mn (Saihangol); Sedimentary Fe-V (Hitagiin gol)	Northern Mongolia	Huvsgol-Bokson sedimentary overlap assemblage	Vendian through Early Cambrian.	Belt interpreted as forming during sedimentation in a carbonate-dominated basin along a continental shelf.
Jixi (JX)	Banded iron formation (BIF, Algoma Fe) (Shuangyashan); Homestake Au (Dongfengshan); Metamorphic graphite; (Liumao); Metamorphic sillimanite	Northeastern China	Jiamusi terrane (Metamorphic) terrane and Zhangguangcailing (Continental margin arc) superterrane	Neoproterozoic to Cambrian.	Belt is part of a khondalite that is interpreted as derived from Al-rich mudstone and carbonates of the Mashan and the Xingdong groups that were deposited in a shallow sea and isolated oceanic basin and lagoon.
Damiao (DM)	Mafic-ultramafic related Ti-Fe (±V) (Damiao); Zoned mafic-ultramafic Cr-PGE (Gaositai)	Northern China	Mafic-ultramafic plutons intruding Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane (Granulite-orthogneiss)	Neoproterozoic. K-Ar age of the deposit-related anorthosite is 604 to 992 Ma.	Belt hosted in Neoproterozoic mafic-ultramafic plutons that intrude Archean crystalline rocks of West Liaoning-Hebei-Shanxi terrene. The plutons occur along northwest-trending major deep faults along the northern margin of the Sino-Korean Platform. The plutons and deposits are interpreted as forming during interplate magmatism along the north margin of the Sino-Korean Craton.
CAMBRIAN THROUGH SILURIAN (540 to 410 Ma) METALLOGENIC BELTS					
Tuora-Sis (Tuo)	Carbonate-hosted Pb-Zn (Mississippi valley type) (Mengeniler)	Russia,Yakutia	North Asian Craton Margin - Verkhoyansk fold and thrust belt (Passive continental margin)	Early Cambrian.	Belt interpreted as forming during sedimentation after Neoproterozoic rifting along the passive continental margin of North Asian Craton. Economic deposits occur in areas of facial thinning of dolomite.
Bedobinsk (BED)	Sediment-hosted Cu (Bedobinsk, Kurishskoye)	Russia, Eastern Siberia (Yenisey Ridge area)	North Asian Craton	Middle to Late Cambrian.	Belt interpreted as forming in an inland-sea basin during post-saline stage of rock deposition. Main source of copper were weathered Riphean rocks as well as lode deposits in the Yenisei Ridge, and from hydrothermal activity along deep-fault zones related to rifting.
Taidon-Kondomsk (TK)	Fe skarn; Volcanogenic-sedimentary Mn (Sheregesh, Usinskoye)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau Mountains)	Fe skarns related to Telbes-Kitat island-arc terrane; volcanogenic-sedimentary Mn deposits occur in Altai-Sayan back-arc basin (Mrassu-Bateni unit).	Early Cambrian to Ordovician	Belt is interpreted as forming in an island-arc and during subsequent accretion (Fe skarn), and in a back-arc environment (Mn deposits). Belt extends as a narrow band along the eastern and southeastern margin of the Kuznetsk basin.

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Martaiginsk (MT)	Granitoid-related Au vein (Sarala, Komsomolskoye); Au skarn (Natal'evskoye, Sinyukhinskoye, Komsomolskoye)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau, Gorny Altai Mountains)	Granitoids and veins related to Tannuola plutonic belt that intrudes the Kozhukhov, Kanim and Uimen-Lebed island-arc terranes, and Altai-Sayan back-arc basin.	Late Ordovician and Early Silurian. $^{40}Ar/^{39}Ar$ isotopic age of 480 to 460 Ma for Martaiginsk complex; K-Ar age of 445 to 427 Ma for Lebed complex; Rb-Sr ages of 472 Ma, 458 Ma, 444 Ma, and 433 Ma for gangue minerals and metasomatite for Gavrilovskoye, Centralnoye, Komsomolskoye, Sarala deposits.	Belt interpreted as forming during accretion, collision, and generation of mantle and crustal granitoids. Deposit clusters in belt occur along fault and shear zones that are branches of the Kuznetsk Alatau fault and along intersections with transversal sublatitudinal faults.
Kiyalykh-Uzen (Kiy)	Cu (±Fe, Au, Ag, Mo) skarn (Kiyalykh-Uzen, Juliya Mednaya); W±Mo±Be skarn (Tuim); Fe skarn (Samson); W-Mo-Be greisen, stockwork, and quartz vein (Verhne-Askizskoye, Turtek)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau Mountains)	Replacements related to Tannuola plutonic belt located in Altai-Sayan back-arc basin (Mrassu-Bateni unit)	Early Ordovician to Early Silurian. $^{40}Ar/^{39}Ar$ host-rock isotopic age of 480 to 420 Ma.	Belt related to early Paleozoic collisional granitoids that intrude Vendian and Cambrian shelf carbonate and clastic-carbonate rocks during dextral-slip movement along the Kuznetsk Alatau fault.
Kizir-Kazyr (KK)	Fe skarn (Irbinskoye); Volcanogenic-sedimentary Fe (Belokitatskoye); Granitoid-related Au vein (Olkhovskoye)	Russia, Southern-Eastern Siberia (Eastern Sayan Ridge)	Replacements related to Tannuola plutonic belt (too small to show at 15 M scale)	Middle Silurian. K-Ar isotopic age for deposit-related gabbro, diorite, and granodiorite plutons in Irbinskoye district is 430 Ma.	Deposits hosted in gabbro, diorite, and granodiorite in the collisional Tannuola plutonic belt, and in volcanogenic-sedimentary rocks of the Kizir-Kazir island-arc terrane.
North-Sayanian (NS)	Fe skarn (Abakanskoye, Anzass); Cyprus Cu-Zn massive sulfide (Mainskoye)	Russia, Southern-Eastern Siberia (West Sayan Mountains)	Replacements related to North Sayan terrane (Island arc)	Early to Middle Cambrian.	Belt interpreted as forming in volcanic basins in an island-arc. Major faults played a significant role and controlled sedimentary, volcanic, and intrusive processes as well as the general linear structure of the belt.
Khemchik-Kurtushi-binsk (KhK)	Serpentinite-hosted asbestos (Actovrak, Sayanskoye)	Russia, Southern-Eastern Siberia (Tuva area)	Replacements related to Kurtushiba terrane (Accretionary wedge)	Vendian to Early Cambrian.	Belt interpreted as forming during accretion of Kurtushiba ophiolite belt along the major Tuva-Sayanian fault in the Kurtushiba accretionary wedge terrane that contains mainly oceanic rocks.
Ondumsk (ON)	Au skarn (Tardan); Granitoid-related Au vein (Proezdnoye)	Russia, Southern-Eastern Siberia (Tuva area)	Replacements related to Tannuola plutonic belt	Late Cambrian to Ordovician	Belt hosted in granitoid intrusions of the collisional Tannuola complex that intrudes Early Cambrian carbonate and volcanic rocks that are part of the Ondum ensialic island arc terrane.
Ulugoisk (UO)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Kyzyl-Tashtygskoye, Kysyl-Tashskoye)	Eastern Tuva, West Siberia, Russia	Ulugo terrane (Island arc)	Early Cambrian	Belt interpreted as forming in an island-arc.

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Iiskiy (Iy)	Mafic-ultramafic related Ti-Fe (±V) (Verhne-Iiskoye)	Russia, Southern-Eastern Siberia (East Sayan area)	Mafic-ultramafic plutons of Haaktigoi complex (too small to show at 15 M scale) intruding Birusa paragneiss terrane and Derba passive continental margin terranes	Cambrian to Silurian	Belt interpreted as forming during intrusion of mafic-ultramafic plutons into a passive continental margin.
Bokson-Kitoiskiy (B-K)			Started in Neoproterozoic		
Ozerninsky (OZ)	Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu); (Ozernoye); Volcanogenic-sedimentary Fe (Arishinskoye)	Russia, Western Transbaikalia	Eravna terrane (Island arc) (too small to show at 15 M scale)	Cambrian to Silurian. Isotopic age of younger granitoids intruding terrane is 320 to 400 Ma.	Belt interpreted as forming in an island arc that was subsequently intruded by the Barguzin-Vitim batholith.
Kruchi-ninskiy (Krh)	Mafic-ultramafic related Ti-Fe (±V) (Kruchininskoye)	Russia, Northeastern Transbaikalia	Mafic-ultramafic intruded by Bargusin-Vitim (bv) granitoid belt intruding West Stanovoy terrane	Cambrian to Silurian	Belt interpreted as forming in early Paleozoic during intraplate magmatism.
Shimanovsk-Gar (ShG)	Fe skarn (Gar); Volcanogenic-sedimentary Fe; Volcanogenic Cu-Zn massive sulfide (Urals type) (Kamenushinskoe)	Russia, Far East	Replacements associated with granitic rocks of the Kiviliysk Complex that intrude Gar terrane; Replacements in Gar terrane (accretionary wedge) and replacements in Manyn terrane (Passive continental margin) (too small to show at 15 M scale).	Late Cambrian or older. Granitic rocks of the Kiviliysk complex have a minimum K-Ar isotopic age of 495 Ma.	Fe skarn deposits interpreted as forming during intrusion of Kiviliysk Granite Complex. Stratiform deposits in belt interpreted as forming during sea floor hydrothermal activity associated with basaltic volcanism that was accompanied by chert deposition in basins.
Uda-Shantar (UdS)	Volcanogenic-sedimentary Fe (Gerbikanskoe); Volcanogenic-sedimentary Mn (Ir-Nimiiskoe-1); Sedimentary phosphate (North-Shantarskoe, Nelkanskoe, Ir-Nimiiskoe-2, Lagapskoe)	Russia, Far East	Galam terrane (Accretionary wedge) (too small to show at 15 M scale	Early Paleozoic	Belt interpreted as forming during sea floor hydrothermal activity associated with basaltic volcanism that was accompanied by chert deposition in basins. Fe and Mn deposits occur in elongate beds and lenses. Sedimentary P deposits are interpreted as formed in limestone caps that formed in two stages on accreted seamounts, atolls, and guyots. Units and deposits were subsequently incorporated into an accretionary wedge.
Uzuurtolgoi (UT)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Malachite); Volcanogenic-Hydrothermal-Sedimentary Massive Sulfide Pb-Zn (±Cu) (Khoh Adar)	Western Mongolia	Ulgey terrane (Island arc) (too small to show at 15 M scale)	Age of belt interpreted as Cambrian	Belt interpreted as forming during subduction-related island arc basalt, andesite, dacite volcanism.

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Hovd (HO)	Granitoid-related Au vein; Au skarn; Cu (±Fe, Au, Ag, Mo) skarn (Yolochka)	Western Mongolia	Replacements related to Turgen granitoid complex that intrudes Hovd terrane (Continental-margin turbidite)	Ordovician to Late Silurian. K-Ar isotopic age of Hovd complex is 426 to 456 Ma.	Belt interpreted as forming during subduction related granitic magmatism that occurred along a continental-margin arc.
Tastyg (TG)	REE-Li pegmatite (Tastygskoye)	Russia, Southern-Eastern Siberia (Southern Tuva area)	Veins and dikes related to South Siberian volcanic-plutonic belt (plutonic part) intruding Sangilen terrane	Middle to Late Silurian. U-Th isotopic age of Li granite and spodumene pegmatite is 420 to 436 Ma.	Belt hosted in polymetamorphic complex and connected with post-collisional anorogenic granite-leucogranite-pegmatite complex. The belt is related to magmatism of transpression zones related to transform micro plate boundaries and within plate (plume) environment.
Telmen (TL)	Mafic-ultramafic related Cu-Ni-PGE (Oyut tolgoi 2); Fe skarn; Cu (±Fe, Au, Ag, Mo) skarn (Solongot)	Northern Mongolia	Plutons and replacements related to Telmen volcanic-plutonic belt.	Middle Cambrian through Middle Silurian. K-Ar isotopic age of Telmen granitoids ranges from 520 Ma to 426 Ma	Belt interpreted as forming during subduction-related gabbroic magmatism, and during subsequent collision-related granitic magmatism.
Zavhanmandal-Jargalant (ZJ)	Mafic-ultramafic related Ti-Fe (±V) (Uet-Ondor); Granitoid-related Au vein	Central Mongolia	Plutons related to Telmen volcanic-plutonic belt.	Interpreted age of Early to Middle Cambrian. K-Ar isotopic ages of Telmen granitoids range from 520 Ma to 426 Ma.	Belt interpreted as forming during during subduction-related gabbroic magmatism, and during subsequent collision-related granitic magmatism.
Khachimgol (Kch)	Mafic-ultramafic related Ti-Fe (±V) (Khachim gol)	Northern Mongolia	Mafic-ultramafic plutons related to Telmen volcanic-plutonic belt (too small to show at 15 M scale)	Interpreted age of Early to Middle Cambrian.	Belt interpreted as forming during subduction-related gabbroic magmatism.
Egiingol (EG)	Talc (magnesite) replacement (Baganuur); Serpentine-hosted asbestos (Zalaat)	Central Mongolia	Replacements in Dzhida terrane (Island arc)	Age of regional metamorphism interpreted as Ordovician.	Belt occurs in the Dzhida terrane that is closely related to Ordovician collisional granite. Belt interpreted as forming during collision-related regional metamorphism.
Bayangol (Bgl)	Mafic-ultramafic related Ti-Fe (±V); Mafic-ultramafic related Cu-Ni-PGE (Serten-Nomgon); Fe skarn (Bayangol 3); Cu (±Fe, Au, Ag, Mo) skarn (Serten, Tomortolgoi)	Central Mongolia	Replacements and plutons related to Telmen volcanic-plutonic belt	Middle to Late Cambrian. Age of zoned gabbroic plutons interpreted as Middle Cambrian; age of the Bayangol granitoids interpreted as Middle to Late Cambrian.	Belt interpreted as forming during subduction-related gabbroic magmatism associated with a passive continental margin containing the Orhon and adjacent terranes.
Zaamar-Bugant (Zaa)	Au in shear zone and quartz vein (Bumbat); Granitoid-related Au vein (Narantolgoi)	Central Mongolia	Veins in Zag-Haraa turbidite basin overlap assemblage and , and on-Ikatsky terrane (Continental margin arc)	Age of regional metamorphism interpreted as Ordovician.	Belt interpreted as forming during collision-related deformation and related regional metamorphism in the Late Ordovician and Silurian during collision of the correlated Zag-Haraa and Orhon terranes.
Chagoyan (Chn)	Sedimentary-exhalative Pb-Zn (SEDEX) (Chagoyan)	Russia, Far East	Bureya metamorphic terrane (too small to show at 15 M scale)	Cambrian(?)	Belt interpreted as forming during generation of hydrothermal fluids during rifting and intrusion of intermediate composition dikes, and chemical marine sedimentation.

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South Khingan (S-Kh)	Banded iron formation (BIF, Superior Fe) (Yuzhno-Khingan, Kimkanskoe, Kostenginskoe)	Russia, Far East	Malokhingansk terrane (Accretionary wedge)	Neoproterozoic and Cambrian. BIF intruded by granitic plutons with K-Ar isotopic ages of 604 and 301 Ma.	Belt is interpreted as forming in volcanic and sedimentation basin along an unstable proto-continental margin, or in a fragment of Archean craton that was incorporated into an accretionary wedge terrane.
Bayanhon-gor-1 (BH-1)	Au in shear zone and quartz vein (Bor Khairhan, Khan Uul, Dovont); Granitoid-related Au vein (Tsagaantsakhir Uul); Cu-Ag vein (Jargalant, Bayantsagaan, Burdiingol); Cu (±Fe, Au, Ag, Mo) skarn (Khokhbulgiin Khondii)	Central Mongolia	Veins in Hangay-Dauria terrane (Accretionary wedge), Orhon-Ikatsky terrane (Continental margin arc), and Zag-Haraa turbidite basin	Late Ordovician. K-Ar metamorphic isotopic ages of foliated and metamorphosed host mudstone (Vendian to Early Cambrian Olziitgol Formation in Orhon terrane) are 447 and 453.9 Ma.	Belt interpreted as forming during regional metamorphism associated with accretion of Bayanhongor and Baydrag terranes.
Govi-Altai (GAl)	Volcanogenic-sedimentary Fe (Uhin Ovoo); Volcanogenic-sedimentary Mn (Tahilgat Uul, Sharturuutiin gol)	Southwestern Mongolia	Govi Altai terrane (Continental-margin turbidite)	Middle Cambrian to Early Ordovician.	Belt interpreted as forming during sedimentation along an early Paleozoic continental slope.
Ikh Bogd (IB)	Serpentine-hosted asbestos (Ih hajuu, Yamaan us); Talc (magnesite) replacement (Tsagaan gol); Podiform chromite	Central Mongolia	Replacements in Ih Bogd terrane (Oceanic) (too small to show at 15 M scale) and Lake terrane (Island arc)	Age of belt interpreted as Ordovician.	Belt interpreted as forming during collision that occurred during amalgamation of subterranes of the Lake island arc terrane into a superterrane, and also during amalgamation of Lake terrane with Baidrag and Idermeg terranes.
Tamirgol-Yoroogol (TY)	Volcanogenic-sedimentary Fe (Tamirgol)	Central Mongolia	Zag-Haraa turbidite basin	Middle Cambrian to Early Ordovician.	Belt interpreted as forming during sedimentation along an early Paleozoic continental slope.
Xilin (XL)	Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu) (Xiaoxilin)	Northeastern China	Zhangguangcailing superterrane (Continental margin arc) (too small to show at 15 M scale)	Early Cambrian. Subsequent metamorphism at 480 to 500 Ma.	Belt interpreted as forming during volcanic, clastic, and carbonate sedimentation in an aulacogen.
Jixi (JX)			Started in Neoproterozoic (1000 to 540 Ma)		
Tadong (TD)	Volcanogenic-sedimentary Fe (Tadong)	Northeastern China	Zhangguangcailing superterrane (Continental margin arc)	Silurian	Belt hosted in pre-accretionary volcanic and sedimentary rocks that were metamorphed and folded during the accretion of Zhangguangcailing superterrane.
Kabarga (Kb)	Banded iron formation (BIF, Superior Fe) (Ussuri)	Russia, Far East	Kabarga terrane (Accretionary wedge) (too small to show at 15 M scale)	Cambrian(?)	Belt related to marine sedimentary units that were structurally included into the highly-metamorphosed Kabarga accretionary wedge terrane.
Voznesenka (VZ)	Korean Pb-Zn massive sulfide (Voznesenka-I, Chernyshevskoe)	Russia, Far East	Layers in marine sedimentatry units in Voznesenka terrane (Passive continental margin)	Cambrian through Permian. Post-deposit, collision-related biotite and Li-F protolithionite granitoid are part of terrane and have Rb-Sr and Sm-Nd isotopic ages of 450 Ma.	Belt hosted in Voznesenka terrane that is interpreted as part of the passive continental margin of Gondwanaland.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Bainaimiao (BN)	Porphyry Cu-Mo (±Au, Ag) (Bainaimiao)	Northern China	Granitoids related to small Bainaimiao complex (too small to show on 10 M scale map) intruding Wundurmiao terrane	Cambrian and Early Ordovician. May extend into late Neoproterozoic. Granodiorite porphyry has U-Pb zircon isotopic ages of 466 to 694 Ma.	Granitoids hosting belt are interpreted as forming during accretion of the WenduermiaoTerrane to Sino-Korean Craton. Belt hosted in granodiorite porphyry that intrudes Mesoproterozoic Bainaimiao Group.
Fangniugou (FN)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Fangniugou)	Northeastern China	Laoling terrane (Island arc)	Ordovician to Silurian. Rb-Sr isotopic of volcanic rocks is 445 Ma. K-Ar isotopic age is 408 Ma.	Belt is interpreted as forming during subduction-related volcanism in Late Ordovician volcaniclastic rock of Laoling island arc terrane. The Laoling terrane is strongly deformed and intruded by mainly Hercynian plutons.
Hunjiang-Taizihe (HT)	Evaporite sedimentary gypsum (Rouguan)	Northeastern China.	Sino-Korean platform sedimentary cover	Cambrian to Ordovician	Gypsum interpreted as forming in a super-tidal sabkha sedimentary environment.
Jinzhong (JZ)	Evaporite sedimentary gypsum (Taiyuan)	Northern China	Sino-Korean platform sedimentary cover	Cambrian through Ordovician	Gypsum interpreted as forming in a large epicontinental marine basin.
East Liaoning (EL**)**	Diamond-bearing kimberlite (Fuxian)	Northeastern China	Kimberlites intruding Sino-Korean Craton - Jilin-Liaoning-East Shandong terrane (Tonalite-trondhjemite-gneiss)	Ordovician(?). Isotopic age of kimberlite is about 340 to 455 Ma. Isotopic age of kimberlite on Shandong Peninsula is 460 to 490 Ma.	Kimberlite and associated intrusions occur along northeast-trending regional Tanlu fault along northern margin of the Sino-Korean Platform.
DEVONIAN THROUGH EARLY CARBONIFEROUS (MISSISSIPPIAN)(410 to 320 Ma) METALLOGENIC BELTS					
Udzha (UD)	REE (±Ta, Nb, Fe) carbonatite (Tomtor)	Russia, Northeast Yakutia	North Asian Craton	Interpreted as Devonian. Host rock Rb-Sr isotopic age is 810 to K-Ar age is 240 Ma.	Belt interpreted as forming during intrusion of alkali-ultramafic rock and carbonatite associated with Devonian rifting.
Daldyn-Olenyok (DO)	Diamond-bearing kimberlite (Aikhal, Udachnaya, Ubileinaya, Sytykanskaya)	Russia, Northeast Yakutia	Kimberlite intruding North Asian Craton	Devonian	Tectonic environment unknown. Devonian kimberlite pipes intrude mostly Cambrian to Silurian carbonate sedimentary rocks of North Asian Craton.
Orulgan (OR)	Sediment-hosted Cu (Aga-Kukan)	Russia, Northeast Yakutia	North Asian Craton Margin - Verkhoyansk fold and thrust belt (Passive continental margin)	Interpreted as Late Devonian to Early Carboniferous.	Belt interpreted as forming during sedimentation during Devonian to Early Mississippian rifting along passive margin of the North Asian Craton. Belt hosted in shallow marine clastic and carbonate sedimentary rocks of the Artygan and Agakukan formations.
Botuobiya - Markha (Bot)	Diamond-bearing kimberlite (Mir, Internatsional'naya)	Russia, Central Yakutia	Kimberlite intruding North Asian Craton	Devonian.	Tectonic environment unknown. Devonian kimberlite pipes intrude mostly Cambrian to Silurian carbonate sedimentary rocks of North Asian Craton.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Sette-Daban (SD)	Sediment-hosted Cu (Kurpandzha); Basaltic native Cu (Lake Superior type) (Dzhalkan and Rossomakha); REE (±Ta, Nb, Fe) carbonatite (Gornoye Ozero, Povorotnoye); Carbonate-hosted Pb-Zn (Mississippi valley type) (Lugun , Segenyakh)	Russia, Southern Yakutia	North Asian Craton Margin - Verkhoyansk fold and thrust belt (Passive continental margin)	Interpreted as Middle Devonian to Early Carboniferous.	Cu deposits interpreted as forming during Devonian rifting. REE and apatite deposits hosted in alkali-ultramafic and carbonatite plutons are also interpreted as forming during Devonian rifting.
Mamsko-Chuiskiy (MCh)	Muscovite pegmatite (Vitimskoye, Lugovka, Kolotovka, Bolshoye Severnoye, Komsomolsko-Molodezhnoye, Sogdiondonskoye, and Chuyskoye)	Russia, Northern Transbaikalia	Veins and dikes in Mamsky and Konkudero-Mamakansky complexes (units too small to show at 15 M scale) intruding Chuja terrane (Paragneiss) overlapped by North Asian Craton Margin - Patom fold and thrust belt	Devonian to Early Carboniferous. Mamsky complex has isotopic age of 350 to 300 Ma.	Interpreted as forming during intrusion of alkaline granitoid of the Mamsky and Konkudero-Mamakansky Complexes into the Chuya paragneiss terrane that formed part of a passive margin. The host granitoids are interpreted as forming during post-accretionary magmatism in transpression zones related to transform micro plate boundaries and within plate (plume) environment.
Synnyrskiy (Sn)	Magmatic and metasomatic apatite (Synnyrskoye)	Russia, Northern Transbaikalia	Replacements related to Synnyrsky alkaline magmatic complex in Synnyrskyky plutonic belt (too small to show at 15 M scale) intruding Baikal-Muya terrane and Barguzin-Vitim granitoid belt	Devonian to Early Carboniferous	Belt interpreted as forming during middle Paleozoic North Baikal rift with an axial zone containing ten concentrically-zoned intrusive plutons of alkaline and nepheline syenite in the Synnyrsky complex.
Bodaibinskiy (Bod)			Belt started in Neoproterozoic. Economic deposits formed in Devonian to Early Carboniferous. Isotopic age of gold from Sukhoy Log deposit is about 320 Ma.		
Muiskiy (MS)	Granitoid-related Au vein; Au in shear zone and quartz vein (Irokindinskoye); Carbonate-hosted Hg-Sb (Kelyanskoye); Porphyry Sn (Mokhovoye)	Russia, Northwestern Transbaikalia	Granitoids and veins related to Barguzin-Vitim granitoid belt (too small to show at 15 M scale intruding Baikal-Muya terrane (Island arc) and Muya metamorphic terrane	Devonian to Early Carboniferous	Belt interpreted as forming in granitoids and veins generation during Riphean collision of Baikal-Muya terrane with Muya terrane.
Berdsko-Maisk (Ber)	Sedimentary bauxite (Berdsko-Maiskoye); Bauxite (karst type) (Oktyabrskoye 4)	Russia, Southern-Eastern Siberia (Salair Range)	Khmelev back-arc basin	Early Devonian	Bauxite interpreted as forming in near-shore marine sedimentary rocks that were deposited in a marine basin. Host sedimentary rocks are Eifelian reefoid clastic limestone.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Salair (SL)	Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Salairskoye); Porphyry Cu-Mo (±Au, Ag) (Kamenushinskoye)	Russia, Southern-Eastern Siberia (Salair Range)	Porphyry intrusions and associated replacements related to Altai volcanic-plutonic belt that overlies and intrudes the Salair terrane.	Interpreted age of Middle Devonian to Early Carboniferous for deposit-related quartz-porphyry intrusion.	Belt interpreted as forming in an active continental margin environments into which mafic dike swarms and small intrusions, and siliceous porphyries were intruded.
Kiya-Shaltyr (Ksh)	Magmatic nepheline (Kiya-Shaltyr)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau Mountains)	Deposits related to intrusions of South Siberan volcanic-plutonic belt	Middle Devonian. Rb-Sr isochron age of 383 Ma	Belt interpreted as forming during rift-related magmatism above a hot spot. A $^{87}Sr/^{86}Sr$ ratio of 0.7053 for gabbros and urtite of the Kiya-Shaltyr pluton indicates a deep-mantle origin. Nepheline plutons occur along major fault zones.
Sorsk (SO)	Porphyry Mo (±W, Bi) (Sorskoye); Polymetallic (Pb, Zn, Ag) carbonate-hosted metasomatite (Karasuk); Zn-Pb (±Ag, Cu) skarn (Julia Svintsovaya)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau Mountains)	Granitoids and associated replacements related to South Siberian volcanic-plutonic belt.	Early and Middle Devonian. $^{40}Ar-^{39}Ar$ isotopic age of deposits is 385 to 400 Ma. K-feldspar and albite metasomatite age is 400 to 380 Ma. Host volcanic rocks with K-Ar age of 396 Ma and Rb-Sr age of 416 Ma.	Belt interpreted as forming during Devonian subalkalic porphyry magmatism related to interplate rifting. Deposit-related porphyry intrusions intrude older early Paleozoic granitoid plutons. Skarn and metasomatic polymetallic deposits hosted in Vendian and Cambrian shallow-water marine carbonate rocks.
Teisk (TE)	Fe skarn (Teiskoye, Khaileolovskoye); Mafic-ultramafic related Ti-Fe (±V) (Patynskoye, Kul-Taiga); Volcanogenic-Sedimentary Fe (Chilanskoye)	Russia, Southern-Eastern Siberia (Kuznetsk Alatau Mountains)	Deposits related to plutonic rocks of South Siberian volcanic-plutonic belt	Early Devonian. K-Ar isotopic ages for syenite-diorite of Malaya Kul-Taiga pluton are 411 and 438 Ma. K-Ar isotopic age of Devonian volcanic rocks is 396 Ma and Rb-Sr isotopic age is 416 Ma.	Belt interpreted as forming during interplate rifting that formed South Minusa volcanic basin. Deposit-related Early Devonian granosyenite plutons occur along marginal faults of Devonian basins.
Chapsordag (ChD)	Barite vein (Chapsordag); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Bazikskoye); Carbonate-hosted fluorspar (Zhurskoye)	Russia, Southern-Eastern Siberia	Replacements related to granitoids related to South Siberian volcanic-plutonic belt.	Devonian	Belt interpreted as forming during rift-related magmatism that formed that the South Siberian volcanic-plutonic belt.
Agulsk (AG)	Porphyry Cu-Mo (±Au, Ag) (Agulskoye, Dzhetskoye	Russia, Southern-Eastern Siberia (Eastern Sayan)	Granitoids related to South Siberian volcanic-plutonic belt	Early and Middle Devonian. K-Ar isotopic age for biotite granite related to Irbinskoye Fe-skarn deposit ranges from 398 to 418 Ma. $^{40}Ar/^{39}Ar$ isotopic age of the porphyry magmatism is 400 to 380 Ma.	Belt interpreted as forming during rift-related granitoid magmatism of South Siberian volcanic-plutonic belt.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Kizhi-Khem (KZ)	W-Mo-Be greisen, stockwork, and quartz vein (Okunevskoye); Porphyry Cu-Mo (±Au, Ag) (Aksug, Dashkhemskoye); Ta-Nb-REE alkaline metasomatite (Aryskanskoye 1); Granitoid-related Au vein	Russia, Southern-Eastern Siberia (Northeast Tuva area)	Replacements and granitoids related to South-Siberian volcanic-plutonic belt that overlies and intrudes the Khamsara island-arc terrane	Devonian through Pennsylvanian. Estimated $^{40}Ar/^{39}Ar$ isotopic age for the Aksug Cu-Mo-porphyry deposit is 400 to 380 Ma. Alaskite and alkalic granite hosting W-Mo-Be deposits intrude Silurian-Devonian granite and have K-Ar isotopic ages of 305 to 280 Ma.	Belt interpreted as forming during granitoid magmatism associated with South Siberian volcanic plutonic belt. Deposit-related plutons intrude Early Cambrian volcanic rocks of the Khamsara island-arc terrane and early Paleozoic granites of Tannuola plutonic belt.
Rudny Altai (RA)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Korbalihinskoye, Stepnoye, Talovskoye, Rubtsovskoye, Zakharovskoye, Jubileinoye); Barite vein (Zarechenskoye, Zmeinogorskoye); Volcanic-hosted metasomatite	Russia, Southern-Eastern Siberia	Rudny Altai terrane (Island arc)	Middle to Late Devonian	Belt interpreted as forming in an island arc. Belt hosted in shallow marine shelf volcanic rocks
Korgon-Kholzun (KKh)	Volcanogenic-sedimentary Fe (Kholzunskoye, Inskoye, Beloretskoye); Fe skarn, Mafic-ultramafic related Ti-Fe (±V) (Kharlovskoye); Polymetallic (Pb, Zn, Ag) carbonate-hosted metasomatite (Charyshskoye)	Russia, Southern-Eastern Siberia (Gorny Altai area)	Deposits related to Altai volcanic-plutonic belt that overlap and intrude Altai and Charysh continental margin turbidite terranes	Devonian to Carboniferous	Belt interpreted as forming along an active Hercynian-continental margin arc.
Shirgaita (SH)	Sedimentary-exhalative Zn-Pb (SEDEX) (Shirgaita); Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Ursulskoye)	Russia, Southern-Eastern Siberia (Gorny Altai area)	Altai volcanic-plutonic belt	Early to Middle Devonian	Belt interpreted as forming along back-arc of an island arc. Belt hosted in clastic and carbonate rocks, andesite and diabase porphyries, tuff, tuff breccia, felsicporphyries, and siliceous tuff.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Deluun-Sagsai (DS)	Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Burgedtas); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Nominy Am); Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai type); Sediment-hosted Cu (Khatuugiin gol); Ag-Pb epithermal vein (Dulaan khar uul) Granitoid related Au vein	Western Mongolia	Granitoids and replacements related to Deluun sedimentary-volcanic-plutonic belt	Interpreted as Early Devonian to Early Carboniferous	Belt interpreted as forming along an active Andean-type continental margin.
Khalzan-burged (KhZ)	Peralkaline granitoid-related Nb-Zr-REE; (Ulaantolgoi); Ta-Nb-REE alkaline metasomatite (Shartolgoi)	Western Mongolia	Alkaline granite plutons in the Altai volcanic-plutonic belt	Interpreted as Early Devonian. K-Ar amphibole isotopic age of nordmarkite is 423 Ma. U-Pb age of calcite granite is 396 Ma. Sm-Nd fluorite isochron age for the Halzanburegtei pluton is 325 Ma.	Belt interpreted as forming along an active Andean-type active continental margin.
Bayan-Kol (BK)	Magmatic nepheline (Bayan-Kol, Korgere-Daba)	Russia, Southern-Eastern Siberia (Tuva area); Northern Mongolia	Granitoids related to South Siberian volcanic-plutonic belt intruding Salair terrane	Late Mississippian and Pennsylvanian. K-Ar biotite average isotopic age for nepheline syenite is 310 Ma. Korgere-Daba pluton has age of 296 Ma; Ulan-Erginsk pluton has age of 313 Ma, Pichekol pluton has age of 323 Ma.	Belt interpreted as forming during middle Paleozoic intraplate rifting.
Bugseingol-Ovormaraat (BOM)	Magmatic nepheline (Ovormaraat, Doshiin gol, Beltesiin gol); Peralkaline granitoid-related Nb-Zr-REE (Altanboom, Uranhem, Arsaan, Shignuul gol, Ust gol Nb-Zr-REE; Ar gol, Yarhis gol); Ta-Nb-REE alkaline metasomatite (Altanboom)	Northern Mongolia	Belt is related to alkaline intrusive magmatic complex that occurs west and south of Hovsgol Lake. The alkaline complex is part of an alkaline magmatic aureole that also occurs in eastern Tuva and eastern Sayan area of Russia.	Belt interpreted as starting in Early Devonian and continuing to to Permian. Isotopic ages range from 400 to 396 Ma and 325 to 300 Ma.	Belt interpreted as forming along an active Andean-type active continental margin. Deposits hosted in anorogenic alkaline gabbro, nepheline syenite, alkaline syenite, and alkaline granite.
Tomurtein Nuruu (TN)	Clastic-sediment-hosted Sb-Au (Talynmeltes)	Southwestern Mongolia	Beitianshan-Atasbogd terrane (Island arc)	Lower to Middle Devonian. Interpreted age for associated greenschist facies metamorphism.	Belt interpreted as forming during regional metamorphism and vein emplacement associated with accretion of Beitianshan-Atasbogd and Zhongtianshan terranes.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Bidzhan (Bdz)	Sn-W greisen, stockwork, and quartz vein; Fluorite greisen (Preobrazhenovskoye)	Russia, Far East	Replacements and granitoids Khanka-Bureya granitic belt that intrudes Malokhingansk accretionary wedge terrane	Interpreted as Devonian(?). K-Ar isotopic ages vary from 604 to 301 Ma.	Belt interpreted as forming in the final stage of intrusion of the Khanka-Bureya granitic belt that formed in a subduction-related continental-margin arc.
Baruunhuurai (BAN)	Au in shear zone and quartz vein (Khaltar Uul II)	Southwestern Mongolia	Replacements in Waizunger-Baaran terrane (Island arc)	Early to Middle Carboniferous	Belt interpreted as forming during regional metamorphism and vein emplacement association with accretion of the Beitianshan-Atasbogd and Zhongtianshan terranes.
Hangai (HAN)	Volcanogenic-sedimentary Mn; Volcanogenic-sedimentary Fe (Zoogiin)	Central Mongolia	Hangay-Dauria terrane (Accretionary wedge).	Lower to Middle Devonian	Belt interpreted as forming in marine sedimentary rocks incorporated into an accretionary wedge.
Edrengiin (ED)	Volcanogenic Cu-Zn massive sulfide (Urals type) (Olgii nuruu); Volcanogenic-sedimentary Mn; Volcanogenic-sedimentary Fe (Olgiibulag)	Southwestern Mongolia	Edren terrane (Island arc)	Early Devonian	Belt interpreted as forming in island arc or ophiolite complex. Deposits hosted in pillow basalt and siliceous rocks.
Bayangovi (BG)	Au in shear zone and quartz vein (Bayangovi district)	Southern Mongolia	Replacements in Govi Altai terrane (Continental-margin turbidite)	Devonian	Belt interpreted as forming regional metamorphism of the Govi-Altai terrane during collision with the Lake terrane.
Bayanleg (BL)	Besshi Cu-Zn-Ag massive sulfide (Bayantsagaan 1)	Southern Mongolia	Bayanleg terrane (Accretionary wedge – type B)	Early Devonian	Belt interpreted as forming in marine sedimentary rocks incorporated into an accretionary wedge.
Ulziit (UZ)	Au in shear zone and quartz vein (Olon Ovoot)	Southern Mongolia	Replacements in Govi Altai terrane (Continental-margin turbidite)	Devonian(?)	Belt interpreted as forming regional metamorphism of Govi-Altai terrane during collision with the Idermeg terrane.
Sulinheer (Sul)	Podiform chromite (Sulinheer)	Southeastern Mongolia	Solon terrane (Accretionary wedge)	Carboniferous(?)	Belt interpreted as forming in a middle Paleozoic ophlolite complex that was structurally incorporated into an accretionary wedge.
Hegenshan (Heg)	Podiform chromite (Hegenshan-3756)	Northeastern China	Dunite dikes in Heilongjiang terrane (Accretionary wedge) (too small to show at 15 M scale)	Middle Devonian. K-Ar isotopic age of peridotite is 380 Ma.	Belt interpreted as forming in a middle Paleozoic ophlolite complex that was structurally incorporated into an accretionary wedge.
Yaroslavka (YA)	Fluorite greisen (Voznesenka-II); Sn-W greisen, stockwork, and quartz vein (Yaroslavskoe)	Russia, Far East	Granitoids intruding Voznesenka terrane (Passive continental margin)	Late Cambrian and though Devonian. Granitoids have K-Ar isotopic ages of 440 to 396 Ma.	Belt interpreted as forming in a collisional arc that formed in a fragment of Gondwanaland. Host leucogranite plutons interpreted as forming during early Paleozoic collision of the Voznesenka and Kabarga terranes. Deposit-related granitoids intrude Cambrian clastic rocks and limestone.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Edren-Zoolon (EZ)	Au in shear zone and quartz vein (Edren, Nemegt)	Southern Mongolia	Veins in Edren terrane (Island arc) and Zoolen terrane (Accretionary wedge)	Late Devonian to Early Carboniferous	Belt interpreted as forming during regional metamorphism and vein emplacement associated with accretion of Beitianshan-Atasbogd and Zhongtianshan terranes.
Tsagaan-suvarga (TsS)	Porphyry Cu-Mo (±Au, Ag) (Tsagaan suvarga; Oyutolgoi, Oyut, Bor Ovoo); Porphyry Cu (±Au) (Oyu Tolgoi); Porphyry Au; Granitoid-related Au vein (Alagtolgoi)	Southeastern Mongolia	Granitoids related to Gurvansayhan island arc terrane	Late Devonian to Early Carboniferous. $^{40}Ar/^{39}Ar$ isotopic age for Tsagaan suvarga porphyry Cu deposit is 364.9± 3.5 Ma.	Belt interpreted as forming in a mature island arc or continental-margin arc.
Hongqiling (HQ)	Mafic-ultramafic related Cu-Ni-PGE (Hongqiling); Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Guanma)	Northeastern China	Mafic and ultramafic plutons in Hongqiling plutonic and Guanma volcanic sedimentary complexes (too small to be shown on 5 M scale map) intruding and overlapping Zhangguangcailing superterrane and Laoling terrane.	Mississippian. Isotopic ages of 331 to 350 Ma.	Belt interpreted interpreted as forming during extension that occurred after accretion of the Zhangguangcailing superterrane and Laoling terrane. Belt hosted in Mississipian mafic-ultramafic plutons and in overlap volcanic assemblages.
LATE CARBONIFEROUS (PENNSYLVANIAN) THROUGH MIDDLE TRIASSIC (320 to 230Ma) METALLOGENIC BELTS					
Severo-Zemelsk (SZ)	Mafic-ultramafic related Cu-Ni-PGE (Ozernaya River)	Russia, North Offshore (Severnaya and Zemlya Islands)	Mafic-ultramafic plutons related to Tungus plateau basalt, sills, dikes and intrusions intruding Kara continental margin turbidite terrane.	Permian toTriassic	Belt interpreted as related to mafic-ultramafic magmatism of transextension zones related to transform micro plate boundaries and within plate (plume) environment**.**
Birulinsk (Bir)	REE-Li pegmatite (Birulinskoye)	Russia, Northern-Eastern Siberia (Taimyr Peminsula)	Veins and dikes related to zonal metamorphic zones (unit too small to show on 10 M map) intruding Kara continental margin turbidite terrane.	Interpreted as Permian.	Belt interpreted as related to late Paleozoic collision and associated regional metamorphism and granitoid magmatism related to transform micro plate boundaries and within plate (plume) environment.
Norilsk (NR)	Mafic-ultramafic related Cu-Ni-PGE (Norilsk I, II, Oktyabrskoye 3); Basaltic native Cu (Lake Superior type) (Arylakhskoye) Porphyry Cu-Mo (±Au, Ag) (Bolgochtonskoye)	Russia, Northern-Eastern Siberia	Tungus plateau basalt, sills, dikes, and intrusions	Early Triassic. $^{40}Ar/^{39}Ar$ isotopic ages for mafic-ultramafic rocks in Norilsk district is 241.0 to 245.3 Ma. Isotopic age for Cu-Mo deposits is 223.3 Ma	Belt interpreted as related to mantle-derived superplume magmatism that resulted in widespread development of trapp magmatism on North Asian Craton.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Maimecha-Kotuisk (MK)	Fe-Ti (±Ta, Nb, Fe, Cu, apatite) carbonatite (Magan I, Bor-Uryach); REE (±Ta, Nb, Fe) carbonatite (Gulinskoye I); Phlogopite carbonatite (Odikhimcha)	Russia, Northeast Siberia	Alkali-ultramafic-carbonatite intrusions on North Asian Craton related to Tungus plateau basalt	Late Permian to Early Triassic. According to the $^{40}Ar/^{39}Ar$ isotopic data, age of deposit-related intrusions ranges from 249 to 253 Ma.	Belt interpreted as related to mantle superplume magmatism that resulted in widespread development of trapp magmatism on North Asian Craton. Magmatic rocks include tholeiite, diabase, trachybasalt, melanonephelinite volcanic rocks and intrusive rocks, and ijolite-carbonatite and kimberlite complexes.
Kureisko-Tungsk (KT)	Fe skarn (Suringdakonskoye); Mafic-ultramafic related Cu-Ni-PGE (Bilchany River); Metamorphic graphite (Noginskoye)	Russia, Northern-Eastern Siberia	Replacements and plutons related to Tungus plateau basalt, sills, dikes, and intrusions	Permian to Triassic	Belt interpreted as related to mantle superplume magmatism that resulted in widespread development of trapp magmatism on North Asian Craton along the long-lived West-Siberian rift system and Yenisei sublongitudinal major fault.
West Verkho yansk (WV)	Au in black shale (Mangazeika); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Kysyltas)	Russia, East-Central Yakutia (Verkhoyansk area)	North Asian Craton Margin - Verkhoyansk fold and thrust belt (Passive continental margin).	Interpreted as Late Carboniferous to Early Permian. Lead from the ores of the Mangazeika deposit have isotopic age of 183 to 120 Ma. Oldest ages of 183 to 174 Ma obtained from the upper section of Carboniferous host rock.	Belt interpreted as forming along passive continental margin of North Asian Craton during rifting.
Central Tungusk (CT)	Hydrothermal Iceland spar (Krutoye, Gonchak)	Russia, Eastern Siberia	Replacements related to Tungus plateau basalt, sills, dikes, and intrusions	Early Triassic. $^{40}Ar/^{39}Ar$ isotopic age for basalt from the northern part of the Tungussk syncline is 248.0 to 248.9 Ma.	Belt interpreted as related to widespread development of trapp magmatism on North Asian Craton. Belt coincides with Triassic tholeiite volcanic and intrusive rocks.
Angara-Ilim (AI)	Fe skarn (Korshunovskoye); REE (±Ta, Nb, Fe) carbonatite (Chuktukonskoye); Weathering crust carbonatite REE-Zr-Nb-Li (Chuktukonskoye)	Russia, Eastern Siberia	Replacements related to Tungus plateau basalt, sills, dikes, and intrusions intruding North Asian Craton	Late Permian to Early Triassic(?). Isotopic age of related igneous rock ranges from 260 to 200 Ma.	Belt interpreted as related to widespread development of trapp magmatism on North Asian Craton. Fe skarn deposits associated with Triassic explosive and intrusive basaltic trapp complexes in diatremes. REE-Ta-Nb carbonatite deposits associated with alkali-ultramafic intrusions.
Barlaksk (BA)	W-Mo-Be greisen, stockwork, and quartz vein (Kolyvanskoye)	Eastern Siberia, Russia	Replacements related to granitoids of Belokurikha plutonic belt (too small to show at 15 M scale) intruding Kolyvan-Tom back-arc basin	Middle Triassic. Isotopic ages of deposit-related leucogranitic intrusions are 235.9 to 232.0 Ma.	Belt interpreted as related to interplate rifting and associated strike-slip faulting. Belt hosted in intraplate granitoids in the Barlak pluton that intruded along strike-slip faults.
Zashik-hinskiy (Zsh)	Ta-Nb-REE alkaline metasomatite (Zashikhinsky); Clastic sediment-hosted Hg±Sb (Gorkhonskoye)	Russia, Southern-Eastern Siberia (East Sayan)	Granitoids and replacements in Ognit and other complexes (too small to show on 10 M map) intruding Birusa paragneiss and Derbinsky passive continental margin terranes (too small to show at 15 M scale).	Late Carboniferous to Middle Triassic	Belt interpreted as forming during rifting and intraplate magmatism.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Kolyvansk (Kol)	W-Mo-Be greisen, stockwork, and quartz vein (Kolivanskoye, Plotbistchenskoye); W±Mo±Be skarn (Beloretskoye)	Russia, Eastern-Southern Siberia (Gorny Altai Mountains)	Replacements related to granitoids in Belokurikha plutonic belt (too small to show at 15 M scale)	Early Triassic. Rb-Sr isotopic ages for deposit-related REE granite of 245.0 to 241.2 Ma.	Belt interpreted as forming during granitoid magmatism in an interplate environment during Middle Carboniferous accretion of the Gorny Altai and Rudny Altai terranes.
Onor (Onr)	Volcanogenic-sedimentary Fe (Xieertala)	Northeastern China	Mandalovoo-Onor terrane (Island arc)	Late Carboniferous	Belt interpreted as forming in an island arc. Belt hosted in marine volcanic, clastic, and carbonate rock.
Duobaoshan (DB)	Porphyry Cu-Mo (±Au, Ag) (Duobaoshan)	Northeastern China	Granitoids related to Nora-Sukhotin-Duobaoshan terrane (Island arc)	Pennsylvanian. K-Ar isotopic age for host batholith is 292 Ma.	Belt interpreted as forming in an island arc. Belt hosted subduction-related granodiorite porphyry.
Melgin-Niman (MN)	Felsic pluton U-REE (Chergilen); Porphyry Mo (Melginskoye, Metrekskoye)	Russia, Far East	Granitoids related to Tyrma-Burensk granitic assemblage intruding Bureya metamorphic terrane (too small to show at 15 M scale)	Permian(?)	Belt interpreted as forming during intrusion of Tyrma-Burensk granitic assemblage in a subduction-related granitic belt.
Wuxing (WX)	Mafic-ultramafic related Cu-Ni-PGE (Wuxing)	Northeastern China	Mafic and ultramafic plutons of Wuxing complex intruding Zhangguangcailing continental margin arc superterrane (too small to be shown on 5 M map)	Pennsylvanian	Belt interpreted as forming during extension after accretion of the Zhangguangcailing continental margin arc superterrane. Belt hosted in post-accretionary mafic and ultramafic plutons that intruded along major east-west-trending faults.
Altay (AT)	REE-Li pegmatite; Muscovite pegmatite (Keketuohai, Ayoubulake)	Northwestern Mongolia; Northwestern China	Veins, dikes, and replacements related to granitoids in Altai volcanic-plutonic belt that intrudes Altai continental margin turbidite terrane	Late Carboniferrous. Calc-alkaline anatectic granite with K-Ar isotopic age of 219 Ma.	Belt interpreted as forming in during intrusion of collisional granite that formed during collision of Kazakhstan and North Asian Cratons. Belt interpreted as forming during high-grade metamorphism with crustal melting and generation of anatectic granite.
Central Mongolia (CM)	Fe-Zn skarn; Sn skarn, Zn-Pb (±Ag, Cu) skarn; W±Mo±Be skarn; Cu (±Fe, Au, Ag, Mo) skarn (Erdenekhairkhan); Porphyry Cu-Mo (±Au, Ag) (Zos Uul) Porphyry Mo (±W, Bi); Au skarn (Buutsagaan); Granitoid related Au vein; W-Mo-Be greisen, stockwork, and quartz vein; Basaltic native Cu (Lake Superior type)	Central Mongolia	Replacements and granitoids related to Selenga sedimentary-volcanic plutonic belt	Interpreted as Early to Late Permian.	Belt interpreted as forming along an active continental margin along the margin of the Mongol-Okhotsk Ocean.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Bayanhon-gor-2 (BH-2)	Granitoid-related Au vein (Tsagaan Tsahir Uul); Cu (±Fe, Au, Ag, Mo) skarn (Khohbulgiin, Khondii)	Central Mongolia	Granite and diorite plutons and quartz-porphyry dikes in Telman volcanic-plutonic belt (too small to show on 10 M scale map)	Carboniferous to Permian. Deposit-related Shar burd diorite with K-Ar isotopic age of 341 Ma and Rb-Sr whole-rock age of 250 Ma. K-Ar age of biotite from coarse-grained facies of Shar us gol granite batholith is 235 to 242. Rb-Sr whole-rock isochron age for Daltyn am diorite is 287 Ma.	Belt interpreted as forming in subduction-related gabbro-diorite-granodiorite stocks and dikes. Belt occurs between a volcanic-plutonic belt formed on the inner continental side of an arc, and S-type REE granitoids developed on oceanic side of continental margin arc.
Battsengel-Uyanga-Erdenedalai (BUE)	Granitoid-related Au vein (Mongot, Battsengel, Uyanga groups, Sharga Ovoo, Tsagaan Ovoo)	Central Mongolia	Small stitching plutons that formed in early stage of intrusion of Hangay plutonic belt that intrudes Hangay-Dauria and Onon accretionary wedge terranes.	Late Carboniferous to Permian	Belt interpreted as forming in subduction-related gabbro, diorite, and granodiorite stocks and dikes along along the North Govi active continental margin arc.
Orhon-Selenge (OS)	Porphyry Cu-Mo (±Au, Ag) (Erdenetiin Ovoo, Central, Oyut; Shand; Zuiliin gol)	Central Mongolia	Granitoids in Selenga sedimentary-volcanic plutonic belt.	Triassic. Quartz-sericite metasomatite of the Erdenetiin Ovoo deposit has K-Ar isotopic age 210 to 190 Ma. Explosive breccia has age if 210 Ma. K-Ar age of deposit-related granite ranges from 185 Ma to 240 to 250 Ma. $^{40}Ar/^{39}Ar$ isochron isotopic age of 207± 2 Ma for white mica from highest grade part of Erdenet mine.	Belt interpreted as forming during oblique subduction of oceanic crust of the Mongol-Okhotsk paleoocean under the southern margin of the Siberian continent. Basaltic Cu hosted in basalt and trachybasalt in mafic volcanic rock in the Permian Khanui Series.
Buteeliin nuruu (BU)	Peralkaline granitoid-related Nb-Zr-REE (Bayangol); REE-Li pegmatite (Bayangol 1); W-Mo-Be greisen, stockwork, and quartz vein	Northern Mongolia	Granitoids related to Selenga sedimentary-volcanic plutonic belt intruding West Stanovoy terrane.	Early Permian(?) or Mesozoic(?). Interpreted as early Permian according to Pb-Pb zircon age of 275 Ma for strongly foliated granite-gneiss. K-Ar isotopic ages of 89 to 129 Ma for migmatite, gneissic granite, leucogranite, aplite, and pegmatite.	Belt interpreted as related to an Early Permian core complex with granitoids that intrude granite-gneiss and mylonite in the West Stanovoy terrane. Alternatively belt may be related collisional granitoids generated during late Mesozoic closure of Mongol-Okhotsk Ocean.
Laoeling-Grodekov (LG)	Porphyry Cu-Mo (±Au, Ag) (Baikal); Au-Ag epithermal vein (Komissarovskoe).	Russia, Far East, Northeastern China	Granitoids in Laoeling - Grodekov superterrane (Island arc).	Permian	Belt interpreted as forming in an island arc.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Harmagtai-Hongoot-Oyut (HHO)	Porphyry Cu-Mo (±Au, Ag) (Nariinhudag, Hongoot, Harmagtai); Porphyry Au; Granitoid-related Au vein (Uhaa hudag and Harmagtai, Shine, Hatsar); Au-Ag epithermal Vein Deposits (Shuteen)	Southern Mongolia	Granitoids related to South-Mongolian volcanic-plutonic belt that intrude Mandalovoo-Onor island arc terrane and Mandah accretionary wedge terranes	Middle Carboniferous to Early Permian	Belt interpreted as forming in a continental margin arc overlapping the Mandalovoo-Onor island arc terrane and Mandah accretionary wedge terranes.
Sumochaga-naobao (SM)	Hydrothermal-sedimentary fluorite (Sumochaganaobao)	Northeastern China	Marine sedimentary rocks in Solon terrane (Accretionary wedge)	Early Permian	Belt interpreted as forming during hydrothermal activity and associated with volcanic and sedimentary rock that were incorporated into an accretionary wedge. Belt hosted in volcaniclastic and carbonate rocks of Xilimiao Formation in an accretionary wedge.
Bieluwutu (BL)	Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu) (Bieluwutu)	Northeastern China	Carboniferous and Permian volcanic and sedimentary rocks in the small Bieluwutu basin that is part of Daxinganling sedimentary assemblage that overlaps the Wundurmiao accretionary wedge terrane	Pennsylvanian	Belt interpreted as forming during exhalative-sedimentary sedimentation in a restricted marine basin during Carboniferous extension of northern margin of the Northern China Platform during formation of the Solon accretionary wedge terrane. The belt related to magmatism in transtensional zones occurring along transform micro plate boundaries and within plate (plume) environment.
Kalatongke (KL)	Mafic-ultramafic related Cu-Ni-PGE (Kalatongke); Granitoid-related Au vein (Alatasi)	Northwestern China	Waizunger-Baaran terrane (Island arc)	Pennsylvanian	Belt interpreted as forming in an island arc.
Yanbian (Yan)	Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu) (Hongtaiping)	Northeastern China	North Margin accretionary wedge terrane (too small to show at 15 M scale)	Early Permian	Belt interpreted as formed during pre-accretionary Early Permian rift-related marine volcanism. Belt hosted in volcaniclastic rocks incorporated into North Margin accretionary wedge terrane.
Shanxi (SX)	Sedimentary bauxite (Ke'er)	Northern China	Stratiform units in the upper part of Sino-Korean platform overlapping Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane.	Pennsylvanian	Belt formed during weathering of metamorphic rocks of the Northern China Platform. Bauxite deposits hosted in karst and lagoonal basins in a littoral-shallow sea.
Zibe (ZB)	Sedimentary bauxite (Zibe)	Northern China	Sino-Korea platform sedimentary cover (Proterozoic through Triassic) overlapping Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane.	Late Permian	Belt formed during weathering of metamorphic rocks of the Northern China Platform. Bauxite deposits hosted in karst and lagoonal basins in a littoral shallow sea.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Mino-Tamba-Chugoku (MTC)	Volcanogenic-sedimentary Mn (Hamayokokawa); Podiform chromite (Wakamatsu); Besshi Cu-Zn-Ag massive sulfide (Yanahara)	Japan	Mino Tamba Chichibu terrane (Accretionary wedge)	Interpreted as Permian (or older) to Jurassic.	Belt is hosted in an accretionary wedge complex composed of marine sedimentary and volcanic rock, and fragments of oceanic crust with ultramafic rock. Besshi deposits are interpreted as forming along a spreading ridge. The belt contains fragments of oceanic crust with podiform chromite deposits hosted in ultramafic rocks, and chert-hosted Mn deposits. Deposits and host rocks were subsequently incorporated into an accretionary wedge.
Hitachi (Hit)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Hitachi)	Japan	South Kitakami terrane (Island arc)	Permian	Belt interpreted as forming in an island arc.
LATE TRIASSIC THROUGH EARLY JURASSIC (230 to 175 Ma) METALLOGENIC BELTS					
North Taimyr (NT)	W-Mo-Be greisen, stockwork, and quartz vein (Kolomeitseva River); W±Mo±Be skarn Morzhovoye); Porphyry Cu-Mo (±Au, Ag) (Mamont River)	Russia, Northern-Eastern Siberia (Taimyr Peminsula)	Replacements associated with granitoids (too small to show at 5 M scale) intruding Permian-Triassic volcanic and sedimentary rocks of Lenivaya-Chelyuskin sedimentary assemblage, Central Taimyr superterrane, Kara terrane.	Middle and Late Triassic. Age of deposit-related granitoids is about 223 to 233 Ma.	Belt interpreted as forming during generation of granitoids during and after collision between the Siberian and Kara continents. Belt hosted in intrusions in tectonic blocks bounded by post-orogenic faults.
Byrranga (BR)	Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Partizanskoye, Surovoye Lake 1)	Russia, Northern-Eastern Siberia (Taimyr Peminsula)	Veins related to granitoids (too small to show at 15 M scale) intruding North Asian Craton Margin, South-Taimyr fold belt.	Middle to Late Triassic	Belt interpreted as forming during intraplate rifting with extensive trapp magmatism and small intrusions of alkalic granite, syenite, and nepheline syenite, and alkali basalt dike complexes.
Kharadzhulsk (KhD)	Ni-Co arsenide vein (Kharadzhulskoye, Butrakhtinskoye)	West Siberia, West Sayan Mountains, Russia	Veins related to major faults in North Sayan terrane (Island arc) and Minusa molasse basin	Interpreted as Triassic.	Belt interpreted as forming during intraplate rifting and interblock strike-slip faulting between North Sayan terrane and Minusa basin with coeval intrusion of basalt dikes. Deposits hosted in volcanic and sedimentary rocks along faulted dikes, faults, and other structures.
Kalgutinsk (KG)	W-Mo-Be greisen, stockwork, and quartz vein (Kalgutinskoye, (Urzarsaiskoye); Ta-Nb-REE alkaline metasomatite (Akalakhinskoye); Sn-W greisen, stockwork, and quartz vein (Baliktigkhem)	Russia, Southern-Eastern Siberia (Gorny Altai Mountains)	Granitoids and replacements related to Belokurikha plutonic belt (too small to show at 15 M scale) intruding Altai terrane and West Sayan terrane	Early Jurassic. Rb-Sr isotopic age for Chindagatui pluton is 201.0 Ma and 204.0 for Kalguta pluton. U-Pb isotopic ages for Ta spodumene granite in Alakha stock are 183 and 188 Ma and Rb-Sr age is 195 Ma. Rb-Sr age of Li-F granite-porphyry in the Dzulaly stock is 188.0 Ma	Belt interpreted as forming during generation of REE granitoids along transpression zones related to transform micro plate boundaries and within plate (plume) environment.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Mongol Altai (MA)	W-Mo-Be greisen, stockwork, and quartz vein (Ulaan Uul, Tsunheg)	Western Mongolia	Small bodies of leucogranite (too small to show at 5 M scale) that intrude Altai and Hovd Hovd terranes	Interpreted as Late Triassic to Early Jurassic.	Belt interpreted as forming during Mesozoic intraplate rifting related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment.
Chergak (ChG)	Ni-Co arsenide vein (Chergak, Tolailyk)	Russia, Southern-Eastern Siberia (Tuva region)	Veins and associated gabbro intrusions related to Akchem, Severo-Tannuola, and Eldigkhem faults cutting Khemchik-Sistigkhem basin, Tuva molasse basin, and West Sayan terrane	Interpreted as Triassic.	Belt interpreted as forming during Mesozoic intraplate rifting that resulted in magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment.
Khovuak-sinsk (KhA)	Ni-Co arsenide vein (Hovu-Aksinskoye, Uzun-Oy)	Russia, Southern-Eastern Siberia (Tuva region)	Veins related to Ubsunur-Bayankol fault cutting Tuva molasse basin and Tannuola subterrane	Interpreted as Triassic.	Belt interpreted as forming during Mesozoic intraplate rifting that resulted in magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment.
Ulug-Tanzek (UT)	Ta-Nb-REE alkaline metasomatite (Ulug-Tanzek)	Russia, Southern-Eastern Siberia (Tuva region)	Replacements related to Ulug-Tanzek granite intrusion (to small to show on 10 M map) that intrudes Sangilen terrane (passive continental margin)	Late Triassic. Isotopic ages of 231 to228 Ma for Bren massive, 217 Ma for Ulug-Tanzek complex, and 209 Ma for younger related intrusive rocks	Belt interpreted as forming during intraplate tectonism and magmatism in an intraplate rift setting. Belt hosted in alkali granite plutons in the Ulug-Tanzek intrusive complex. The belt is characterized by magmatic rocks related to transform micro plate boundaries and within plate (plume) environment.
Orhon-Selenge (OS)			Started in Late Carboniferrous and continued into Middle Triassic		
North Hentii (NH)	Granitoid-related Au vein; Au in shear zone and quartz vein (Boroo, Sujigt, Narantolgoi)	Northern Mongolia	Granitoids related to Mongol-Transbaikalia volcanic-plutonic belt intrudes and overlaps Zag-Haraa turbidite basin	Middle Triassic to Middle Jurassic. K-Ar isotopic ages of 166 to 235 Ma for deposit-related Yoroogol gabbro-granite.	Belt is interpreted as forming during granitoid intrusion related to extensional margin of the Khentii collisional uplift.
Central Hentii (CHE)	Sn-W greisen, stockwork and quartz vein (Modot, Tsagaan dabaa); REE-Li pegmatite; Ta-Nb-REE alkaline metasomatite (Janchivlan); W±Mo±Be skarn; Peralkaline peralkaline granitoid-related Nb-Zr-REE (Avdrant)	Mongolia	Replacements and granitoids related to Mongol-Transbaikalia volcanic-plutonic belt that intrudes and overlaps Hangay-Dauria terrane and adjacent units.	Late Triassic to Early Jurassic. Deposit-related granite with Rb-Sr isotopic age of 190.49 Ma and K-Ar age of 188 to 225 Ma.	Belt interpreted as forming during generation of collisional granitoids during closure of the Mongol-Okhotsk Ocean. Small plutons hosting REE deposits intruded in a continental post-collisional event.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Delgerhaan (DE)	Porphyry Cu (±Au); Granitoid-related Au vein (Bayan Uul, Unegt)	Central Mongolia	Granitoids in the Mongol-Transbaikalia volcanic-plutonic belt that intrudes Hangay-Dauria terrane, Ononsky terrane, and Gobi-Khankaisk-Daxinganling volcanic-plutonic belt	Late Triassic. $^{40}Ar/^{39}Ar$ isochron isotopic ages for plagioclase-biotite porphyry, and biotite granodiorite from Bayan Uul ore-field are 220 to 223 Ma.	Belt interpreted as forming during emplacement of a volcanic-plutonic complex along an extensional margin related to collisonaland uplift.
Govi-Ugtaal-Baruun-Urt (GB)	Fe-Zn skarn (Tomortiin Ovoo); Cu (±Fe, Au, Ag, Mo) skarn; Zn-Pb (±Ag, Cu) skarn; Sn skarn (Oortsog ovoo); Fe Skarn; Porphyry Mo (Aryn nuur**)**	Central and Eastern Mongolia	Replacements related to Mongol-Transbaikalia volcanic-plutonic belt that intrudes and overlies Idermeg terane and Gobi-Khankaisk-Daxinganling volcanic-plutonic belt	Interpreted as Late Triassic to Early Jurassic.	Belt interpreted as forming during early Mesozoic granitoid magmatism associated with North Govi continental margin arc. Belt hosted in Late Triassic to Early Jurassic alaskite, granite, and alkaline granite.
Nuhetdavaa (ND)	W-Mo-Be greisen, stockwork, and quartz vein; Ta-Li ongonite (Yugzer)	Southern Mongolia	Replacements and granitoids related to Mongol-Transbaikalia volcanic-plutonic belt that intrudes and overlies Dongujimqin-Nuhetdavaa terrane and Hailar-Tamsag sedimentary basin.	Interpreted as Late Triassic to Early Jurassic. K-Ar isotopic ages of 210 to 220 Ma.	Belt interpreted as forming during interplate granite magmatism in a late Paleozoic or early Mesozoic late collisional or immediate-succeeding post-collisional event. Age of metallogenic belt and related tectonic origin is not clear.
Harmorit-Hanbogd-Lugiingol (HL)	Sn-W greisen, stockwork, and quartz vein (Khar morit); Ta-Nb-REE Alkaline Metasomatite (Khan Bogd); REE (±Ta, Nb, Fe) carbonatite (Lugiin Gol); Peralkaline granitoid-related Nb-Zr-REE; REE-Li pegmatite	Mongolia	Replacements and granitoids related to South Mongolian volcanic-plutonic belt that intrudes and overlaps the Hutaguul-Xilinhot and Gurvansayhan terranes and Lugyngol overlap volcanic-sedimentary basin.	Middle Triassic to Early Jurassic. Rb-Sr whole-rock isochron age for Lugiin gol nepheline syenite pluton is 244 Ma and whole rock-mineral isochron ages are 222 Ma and 180 to 199 Ma. K-Ar age is 228 to 242 Ma. Khanbogd REE-Nb-Zr deposit is associated with late Paleozoic alkaline granite pluton with Rb-Sr age isotopic of 277 Ma and K-Ar age of 293 Ma.	Belt interpreted as forming during late Paleozoic and early Mesozoic continental rifting along a passive continental margin with generation of calc-alkaline and alkaline granitoids.
Wulashan-Zhangbei (WZ)	Alkaline complex-hosted Au; (Dongping); Au potassium metasomatite (Hadamen); Granitoid-related Au vein	Northern China	Granitoids related to Alashan-Yinshan Triassic plutonic belt (too small to show at 15 M scale) intruding Sino-Korean Craton - Erduosi terrane, Solon terrane, and adjacent units	Middle Jurassic. ^{40}Ar-^{39}Ar isotopic ages is 327 Ma and 157 to 177 Ma for intrusion and deposit potassic feldspar, respectively.	Belt interpreted as forming during granitoids generated above a mantle plume in an extensional tectonic setting. Belt related to Late Triassic to Early Jurassic alkaline to subalkaline granite.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Fanshan (FS)	Magmatic and metasomatic apatite (Fanshan)	Northern China	Mafic-ultramafic plutons occurring along major fault cutting Sino-Korea platform sedimentary cover and Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane	Late Triassic. Rb-Sr isochron age of 218.8 Ma.	Belt interpreted as forming during intrusion of intraplate mafic-ultramafic plutons associated with the subduction of Kula plate under the Eurasian plate.
Gyeonggi (GA)	Mafic-ultramafic related Ti-Fe (±V) (Soyounpyong-do); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Chilbo); W±Mo±Be skarn (Bupyung)	South Korea	Mafic-ultramafic plutons and granitoids related to Daebu Granite belt intruding South China Craton - Gyenggi terrane	Interpreted as Early Jurassic.	Belt is related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment. Ti-Fe deposits interpreted as forming during intrusion of mafic and ultramafic plutons associated with Late Jurassic to Early Cretaceous Daebo orogeny. Polymetallic vein deposits formed during hydrothermal fluid activity, and skarns formed during contact metasomatism along contact zones of hornblende biotite granite and dikes.
Eungok (EU)	Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork; Ni-Co arsenide vein (Eungok,Yungchang)	South Korea	Replacements and granitoids related to Daebu Granite belt intruding Sino-Korean Craton - Yeongnam terrane	Interpreted as starting in Early Jurassic.	Belt is related to magmatic rocks that intruded along transform micro plate boundaries and in a within plate (plume) environment. Belt formed during intrusion of granitoids associated with Late Jurassic to Early Cretaceous Daebo orogeny with intrusion of biotite granite, granite porphyry, and quartz porphyry into granitic gneiss.
Mino-Tamba-Chugoku (MTC)			Started in Late Carboniferous through Middle Triassic		
North Kitakami (NK)	Volcanogenic-sedimentary Mn (Nodatamagawa); Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Taro)	Japan	Mino Tamba Chichibu terrane (Accretionary wedge)	Interpreted Triassic to Early Cretaceous.	Mn deposits formed in syngenetic setting on the ocean floor. Kuroko deposits formed in an island arc. Deposits were subsequently incorporated into accretionary wedge.
Sannae (SA)	Granitoid-related Au vein (Dongjin); Ni-Co arsenide vein	South Korea	Granitoids related to Daebu Granite belt intruding Sino-Korean Craton - Yeongnam terrane	Interpreted as Late Triassic to Early Jurassic.	Belt interpreted as forming during intrusion of Late Triassic to Early Jurassic granitoids during Songrim orogeny. Deposits formed in fissure-filling Au quartz veins along faults in conglomerate in the Maisan Conglomerate that is intruded by Jurassic hornblende biotite granite.
Hongcheon (HO)	Ta-Nb-REE alkaline metasomatite(?) (Hongcheon-Jaun)	South Korea	South China Craton - Gyenggi terrane (Granulite-paragneiss)	Jurassic.	Ta-Nb-REE alkaline metasomatite deposits interpreted as forming during intrusion of syenite of the Jurassic Daebo Granite belt. **Deposit is not in mineral deposit database. Should metallogenic belt be deleted?**
Sambagawa -Chichibu-Shimanto (SCS)	Besshi Cu-Zn-Ag massive sulfide (Besshi); Volcanogenic-sedimentary Mn (Ananai); Cyprus Cu-Zn massive sulfide (Okuki)	Japan	Shimanto accretionary wedge terrane, Mino Tamba Chichibu accretionary wedge terrane, and Sambagawa metamorphic terrane.	Interpreted as Early Jurassic and to Campanian. Age of submarine basaltic volcanism and related Besshi-type deposits interpreted to occur between 200 and 140 Ma.	Mn deposits formed in syngenetic setting on the ocean floor. Besshi and Cyprus deposits formed during submarine volcanism related to spreading ridge. Deposits were subsequently incorporated into an accretionary wedge.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
MIDDLE JURASSIC THROUGH EARLY CRETACEOUS (175 to 96 Ma) METALLOGENIC BELTS					
Tari-Bigai (TB)	Carbonate-hosted Hg-Sb (Izvilistaya River)	Russia, Northern-Eastern Siberia (Taimyr Peninsula)	Veins related to major fault cutting North Asian Craton Margin - South-Taimyr fold belt	Interpreted as Early Cretaceous or older.	Belt interpreted as forming during intraplate rifting and generation of alkali basalt.
Verkho-yansk (VK)	Au in shear zone and quartz vein (Djandi, Nikolaevskoe, Otkrytoe); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork; Sn-W greisen, stockwork, and quartz vein (Imtandzha); Au in black shale (Mangazeika 2)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements in North Asian Craton Margin, Verkhoyansk fold and thrust belt	Interpreted as late Late Jurassic to Early Neocomian.	Belt interpreted as forming during collision of the Kolyma-Omolon superterrane and the North Asian Craton and associated regional metamorphism.
Kular (KU)	Au in shear zone and quartz vein (Emelyanovskoye); Granitoid-related Au Vein (Novoe); Sn-W greisen, stockwork, and quartz vein (Tirekhtyak district)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins in Kular-Nera terrane	Interpreted as late Late Jurassic to Early Neocomian. Deposit-related granite with ^{40}Ar-^{39}Ar isotopic age of 103 Ma.	Belt interpreted as forming during collision of the Kolyma-Omolon superterrane and the North Asian Craton and associated regional metamorphism. Belt occurs in a complex fold and thrust structure with refolded recumbent isoclines. Host rocks metamorphosed at the greenschist facies.
Erikit (ER)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Khotoidokh)	Russia, East-Central Yakutia (Verkhoyansk area)	Kolyma-Omolon superterrane (Yakutia) – Uyandina - Yasachnaya volcanic belt and Ilin–Tas back arc basin	Interpreted as Late Jurassic.	Belt interpreted as related to a subduction-related magmatic arc formed on the southwest margin of the Kolyma-Omolon superterrane. Belt hosted in Uyandina-Yasachnaya volcanic belt.
Chybaga-lakh (CH)	Cassiterite-sulfide-silicate vein and stockwork (Kere-Yuryakh); Sn-B (Fe) skarn (ludwigite) (Titovskoe); Granitoid-related Au vein (Chuguluk, Nenneli)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements in Main granite belt	Interpreted as late Late Jurassic to Early Neocomian.	Belt interpreted as forming during collision of the Kolyma-Omolon superterrane and the North Asian Craton and associated regional metamorphism and generation of anatectic high-alumina granitoids.
Adycha-Nera (AN)	Au in shear zone and quartz vein (Uchui); Sn-W greisen, stockwork, and quartz vein (Imtachan); Granitoid-related Au vein (Delyuvialnoe)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins in Kular-Nera terrane	Interpreted as late Late Jurassic to Early Neocomian.	Belt interpreted as forming in two stages: (1) initial accumulation of disseminated Au in the late Paleozoic early Lower Mesozoic black slate; and (2) mobilization during regional metamorphism and collisional granitoid intrusion during accretion of Kolyma-Omolon superterrane to northeastern margin of the North Asian Craton.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Polousny (PO)	Cassiterite-sulfide-silicate vein and stockwork deposits (Ulakhan-Sala); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork deposits (Aragochan, Dalnee)	Russia, East-Central Yakutia (Verkhoyansk area)	Granitoids related to Northern granite belt (too small to show at 15 M scale)	Interpreted as Middle Cretaceous (Neocomian to Aptian). ^{40}Ar-^{39}Ar isotopic age of 120 to 130 Ma.	Belt interpreted as forming during collision of the Kolyma-Omolon superterrane and the North Asian Craton and associated regional metamorphism and generation of anatectic granitoids.
Yana-Adycha (YAd)	Cassiterite-sulfide-silicate vein and stockwork (Ege-Khaya, Ilin-Tas, Burgochan); Sn-W greisen, stockwork, and quartz vein (Kester)	Russia, East-Central Yakutia (Verkhoyansk area)	Replacements in Transverse granite belt (too small to show at 15 M scale)	Interpreted as mid-Cretaceous.	Belt interpreted as forming during collision of the Kolyma-Omolon superterrane and the North Asian Craton and associated regional metamorphism and generation of anatectic granitoids.
Tompo (TO)	W±Mo±Be skarn (Agylky); Sn-W greisen, stockwork, and quartz vein (Erikag, Dzhuptagan)	Russia, East-Central Yakutia (Verkhoyansk area)	Replacements in Transverse granite belt (too small to show at 15 M scale)	Interpreted as Neocomian.	Belt interpreted as forming during collision of the Kolyma-Omolon superterrane and the North Asian Craton and associated regional metamorphism and generation of anatectic granitoids. Belt occurs along sublatitudinal high-angle, probable strike-slip faults that cut Permian to Middle Jurassic sandstone and shale.
Allakh-Yun' (AY)	Au in shear zone and quartz vein (Yur, Nekur, Bular); Cu (±Fe, Au, Ag, Mo) skarn (Muromets); Au in black shale (Svetly)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins in North Asian Craton Margin, Verkhoyansk fold and thrust belt (Passive continental margin)	Interpreted as Late Jurassic.	Belt interpreted as forming during accretion of the Okhotsk terrane to the North Asian Craton. Belt occurs in Minorsk-Kiderikinsk zone of highly deformed Late Carboniferous and Permian rocks in western South Verkhoyansk synclinorium. Au quartz veins are slightly older than large anatectic granitic plutons of the South Verkhoyansk synclinorium.
Chara-Aldan (CA)	Au potassium metasomatite (Kuranakh); Au skarn (Klin); U-Au (El'kon group); Au in shear zone and quartz vein (Krutoy); Charoite metasomatite (Murunskoye)	Russia, Southern Yakutia	Replacements and granitoids related to South Yakutian subalkaline and alkaline igneous belt intruding North Asian Craton and Central Aldan superterrane	Interpreted as Jurassic to Early Cretaceous.	Belt interpreted as forming in back-arc region of an Andean type continental-margin arc that formed along the Early Cretaceous margin of the North Asian Craton. Belt hosted in subalkaline and alkaline plutonic rocks, including plutons, stocks, and sills of syenite, monzonite, granosyenite, alkali gabbro, and volcanic analogues, as well as zoned alkali-ultramafic plutons.
Kondyor-Feklistov (KDF)	Zoned mafic-ultramafic Cr-PGE (Kondyor)	Russia, Far East	Mafic-ultramafic intrusions (too small to show at 15 M scale) intruded along major fault cuitting North Asian Craton and northeastern part of Tukuringra-Dzhagdy terrane	Early Cretaceous. K-Ar isotopic ages for the zoned mafic-ultramafic intrusions in the Kondyor metallogenic belt range from 110 to 160 Ma. ^{40}Ar-^{39}Ar isotopic age of 127 Ma recently obtained for the alkalic mafic and ultramafic igneous rocks at Ingagli.	Belt interpreted as forming during intrusion of mafic-ultramafic plutons along a deep-seated fault that formed along the North Asian Craton margin during collision and accretion of outboard terranes.
Mavrinsk (MV)	Clastic sediment-hosted Hg±Sb (Mavrinskoye, Orlinogorskoye)	Russia, Southern-Eastern Siberia (Salair Range)	Replacements along major fault between Salair terrane and Kuznetsk orogenic basin	Early Jurassic or younger. K-Ar isotopic age of 190 to 200 Ma for lamprophyre dikes provides a minimum age for Hg deposits.	Belt interpreted as forming during intraplate rifting and interblock strike-slip faulting during the Late Paleozoic to Early Mesozoic.

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Kuznetsk (KE)	Volcanic-hosted Hg (Kupriyanovskoye, Belo-Osipovskoye); Carbonate-hosted Hg (Pezass)	Russia, Eastern Siberia	Replacements along major faults cutting Kuznetsk orogenic basin, Altai volcanic-plutonic belt and Telbes-Kitat island-arc terrane.	Middle to Late Jurassic.	Belt interpreted as forming during intraplate rifting and interblock strike-slip faulting during the Late Paleozoic to Early Mesozoic. Belt occurs along the major Kuznetsk fault.
Sistigkhem (SS)	Carbonate-hosted Hg-Sb (Kukshinskoye, Oktyabrskoye)	Russia, Southern-Eastern Siberia (Tuva area)	Replacements along and adjacent to Khemchic-Kurtushiba fault and conjugate faults that bound the Kurtushiba and Alambai terranes.	Interpreted as Middle to Late Jurassic.	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment.
Eravninsky (Era)	Cassiterite-sulfide-silicate vein and stockwork (Kydzhimitskoye); Carbonate-hosted fluorspar (Egitinskoye)	Russia, Western Transbaikalia	Replacements, volcanic complexes related to Trans-Baikalian-Daxinganling (trbv) sedimentary-volcanic-plutonic belt that intrudes and overlaps the Orhon-Ikatsky terrane, Barguzin-Vitim granitoid belt, and Selenga sedimentary-volcanic plutonic belt	Interpreted as Middle Jurassic to Early Cretaceous.	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment.
Karengskiy (Krg)	Porphyry Mo (±W, Bi) (Orekitkanskoye)	Russia, Eastern Transbaikalia	Granitoids and volcanic complexes related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that intrudes and overlaps West Stanovoy terrane, Barguzin-Vitim granitoid belt, and Selenga sedimentary-volcanic plutonic belt.	Interpreted as Middle Jurassic to Early Cretaceous.	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Nerchinsky (Ner)	Granitoid-related Au vein (Darasunskoye); W-Mo-Be greisen, stockwork, and quartz vein (Muoklakanskoye); Fluorspar vein (Usuglinskoye)	Russia, Eastern Transbaikalia	Granitoids and replacements related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt intruding and overlapping West Stanovoy terrane, Barguzin-Vitim granitoid belt, and Selenga sedimentary-volcanic plutonic belt	Interpreted as Middle Jurassic to Early Cretaceous.	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment. The belt is related to granitoids in the Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt.
Shilkinsko-Tukuringrskiy (ShT)	Granitoid-related Au vein (Ukonikskoe); Porphyry Au; Au skarn; Au-Ag epithermal vein; Porphyry Mo (±W, Bi) (Zhirekenskoye) W-Mo-Be greisen, stockwork, and quartz vein; Cassiterite-sulfide-silicate vein and stockwork; Ta-Nb-REE alkaline metasomatite; Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Berezitovoe); Au-Ag epithermal vein (Baleyskoe); Fluorite vein (Kalanguyskoye)	Russia, Eastern Transbaikalia	Granitoids, volcanic rocks, and replacements related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt (too small to show at 15 M scale) intruding and overlapping West Stanovoy terrane, Ononsky terrane, Argunsky terrane, and adjacent units.	Interpreted as Middle Jurassic to Early Cretaceous.	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment. Belt occurs in basins with continental sedimentary rocks and alkaline magmatic plutonic and volcanic rocks that occur along the Mongol-Okhotsk suture that separates various terranes and the North Asian Craton and the Sino-Korean Craton.
North Stanovoy (NSt)	Granitoid-related Au vein (Bamskoe); Au-Ag epithermal vein (Burindinskoe)	Russia, Far East	Granitoids related to Stanovoy granite belt intruding Tynda terrane	Early Cretaceous	Belt interpreted as forming during late-stage accretion of the Bureya superterrane to the south with the North Asian Craton to the north, during final closure of the Mongol-Okhotsk Ocean.
Djeltu-laksky (Dlt)	Granitoid-related Au vein (Zolotaya Gora)	Russia, Far East	Granitoids related to Stanovoy granite belt intruding Tynda terrane (Stanovoy block) and Dzugdzur anorthositic belt	Early Cretaceous	Belt interpreted as forming during late-stage accretion of the Bureya superterrane to the south with the North Asian Craton to the north, during final closure of the Mongol-Okhotsk Ocean.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
North Bureya (NB)	Au-Ag epithermal vein (Pioneer); Granitoid-related Au vein (Pokrovskoe)	Russia, Far East	Veins and granitoids related to Umlekam-Ogodzhin volcanic-plutonic belt that intrudes and overlaps Malokhingansk terrane, Turan terrane of the Bureya superterrane, Gonzha terrane, Nora-Sukhotin-Duobaoshan terrane, and Tukuringra-Dzhagdy terrane	Early Cretaceous	Belt interpreted as forming during formation of Umlekan-Ogodzhin continental-margin arc that formed during subduction of part of ancestral Pacific Ocean plate that is now preserved as tectonically interwoven fragments of the Badzhal, Khabarovsk, and Samarka terranes.
Kerbi-Selemdzha (Ksl)	Au in shear zone and quartz vein (Tokur); Granitoid-related Au vein (Malomyr); Cassiterite-sulfide-silicate vein and stockwork	Russia, Far East	Veins in Tukuringra-Dzhagdy terrane and Badzhal terrane	Middle Triassic inception of Au deposition in sedimentary rocks, and reactivation during Late Jurassic and Early Cretaceous to form Au in shear zone and quartz vein. ^{40}Ar-^{39}Ar isotopic adularia age of 114 Ma at Tokur.	Belt interpreted as forming during collision of the Bureya and Khanka continental-margin arc superterranes with the North Asian Craton and associated regional metamorphism and emplacement of anatectic granitoids.
Sarasinsk (SR)	Carbonate-hosted Hg-Sb (Sarasinskoye); Fluorspar vein	Russia, Eastern-Southern Siberia (Gorny Altai Mountains)	Replacements in Anui-Chuya terrane	Middle to Late Jurassic	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment. Transtension occurred during interblock strike-slip faulting along the major Sarasinsk-Kurai fault.
Kurai-Tolbo Nuur (KTN)	Carbonate-hosted Hg-Sb; (Aktashskoye); Silica-carbonate (listvenite) Hg (Chagan-Uzunskoye); Volcanogenic-hydrothermal-sedimentary massive sulfide Pb-Zn (±Cu) (Ozernoye 1); Clastic sediment-hosted Hg±Sb; Ag-Pb epithermal vein; Au-Ag epithermal vein; Ni-Co arsenide vein, Ag-Sb vein (Tolbonuur, Tolbo)	Russia, Eastern-Southern Siberia (Gorny Altai Mountains)	Replacements in West Sayan terrane and Hovd terrane	Early and Middle Jurassic. Age of near-deposit altered rocks is 150 to 180 Ma.	Belt interpreted as forming during interplate alkaline basalt magmatism related to a mantle plume. Belt interpreted as forming during intraplate rifting and strike-slip block movements faulting. Belt occurs along complex, major Kuznetsk-Altai fault.
Hovdgol (Hov)	Au-Ag epithermal vein (Hovdgol); Granitoid-related Au vein (Aketishi); Hg-Sb-W vein and stockwork	Western Mongolia; Northwestern China	Veins related to gabbro, diabase, and lamprophyre dikes that intrude Altai terrane and Altai volcanic-plutonic belt	Interpreted as Late Jurassic.	Belt interpreted as forming during interplate alkaline basalt magmatism related to a mantle plume.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Terlig-khaisk (TR)	Volcanic-hosted Hg; Clastic sediment-hosted Hg±Sb (Terligkhaiskoye)	Russia, Eastern-Southern Siberia (Tuva area)	Replacements along fault zone between and along margins of Khemchik-Sistigkhem basin and Kurtushiba terrane	Middle to Late Jurassic.	Belt is interpreted as related to magmatism along transextension zones along transform micro plate boundaries and within plate (plume) environment. Deposits occur along major Khemchik-Kurtushiba fault zone.
Karasug (KA)	Fe-REE carbonatite (Karasugskoye)	Russia, Eastern-Southern Siberia (Tuva area)	Replacements between and along margins of Khemchik-Sistigkhem basin and Tuva molasse basin	Early and Late Cretaceous. K-Ar isotopic ages of112 to 122 Ma for hydrothermal ore. U-Pb age of 115 to 75 Ma for Karasugskoye deposit.	Belt is interpreted as related to magmatism along transextension zones related to transform micro plate boundaries and within plate (plume) environment with intrusion of alkali-ultramafic magmatic rocks along mantle-related faults. Belt occurs along sublatitudinal Chadan-Karasug fault.
Uuregnuur (UN)	Au-Ag epithermal vein (Namiryn gol); Cassiterite-sulfide-silicate vein and stockwork; Sediment-hosted Cu	Western Mongolia	Veins and replacements related to gabbro, diabase, and lamprophyre dikes of Kharig dike complex (too small to show at 5 M scale) that intrude boundaries of Hovd and Lake terranes	Interpreted as Late Mesozoic.	Belt interpreted as forming during intraplate rifting and associated alkaline basaltic magmatism related to a mantle plume.
Dzid-Selenginskiy (DSe)	W-Mo-Be greisen, stockwork, and quartz vein (Dzhidinskoe); Granitoid-related Au vein; Au skarn (Teshig 1) Porphyry Mo (±W, Bi); Mafic-ultramafic related Ti-Fe (±V); Fluorspar vein; Magmatic and metasomatic apatite	Russia, Western Transbaikalia; Northern Mongolia	Veins, replacements, and plutons related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Dzhida terrane, Hamar-Davaa terrane, Orhon-Ikatsky terrane, Selenga sedimentary-volcanic plutonic belt, Barguzin-Vitim granitoid belt, and adjacent units	Interpreted as Middle Jurassic to Early Cretaceous. Isotopic ages of 180 to 170 Ma and 145 to 140 Ma for Gudjir complex granitoids.	Belt interpreted as forming during subalkaline and alkaline granitoid magmatism associated with extensional or back arc rifting related to the Orhon-Selenge continental margin arc.
Khilokskiy (Khl)	Sn-W greisen, stockwork, and quartz vein (Bom-Gorkhonskoye)	Russia, Western Transbaikalia	Veins, replacements, granitoids, volcanic complexes related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Barguzin-Vitim granitoid belt and Selenga sedimentary-volcanic plutonic belt.	Interpreted as Middle Jurassic to Early Cretaceous.	Belt is interpreted as related to magmatism that occurred transpression zones related to transform micro plate boundaries and within plate (plume) environment.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Onon-Chikoiskiy (OCH)	Sn-W greisen, stockwork, and quartz vein (Shumilovskoye); W-Mo-Be greisen, stockwork, and quartz vein (Upper Kumyr)	Russia, Eastern Transbaikalia	Veins, replacements, volcanic complexes and granitoids related to Trans-Baikalian-Daxinganling (trbv) sedimentary-volcanic-plutonic belt that overlies and intrudes Hangay-Dauria terrane, Zag-Haraa turbidite basin, and Selenga sedimentary-volcanic plutonic belt.	Interpreted as Middle Jurassic to Early Cretaceous.	Belt interpreted as related to magmatism that occurred transpression zones related to transform micro plate boundaries and within plate (plume) environment.
Verkhne-Ingodinsky (VIG)	Cassiterite-sulfide-silicate vein and stockwork (Ingodinskoye, Levo-Ingodinskoye)	Russia, Central Transbaikalia	Veins, volcanic complexes, and replacements related to Trans-Baikalian-Daxinganling (trbv) sedimentary-volcanic-plutonic belt that overlies and intrudes Hangay-Dauria terrane and Selenga sedimentary-volcanic plutonic belt	Interpreted as Middle Jurassic to Early Cretaceous.	Belt interpreted as related to magmatism that occurred transpression zones related to transform micro plate boundaries and within plate (plume) environment.
Onon-Turinskiy (OT)	Granitoid-related Au vein (Lubavinskoye); Porphyry Au (Ara-Ilinskoe); Cassiterite-sulfide-silicate vein and stockwork (Khapcheranga, Tarbaldzheiskoe)	Russia, Central Transbaikalia; Northern Mongolia	Veins, volcanic complexes, and replacements related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Selenga sedimentary-volcanic plutonic belt, and Ononsky terrane	Interpreted as Middle Jurassic to Early Cretaceous.	Belt interpreted as related to magmatism that occurred transpression zones related to transform micro plate boundaries and within plate (plume) environment. Belt and related host rocks occurs along sub-meridional Onon-Tura fault.
Aginskiy (AG)	Sn-W greisen, stockwork, and quartz vein (Spokoininskoye); REE-Li pegmatite (Malo-Kulindinskoye); Ta-Nb-REE alkaline metasomatite; Hg-Sb-W vein and stockwork (Barun-Shiveinskoye)	Russia, Eastern Transbaikalia	Veins, volcanic complexes, and replacements related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Argunsky terrane	Interpreted as Middle Jurassic to Early Cretaceous.	Belt interpreted as related to magmatism that occurred transpression zones related to transform micro plate boundaries and within plate (plume) environment.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Tuanjiegou (TJ)	Granitoid-related Au vein (Tuanjiegou)	Northeastern China	Granitoids related to Jilin-Liaoning-East Shandong volcanic-plutonic belt (too small to be shown on 10 M map) that intrudes Heilongjiang terrane and Zhangguangcailing superterrane	Late Jurassic to Early Cretaceous	Belt interpreted as forming during intrusion of post-accretionary granitoids associated with interplate magmatism along deep faults. Belt and host plutonic rocks are related to subduction of Pacific plate under the Euroasian continent.
East Mongolian-Priargun-skiy-Deerbugan (EMA)	Polymetallic (Pb, Zn, Ag) carbonate-hosted metasomatite (Klichinskoye, Vozdvizhenskoye); Zn-Pb (±Ag, Cu) skarn; Au skarn (Savinskoye-5, Bayandun); Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Tsav, Jiawula); Volcanic-hosted Au-base-metal metasomatite (Novo-Shirokinskoye); W-Mo-Be greisen, stockwork, and quartz vein (Tumentsogt); Porphyry Cu-Mo (±Au, Ag) (Wunugetushan); Porphyry Mo (±W, Bi) (Shakhtaminskoye); Granitoid-related Au vein (Urliin Ovoo); Carbonate-hosted As-Au metasomatite (Zapokrovskoye); Au-Ag epithermal vein (Noni, Tsagaanchuluut khudag II, Erentaolegai); Sedimentary siderite Fe; Sn-W greisen, stockwork, and quartz vein (Baga Gazar); Carbonate-hosted Hg-Sb; Fluorspar vein (Solonechnoye); Volcanic-hosted U	Russia, Eastern Transbaikalia; Central and Eastern Mongolia; Northeastern China	Veins, volcanic complexes, replacements, and granitoids related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Argunsky terrane, Idermeg terrane, Gazimur sedimentary basin, Gobi-Khankaisk-Daxinganling volcanic-plutonic belt, Lower Borzja fore-arc basin, Upper Borzja marine molasse basin.	Interpreted as Middle Jurassic to Early Cretaceous. Gold deposits and occurrences with several ages of 190 to 180 Ma and 165 to 175 Ma. K-Ar isotopic age of sericite at Ulaan Ag-Pb-Zn deposit of 161 Ma. K-Ar isotopic age of mica at Dornot uranium deposit is 141, 142, and 143 Ma, K-Ar isotopic age of the granodioritic porphyry is 164 Ma.	Belt interpreted as forming during Middle Jurassic to Early Cretaceous extensional tectonism associated with generation of the Trans-Baikalian-Daxinganling volcanic-plutonic belt. The metallogenic belt is controlled by major, regional northeast-and northwest-trending faults. The northeast-striking faults (Byrkinsky-Urovsky, Gazimur-Urjumkan, Argunsky) control the magmatic and hydrothermal activity and internal structure of the belt.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Ikh-Hairhan (IH)	Sn-W greisen, stockwork, and quartz vein; Ta-Li ongonite (Ikh Khairkhan)	Central Mongolia	Veins, replacements, and granitoids related to Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Hangay-Dauria terrane	Interpreted as Late Jurassic to Early Cretaceous. K-Ar isotopic ages of 158 Ma and 130 Ma.	Belt is interpreted as related to magmatism along transpression zones along transform micro plate boundaries and within plate (plume) environment**.**
Mushgaihudag-Olgiihiid (MH)	REE (±Ta, Nb, Fe) carbonatite; (Mushgai hudag) Be-tuff (Teg uul)	Central Mongolia	Stratiform units in Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Govi Altai, Mandan, Mandalovoo-Onor, and Gurvansayhan terranes	Interpreted as Late Jurassic to Early Cretaceous. Rb-Sr isotopic age of 107 to 125 Ma. K-Ar ages of 115 to 118 Ma.	Belt interpreted as formed in Late Mesozoic rift in post-collisional setting.
Govi-Tamsag (GT)	Sediment-hosted U (Haraat); Evaporite sedimentary gypsum (Shiree Uul, Taragt-2); Sedimentary celestite (Horgo uul); Volcanic-hosted zeolite (Tsagaantsav)	Southern Mongolia	Stratiform units in Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that overlies and intrudes Dzhida, Govi Altai, Mandalovoo-Onor terranes	Interpreted as Late Jurassic to Early Cretaceous.	Belt is related to Aptian-Albian (Late Cretaceous) and local Paleogene sedimentary rocks deposited in grabens and depressions that overlap the Mesozoic Eastern-Mongolian-Preargune continental rift belt that developed on the Idermeg passive continental margin, Govi-Altai turbidite, and Mandal-Ovoo island arc terranes. The sedimentary U deposits and occurrences formed in the latest stage of a late Mesozoic continental rift. The gypsum deposits and occurrences formed in continental evaporite basins.
Daxinganling (DX)	Zn-Pb (±Ag, Cu) skarn (Baiyinnuoer); Sn skarn; Cassiterite-sulfide-silicate vein and stockwork (Maodeng); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Meng'entaolegai, Aonaodaba); Peralkaline granitoid-related Nb-Zr-REE (Baerzhe); Au-Ag epithermal vein (Guandi)	Northeastern China (Great Xingan Mountains)	Veins, replacements, and granitoids related to Daxinganling volcanic-plutonic belt (too small to show at 15 M scale) that overlies and intrudes including Daxingaling overlap assemblage, and Gobi-Khankaisk-Daxinganling volcanic-plutonic belt	Late Jurassic and Early Cretaceous. Alubaogeshan granite porphyry intrusion with isotopic age of 149 Ma. Duerji granite complex is with U-Pb zircon age of 150 Ma. Rb-Sr age of 125 Ma for Baerzhe. Rb-Sr whole-rock isochron age of 148.31 Ma for Aobaodaba granite porphyry.	Belt is interpreted as forming during interplate extensional tectonism. The extension is interpreted as occurring during Late Jurassic in a back-arc setting with formation a series of volcanic and sedimentary basins and sub-alkaline to alkaline granite. The basins and granitoids are controlled by northeast-north-northeast and east-west striking regional faults that to certain degree reflect the pre-Mesozoic structures.

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Bindong (BD)	Zn-Pb (±Ag, Cu) skarn (Ergu-Xishan); W±Mo±Be skarn (Wudaoling); Fe skarn (Chuihongshan)	Northeastern China	Replacements related to small granitoids in the Mesozoic Jihei volcanic and plutonic belt that intrudes and overlies Zhangguangcailing superterrane, Zhangguangcailing sedimentary overlap assemblage, and adjacent units	Late Jurassic to Early Cretaceous. K-Ar isotopic age of 157.8 Ma for Wudaoling quartz porphyry.	Belt interpreted as forming during interplate extensional tectonism and generation of sub-alkaline to alkaline volcanism and related sedimentation along northeast and east-west regional faults.
Laozhuo-shan (LZ)	Granitoid-related Au vein (Laozhuoshan)	Northeastern China	Granitoids related to Jihei volcanic and plutonic belt	Late Jurassic to Early Cretaceous	Belt interpreted as forming during generation of post-accretionary granitoids along major faults during interplate magmatism related to subduction of Pacific Oceanic Plate under the Eurasian Plate..
Ariadny (AR)	Zoned mafic-ultramafic Cr-PGE (Katenskoe); Mafic-ultramafic related Ti-Fe (±V) (Ariadnoe, Koksharovskoe)	Russia, Far East	Plutons intruding Samarkina terrane (Accretionary wedge)	Middle Jurassic and Early Cretaceous. K-Ar isotopic ages of about 160 Ma age	Belt interpreted as forming during generation of ultramafic and gabbroic plutons during underthrusting of the Kula oceanic ridge and formation of bimodal igneous rocks along a transform continental margin.
Samarka (Sam)	Porphyry Cu-Mo (±Au, Ag) (Malakhitovoe); Porphyry Mo (±W, Sn, Bi); W±Mo±Be skarn (Vostok-2, Lermontovsky)	Russia, Far East	Replacements and granitoids in Khungari-Tatibi granitic belt (too small to show at 15 M scale) that intrudes Samarka terrane	Early to mid-Cretaceous. K-Ar isotopic ages of 110 to 115 Ma for host granitoids.	Belt interpreted as forming during generation of S-type grantitoid plutons during underthrusting of the Kula oceanic ridge and formation of bimodal igneous rocks along a transform continental margin.
Hartolgoi-Sulinheer (HS)	Au-Ag epithermal vein (Biluut, Khoit Barjin); Ag-Pb epithermal vein (Biluut); Porphyry Mo; W±Mo±Be skarn (Qiyishan); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Khartolgoi); Carbonate-hosted Hg-Sb (Zuun Togoo Uul); Silica-carbonate (Listvenite) Hg	Southern Mongolia; Northwestern China	Veins and replacements related to latite and lamporphyre dikes in Trans-Baikalian-Daxinganling sedimentary-volcanic-plutonic belt that intrudes and overlies Tsagaan Uul-Guoershan and Solon terranes and Lugyngol volcanic-sedimentary basin.	Interpreted as Late Jurassic to Early Cretaceous.	In northwestern China, the belt interpreted as forming during generation of post-accretionary granite during subduction of Pacific Plate under the Eurasian Plate. In southern Mongolia, the belt is interpreted as forming in result of back arc extension of a late Mesozoic continental margin arc.

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Yanshan-2 (YSH)	Cu (±Fe, Au, Ag, Mo) skarn (Shouwangfen); W±Mo±Be skarn (Yangjiazhangzi); Porphyry Mo (±W, Bi) (Dazhuangke); Granitoid-related Au vein (Jinchanggouliang) Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Caijiaying); Au-Ag epithermal vein (Niujuan)	Northeastern China; Northern China	Veins, replacements, and granitoids related to Yanliao volcanic and sedimentary basin and plutonic belt that overlies and intrudes Sino-Korean Craton , West Liaoning-Hebei-Shanxi terrane, Sino-Korea platform sedimentary cover, and adjacent units	Middle Jurassic to Early Cretaceous. K-Ar isotopic age of Hongluoshan granite is of 178 to 186 Ma. K-Ar age for related dike at Jinchanggouliang deposit is about 120 Ma. Quartz diorite and quartz monzonite at Dazhuangke deposit has K-Ar isotopic age of 146 to 168 Ma.	Belt interpreted as forming during interplate magmatism associated with extensional tectonism related to oblique subduction of the Pacific Oceanic Plate beneath Eurasian Plate.
Jiliaolu (JLL)	Zn-Pb (±Ag, Cu) skarn (Huanren); Cu (±Fe, Au, Ag, Mo) skarn (Huatong); Granitoid-related Au vein (Jiaojia); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Ermi); Volcanic-hosted Au-base metal metasomatite (Liujiapuzhi)	Northeastern China; Northern China	Replacements and granitoids related to Jilin-Liaoning-East Shandong volcanic-plutonic belt that overlies and intrudes Sino-Korean Craton - Jilin-Liaoning-East Shandong terrane	Middle Jurassic to Early Cretaceous	Belt interpreted as forming during interplate magmatism associated with extensional tectonism related to oblique subduction of the Pacific Oceanic plate beneath Eurasian continental plate. Belt occurs in about twenty relatively large volcanic basins. belt contains more than 200 granitoid-related vein Au deposits in a district of 23,000 km^2, some large and superlarge, that comprise one quarter of proven Au reserve in China.
North Jilin (NJ)	Zn-Pb (±Ag, Cu) skarn (Tianbaoshan); Granitoid-related Au vein; Porphyry Cu (±Au) (Xiaoxinancha); Porphyry Mo (±W, Bi) (Daheishan); Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Sanmen); Au-Ag epithermal vein (Ciweigou); Fluorspar vein	Northeastern China	Replacements and granitoids intruding North marginal plutonic belt of North China Platform, Laoling terrane, and Zhangguangcailing superterrane	Middle Jurassic to Early Cretaceous. Siliceous and mafic volcanic rocks at Ciweigou Au-Ag epithermal deposit are Late Jurassic and have Rb-Sr isochron age of 147.5 Ma.	Belt interpreted as related to magmatism along transpression zones along transform micro plate boundaries and within plate (plume) environment.
Benev (BV)	W±Mo±Be skarn (Benevskoe)	Russia, Far East	Replacements related to granitoids of Khungari-Tatibi granitic belt that intrude Taukha and Sergeevka terranes	Early Cretaceous	Belt interpreted as forming during generation of granitoids during underthrusting of the Kula Oceanic ridge and formation of bimodal igneous rocks along a transform continental margin.
Sambagawa-Chichibu-Shimanto (SCS)			Started in Late Triassic through Early Jurassic		

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Kamuikotan (KM)	Podiform chromite (Nitto)	Japan, Hokkaido island	Ultramafic rocks that comprise part of an ophiolite in Kamuikotan complex in Shimanto accretionary wedge terrane	Interpreted as Late Jurassic to Early Cretaceous.	Belt is interpreted as forming during generation of an ophiolite that was incorporated into an accretionary wedge.
Hanxing (HX)	Fe skarn (Zhongguan)	Northern China	Replacements related to Late Jurassic to Early Cretaceous granitoids in Taihanshan volcanic-plutonic belt (too small to be shown at 15 M scale) intruding Sino-Korean Craton - West Liaoning-Hebei-Shanxi terrane	Late Jurassic to Early Cretaceous	Belt interpreted as forming during granitoid plutonism associated with extensional faults related to subduction of Pacific Plate under the Eurasian Plate.
Laiwu (LW)	Fe skarn (Jinling)	Northern China	Replacements related to Late Jurassic to Early Cretaceous granitoids in Jilin-Liaoning-East Shandong volcanic-plutonic belt that intrudes Sino Korean Craton - West Liaoning-Hebei-Shanxi terrane	Late Jurassic to Early Cretaceous. Isotopic ages of 110 to 128 Ma.	Belt interpreted as forming during granitoid plutonism associated with extensional faults related to subduction of Pacific Plate under Eurasian Plate. Host granitoids of the Jinling Complex are interpreted as forming during the Yanshan orogeny.
Taebaegsan (Tae)	Fe skarn (Kangwon, Dongnam, Susuk); Fe-Zn skarn (Yomisan); Zn-Pb (Ag, Cu, W) skarn; W±Mo±Be skarn (Wondong, Sangdong); REE-Li pegmatite; Au in shear zone and quartz vein (Seojom)	South Korea	Replacements and dikes related to Middle Jurassic through Early Cretaceous granitoids in Daebu Granite intruding Yeongnam Meta Complex and Great Limestone Group, (too small to show at 15 M scale).	Interpreted as Middle Jurassic through Early Cretaceous.	Belt interpreted as forming during intrusion of granitoids associated with Late Jurassic to Early Cretaceous Daebo granite that intruded during the Daebo orogeny. Granite consists of biotite granite, feldspar porphyry, and granite porphyry that intrude Precambrian metasedimentary rocks. Deposits formed during contact metasomatism of calcareous layers in metasedimentary rock.
Kitakami (Kit)	Cu (±Fe, Au, Ag, Mo) skarn (Kamaishi); Granitoid-related Au vein (Oya)	Japan	Replacements in Early Cretaceous Hiroshima granitic belt (too small to show at 15 M scale) intruding South Kitakami and Mino-Tamba-Chichibu terranes.	Early Cretaceous (Aptian through Albian). K-Ar isotopic ages of 120 Ma to 110 Ma for deposit-related granitic rocks in the Kitakami Mountains.	Belt interpreted as forming during intrusion of granitoids associated with a continental-margin arc and siliceous magmatism.
CENOMANIAN THROUGH CAMPANIAN (96 to 72 Ma) METALLOGENIC BELTS					
Lower Yana (LY)	Ag-Sb Vein (Kyuchyus); Clastic-sediment-hosted Sb-Au	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements in Kular-Nera terrane	Interpreted as Aptian to Late Cretaceous.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin. The belt occurs along the Yana fault that cuts the southeastern Kular sector of the Kular-Nera slate belt.

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Chokhchur-Chekur-dakh (CC)	Cassiterite-sulfide-silicate vein and stockwork (Churpunya, Chokurdakh)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements in Svyatoi Nos volcanic belt (too small to show at 15 M scale)	Interpreted as Aptian to Late Cretaceous. The granitoids are dated by ^{40}Ar-^{39}Ar at 105 to 106 Ma.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin. Belt occurs along the Yana fault. Belt hosted in granodiorite, amphibole-biotite granite, and subalkali granite that form part of Svyatoy Nos magmatic arc.
Central Polousny (CP)	Cassiterite-sulfide-silicate vein and stockwork (Ukachilkan); Sn-W greisen, stockwork, and quartz vein (Deputatskoe ; Takalkan)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements related to Northern granite belt (too small to show at 15 M scale) that intrudes Polousnyi-Debin terrane	Interpreted as Aptian to Late Cretaceous. Deputatskiy stock has K-Ar isotopic age of 108 Ma.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin. Belt associated with REE and subalkali granitoids that occur in small stocks.
Turukhansk (TU)	Volcanogenic-sedimentary Fe (Turukhanskoye)	Russia, Eastern Siberia	Stratiform units in Northern, Eastern, and Western Siberia sedimentary basins	Cretaceous to Paleogene	Belt interpreted as forming in a nearshore environment during rewashing of laterite crust weathering material in the shallow-water environment. Material interpreted as derived from trapp basalt of the North Asian Craton.
Eckyuchu-Billyakh (EB)	Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Prognoz); Clastic-sediment-hosted Sb-Au; Hg-Sb-W vein and stockwork (Zvyozdochka); Ag-Sb vein vein; Au-Ag epithermal vein	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements related to Transverse granite belt (too small to show at 15 M scale) that intrudes North Asian Craton Margin - Verkhoyansk fold and thrust belt	Interpreted as Aptian to Late Cretaceous. Granitoid stocks and dikes of various composition are have ^{40}Ar-^{39}Ar isotopic ages of older than 120 Ma. Khoboyatu-Echiy granite pluton has ^{40}Ar-^{39}Ar age of 97 Ma.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin. Belt hosted in granitoid stocks and dikes that occur at the terminations of the Transverse granitoid belt.
Taryn (Tar)	Clastic-sediment-hosted Sb-Au (Senatachan, Sarylakh, Kupol'noe)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements in Kular-Nera terrane and North Asian Craton Margin - Verkhoyansk fold and thrust belt	Interpreted as Aptian to Late Cretaceous.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin.
Selennyakh (SE)	Carbonate-hosted Hg-Sb (Gal Khaya, Pologoye, Arbat); Volcanic-hosted Hg (Dogdo); Ag-Sb vein (Kysylga)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements related to Uyandina-Yasachnaya volcanic belt that overlies Omulevka passive continental margin terrane of Kolyma-Omolon superterrane, and adjacent terranes.	Interpreted as Aptian to Late Cretaceous.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin.
Khandyga (Kha)	Ag-Sb vein; Carbonate-hosted As-Au metasomatite; Clastic-sediment-hosted Sb-Au (Senduchen); Clastic sediment-hosted Hg±Sb (Seikimyan)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements in North Asian Craton Margin - Verkhoyansk fold and thrust belt	Interpreted as Aptian to Late Cretaceous.	Belt interpreted as forming during post-accretionary extension related to initiation of opening of Eurasia Basin. Belt occurs in veins and replacements in the southern Verkhoyansk fold and thrust alon the Sette-Daban tectonic zone.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
South Verkho-yansk (SV)	Au in shear zone and quartz vein (Nezhdaninka); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Upper Menkeche); Granitoid-related Au vein; W-Mo-Be greisen, stockwork, and quartz vein; Au-Ag epithermal vein	Russia, East-Central Yakutia (Verkhoyansk area)	Veins related to Late Cretaceous granitoids in South Verkhoyansk granite belt intruding North Asian Craton Margin - Verkhoyansk fold and thrust belt	Interpreted as Aptian to Late Cretaceous.	Belt interpreted as forming during accretion of the Okhotsk terrane to the North Asian Craton and resultant deformation of South Verkhoyansk belt. Au quartz veins are relatively older than large granitic plutons intruding the South Verkhoyansk synclinorium that have ^{40}Ar-^{39}Ar isotopic ages of 120 to 123 Ma.
Upper Udoma (UY)	Cassiterite-sulfide-silicate vein and stockwork (Khoron); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork; Sn-W greisen, stockwork, and quartz vein; Porphyry Mo (±W, Sn, Bi)	Russia, East-Central Yakutia (Verkhoyansk area)	Veins and replacements related to Okhotsk-Chukotka volcanic-plutonic belt that intrudes and overlies North Asian Craton Margin - Verkhoyansk fold and thrust belt	Interpreted as Late Cretaceous.	Belt interpreted as forming during generation of granitoids along an active continental margin arc consisting of the Albian to Late Cretaceous Okhotsk-Chukotka volcanic-plutonic belt.
Kukhtuy-Uliya (Kul)	Au-Ag epithermal vein (Khakandzha, Yurievka); Porphyry Mo (±W, Sn, Bi); Porphyry Sn Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite	Russia, Far East	Veins related to Okhotsk-Chukotka volcanic-plutonic belt that intrudes and overlies Okhotsk terrane	Late Cretaceous and to Paleocene	Belt interpreted as forming during generation of granitoids along an active continental margin arc consisting of the Albian to Late Cretaceous Okhotsk-Chukotka volcanic-plutonic belt.
Bakcharsk (BCh)	Sedimentary siderite Fe (Bakcharskoye); Banded iron formation (BIF, Superior Fe); Sedimentary Fe-V	Russia, Eastern Siberia	Stratiform units in Northern, Eastern, and Western Siberia sedimentary basins	Cretaceous and Paleogene	Belt interpreted as forming in a nearshore environment during rewashing of laterite crust weathering material in the shallow-water environment. Material interpreted as derived from trapp basalt of the North Asian Craton.
Verkhoturovsk (VT)	Bauxite (karst type) (Porozhninskoye 2); Talc (magnesite) replacement; Sedimentary bauxite	Russia, Eastern Siberia (Yenisei Ridge area)	Weathering of units in North Asian Craton, Craton Margin (East Angara fold and thrust belt) and Central Angara terrane	Cretaceous to Paleogene	Belt interpreted as forming during Cretacous and Paleogene tropical weathering.
Chelasin (CHL)	Sn-B (Fe) skarn (ludwigite); Granitoid-related Au vein; Cu (±Fe, Au, Ag, Mo) skarn; Porphyry Cu (±Au (Chelasin)	Russia, Far East	Replacements and granitoids related to Okhotsk-Chukotka volcanic-plutonic belt that intrudes and overlies North Asian Craton and Uda volcanic-plutonic belt	Late Cretaceous to Paleocene	Belt interpreted as forming during generation of granitoids in an active continental margin arc consisting of the Albian to Late Cretaceous Okhotsk-Chukotka volcanic-plutonic belt.

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Preddzhug-dzhursky (PRD)	Porphyry Cu-Mo (±Au, Ag_; Porphyry Cu (±Au); Au-Ag epithermal vein (Avlayakan); Granitoid-related Au vein; Cu (±Fe, Au, Ag, Mo) skarn	Russia, Far East	Granitoids related to Okhotsk-Chukotka volcanic-plutonic belt that intrudes and overlies the East Aldan superterrane - Batomga composite terrane, Dzugdzur anorthositic belt, and Ulkan plutonic belt.	Late Cretaceous to Paleocene	Belt interpreted as forming during generation of granitoids along an active continental margin arc consisting of the Albian to Late Cretaceous Okhotsk-Chukotka volcanic-plutonic belt.
Belininsk (Bel)	Bauxite (karst type) (Barzasskoye); Lateritic Ni (Belininskoye); Sedimentary bauxite; Talc (magnesite) replacement	Russia, Southern-Eastern Siberia (Salair Range, Kuznetsk Alatau Mountains)	Weathering of sedimentary rocks in Salair and Telbes-Kitat island-arc terranes, and ultramafic-mafic bodies in Alambai accretionary wedge terrane	Late Cretaceous to Paleocene	Belt interpreted as forming as deuterogenic laterite derived from argillic karst material. Lateritic Ni deposits formed from of weathering crusts on serpentinized ultramafic rocks.
Djotsk (DJ)	Weathering crust Mn (±Fe) (Seibinskoye)	Russia, Eastern Siberia	Weathering of sedimentary rocks in Kizir-Kazir terrane (Island arc) (too small to show at 15 M scale)	Late Cretaceous to Paleogene	Belt interpreted as forming from weathering crusts developed on Neoproterozoic Mn-bearing rocks.
Ezop-Yam-Alin (EYA)	W-Mo-Be greisen, stockwork, and quartz vein (Lednikovy-Sarmaka); Sn-W greisen, stockwork, and quartz vein; Cassiterite-sulfide-silicate vein and stockwork; Porphyry Mo (±W, Sn, Bi) (Ippatinskoe, Olgakanskoe, Shirotnoe)	Russia, Far East	Veins and replacements related to Khingan-Okhotsk volcanic-plutonic belt	Late Cretaceous. Sn granite with isotoics ages of 75 to 100 Ma.	Belt interpreted as forming during generation of granitoids along along the Khingan transform continental-margin arc consisting of the Khingan-Okhotsk volcanic-plutonic belt that is related to oblique subduction of ancestral Pacific Ocean Plate.
Pilda-Limuri (PLL)	Sn-W greisen, stockwork, and quartz vein; W-Mo-Be greisen, stockwork, and quartz vein; Ag-Sb vein (Dyapp); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Uchaminskoye); Granitoid-related Au vein (Agnie-Afanasievskoye)	Russia, Far East	Veins, replacements, and granitoids related to Khingan-Okhotsk volcanic-plutonic belt	Late Cretaceous	Belt interpreted as forming during generation of granitoids along along the Khingan transform continental-margin consisting of the Khingan-Okhotsk volcanic-plutonic belt that is related to oblique subduction of ancestral Pacific Ocean Plate.

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Malo-Khingan (MKh)	Porphyry Sn (Khinganskoe); Rhyolite-hosted Sn; Sn-W greisen, stockwork, and quartz vein (Pravourmiiskoe).	Russia, Far East	Granitoids related to Khingan-Okhotsk volcanic-plutonic belt	Late Cretaceous. Probable deposit-related to subalkaline potassium granite with K-Ar ages of 80 to 90 Ma and Rb-Sr whole-rock isochron age of 78 Ma.	Belt interpreted as forming during generation of granitoids along along the Khingan transform continental-margin arc consisting of the Khingan-Okhotsk volcanic-plutonic belt that is related to oblique subduction of ancestral Pacific Ocean Plate.
Badzhal-Komso-molsk (BKS)	Sn-W greisen, stockwork, and quartz vein (Pravourmiyskoe, Solnechnoe, Sobolinoye); Cassiterite-sulfide-silicate vein and stockwork; Cu (±Fe, Au, Ag, Mo) skarn; Porphyry Mo (±W, Sn, Bi)	Russia, Far East	Veins and replacements related to Khingan-Okhotsk volcanic-plutonic belt	Late Cretaceous. K-Ar isotopic ages of 75 to 86 Ma. Rb-Sr age of 95 to 83 Ma.	Belt interpreted as forming during generation of granitoids along the Khingan transform continental-margin arc consisting of the Khingan-Okhotsk volcanic-plutonic belt that related to oblique subduction of ancestral Pacific Ocean Plate.
Durmin (Dur)	Au-Ag epithermal vein (Durmin)	Russia, Far East	Veins related to East Sikhote-Alin volcanic-plutonic belt (too small to show at 15 M scale) that overlies and intrudes Kiselyovka-Manoma terrane (too small to show at 5 M scale)	Interpreted as Late Cretaceous.	Belt interpreted as forming during generation of granitoids along the East-Sikhote-Aline continental-margin arc related to oblique subduction of ancestral Pacific Ocean Plate.
Tumnin-Anyuy (TuA)	Porphyry Sn (Mopau); Cassiterite-sulfide-silicate vein and stockwork; Au-Ag epithermal vein (Tumninskoye)	Russia, Far East	Veins and granitoids related to East Sikhote-Alin volcanic-plutonic belt that overlies and intrudes Kema, Luzhkinsky, and Samarka terranes	Late Cretaceous to Paleocene	Belt interpreted as forming during generation of granitoids along the East-Sikhote-Aline continental-margin arc related to oblique subduction of ancestral Pacific Ocean Plate.
Luzhkinsky (LZH)	Sn-W greisen, stockwork, and quartz vein (Tigrinoe, Zimnee, Arsenyevsky); Cassiterite-sulfide-silicate vein and stockwork (Vysokogorskoe); W-Mo-Be greisen, stockwork, and quartz vein; Porphyry Sn (Yantarnoe); Porphyry Cu (±Au), Porphyry Cu-Mo (±Au, Ag); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork	Russia, Far East	Veins, replacements, and granitoids related to East Sikhote-Alin volcanic-plutonic belt that overlies and intrudes Zhuravlevsk-Amur River terrane	Mid-Cretaceous and early Tertiary between 100 and 50 Ma.	Belt interpreted as forming during generation of granitoids in back-arc of the East-Sikhote-Aline continental-margin arc related to oblique subduction of ancestral Pacific Ocean Plate.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Sergeevka-Taukha (Ser)	Granitoid-related Au vein (Progress, Askold); Boron (datolite) skarn (Dalnegorsk); Zn-Pb (±Ag, Cu) skarn (Nikolaevskoe, Partizanskoe); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork; Porphyry Sn; Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Krasnogorskoye); Au-Ag epithermal vein; Porphyry Cu (±Au)	Russia, Far East	Veins and granitoids related to East Sikhote-Alin volcanic-plutonic belt that overlies and intrudes Sergeevka, Samarka, and Taukha terranes	Late Cretaceous and early Tertiary. K-Ar ages of deposits range between 60 and 80 Ma.	Belt interpreted as forming during generation of granitoids along the East-Sikhote-Aline continental-margin arc related to subduction of ancestral Pacific Ocean Plate.
Sambagawa-Chichibu-Shimanto (SCS)			Started in Late Triassic through Early Jurassic		
Hidaka (HD)	Cyprus Cu-Zn massive sulfide (Shimokawa)	Japan, Hokkaido	Stratiform units in Shimanto accretionary wedge terrane	Middle Cretaceous to Eocene	Belt interpreted as forming in basalt generated along the Kula-Pacific ridge. Subsequent structural incorporatation of host rocks and deposits into an accretionary wedge.
Inner Zone Southwest Japan (ISJ)	Zn-Pb (±Ag, Cu) skarn (Kamioka Tochibara); W-Mo-Be greisen, stockwork, and quartz vein (Otani); W±Mo±Be skarn; Cu (±Fe, Au, Ag, Mo) skarn (Bandojima); Porphyry Mo (±W, Sn, Bi); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Ikuno); Fluorspar vein; Metamorphic graphite	Japan	Veins and replacements in Nohi rhyolite volcanic belt and Hiroshima granitic belt that overlie and intrude Hida, Sangun-Hidagaien-Kurosegawa, Akiyoshi-Maizuru, Mino-Tamba-Chichibu terranes (some too small to show at 15 M scale).	Cretaceous to Paleogene. Cretaceous age of deposit-related granitic rocks in Ryoke and Sanyo belts are. Paleogene age mostly for Sanin belt.	Belt interpreted as forming during generation of granitoids along a East Asia magmatic arc related to subduction of of Kula and Pacific plates.
Wolak (WO)	Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Youngdeog); W-Mo-Be greisen, stockwork, and quartz vein (Wolak); W±Mo±Be skarn; Cu (±Fe, Au, Ag, Mo) skarn (Jesamuk); Fe skarn (Susan); Weathering crust Mn (±Fe)	South Korea	Veins and replacements related to Cretaceous Bulgugsa granite that intrudes Gyeonggi Metamorphic Complex, Ogcheon Group, Great Limestone Group, and Daebo Granite (all too small to show at 15 M scale), and Ogcheon terrane.	Interpreted as Cenomanian through Campanian.	Deposits formed during intrusion of Cretaceous Bulgugsa granite (biotite granite, leucogranite, and hornblende granite). Granitoids interpreted as forming during Late Cretaceous to Early Tertiary Bulgugsa orogeny.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Gyeongpuk (GP)	Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Darak, Chilgok); W-Mo-Be greisen, stockwork, and quartz vein (Kyeongju); Sn-W greisen, stockwork, and quartz vein (Wangpiri); Fe skarn; Polymetallic Ni vein (Samkwang).	South Korea	Veins and replacements related to Cretaceous Bulgugsa granite (biotite granite and granodiorite) intruding Sino-Korean Craton - Yeongnam terrane.	Interpreted as Cenomanian through Campanian.	Belt interpreted as forming during generation of Bulgugsa granite during Late Cretaceous to Early Tertiary Bulgugsa orogeny. Bulgugsa granite consists of biotite granite, granodiorite, porphyry, and felsic and quartz-porphyry. Deposits consist of hydrothermal, fissure-filling sulfide veins in granite gneiss, granodiorite, and biotite granite.
Gyeongnam (GN)	Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork; Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite (Gwymyeong, Mulkum, Kuryong); Fe skarn Ulsan); W-Mo-Be greisen, stockwork, and quartz vein; Porphyry Mo (±W, Sn, Bi); Cu-Ag vein (Goseong, Tongyoung) Au in shear zone and quartz vein (Cheolma)	South Korea	Veins and replacements related to Cretaceous Bulgugsa granite (biotite and feldspar porphyry) intruding Sino-Korean Craton - Yeongnam terrane.	Interpreted as Cenomanian through Campanian (96-75 Ma).	Belt interpreted as forming during generation of Bulgugsa granite (biotite granite, granodiorite and quartz-porphyry) during Late Cretaceous to Early Tertiary Bulgugsa orogeny. Deposits occur along the fissures and shear zones.
MAASTRICHTIAN THROUGH OLI GOCENE (72 to 24 Ma) METALLOGENIC BELTS					
Popigay (PP)	Impact diamond (Popigay)	Russia, Northern Yakutia	Astrobleme formed on North Asian Craton	Eocene. Tagamite and impact glasses have ^{40}Ar-^{39}Ar isotopic ages of 35.7 Ma.	Belt hosted in Popigay ring structure is interpreted as resulting from meteoritic impact with formation of pseudotachylites, high-grade shock metamorphic minerals, and allogenic breccia.
Lower Yana (LY)			Started in Cenomanian through Campanian		
Chokhchur-Chekurdakh (CC)			Started in Cenomanian through Campanian		
Central Polousnyy (CP)			Started in Cenomanian through Campanian		
Eckyuchu-Billyakh (EB)			Started in Cenomanian through Campanian		
Taryn (TR)			Started in Cenomanian through Campanian		
Selennyakh			Started in Cenomanian through Campanian		
Khandyga (KH)			Started in Cenomanian through Campanian		
South Verkhoyansk			Started in Cenomanian through Campanian		
Upper Udoma (UY)			Started in Cenomanian through Campanian		
Kukhtuy-Uliya (KU)			Started in Cenomanian through Campanian		
Chelasin (CHL)			Started in Cenomanian through Campanian		
Preddzhugdzhursky (PRD)			Started in Cenomanian through Campanian		

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Lower Amur (LAM)	Au-Ag epithermal vein (Mnogovershinnoe); Epithermal quartz-alunite (Iskinskoe); Porphyry Au; Porphyry Cu (±Au); Sn-W greisen, stockwork, and quartz vein	Russia, Far East	Veins and granitoids related to East Sikhote-Alin volcanic-plutonic belt that intrudes and overlies Amur River and Kiselyovka-Manoma accretionary-wedge terranes.	Late Cretaceous and Paleocene. K-Ar isotopic deposit ages of 49 to 69 Ma	Belt interpreted as forming during generation of granitoids along a continental-margin arc related to subduction of ancestral Pacific Ocean Plate.
Kema (Kem)	Ag-Au epithermal vein (Glinyanoe, Tayozhnoe 1); Porphyry Cu-Mo (±Au, Ag) Sukhoi Creek; Porphyry Cu (±Au) Verkhnezolotoe); Porphyry Mo (±W, Sn, Bi)	Russia, Far East	Veins related to East Sikhote-Alin volcanic-plutonic belt that intrudes and overlies the Kema terrane	Early Tertiary	Belt interpreted as forming during generation of granitoids along a continental-margin arc related to subduction of ancestral Pacific Ocean Plate.
Luzhkinsky (LZH)			Started in Cenomanian through Campanian		
Hidaka (HD)			Started in Cenomanian through Campanian		
Inner Zone Southwest Japan (ISJ)			Started in Cenomanian through Campanian		
MIOCENE THROUGH QUATERNARY (24 to 0 Ma)					
Northeast Hokkaido (NEH)	Au-Ag epithermal vein (Konomai); Volcanic-hosted Hg (Itomuka); Hg-Sb-W vein and stockwork (Ryushoden); Clastic sediment-hosted Hg±Sb	Japan, Hokkaido	Veins and replacements in Quaternary Japan volcanic belt and Neogene Japan sedimentary basin that overlies and intrudes Hidaka zone of the Shimanto accretionarry wedge terrane.	Miocene to Quaternary. Two ages of deposits: early stage (14.4 to 11.2 Ma); and late stage (8.1 to 0.3 Ma).	Belt interpreted as forming along an island arc related to subduction of the Pacific Plate beneath eastern Hokkaido Island.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Northeast Japan (NEJ)	Volcanogenic Zn-Pb-Cu massive sulfide (Kuroko, Altai types) (Kosaka, Shakanai); Au-Ag epithermal vein (Sado, Hosokura, Toyoha); Polymetallic (Pb, Zn±Cu, Ba, Ag, Au) volcanic-hosted metasomatite; Sulfur-sulfide (S, FeS_2) (Horobetsu); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Ashio); Mn vein; Volcanogenic-sedimentary Mn (Kinjo); Chemical-sedimentary Fe-Mn; Limonite from spring water (Gumma)	Japan	Layers and veins in Quaternary Japan volcanic belt and Neogene Japan sedimentary basin that overlie and intrude Hiroshima granitic plutonic belt, and Mino-Tamba-Chichibu and South Kitakami terranes.	Miocene to Quaternary. Many Kuroko-type deposits were formed in middle Miocene, at about 13 Ma. K-Ar ages of vein deposits suggest two stages of formation: early stage (15 to 10 Ma), and late stage (8 to 2 Ma). Sulfur-sulfide (S, FeS2) and limonite deposits formed on Quaternary volcanoes.	Volcanogenic massive sulfide deposits interpreted as forming in back-arc region of an island arc related to subduction of the Pacific Plate beneath eastern Hokkaido Island. Au-Ag epithermal vein deposits interpreted as forming along axial part of an island arc volcanism. Sulfur-sulfide and limonite deposits formed in active island arc. Island arc magmatism related to subduction of Pacific Plate.
Hokuriku-Sanin (Hok)	Au-Ag epithermal vein (Omori); Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork (Taishu); Ag-Sb vein; Clastic-sediment-hosted U	Japan	Veins and replacements related to Neogene Japan sedimentary basin that overlies and intrudes Hiroshima granitic plutonic belt, and Akiyoshi-Maizuru and Mino-Tamba-Chichibu terranes.	Miocene to Pleistocene	Belt interpreted as forming along an island arc during back-arc rifting or axial part of an island arc that was related to subduction of Philippine Sea Plate.

Name (Symbol)	Mineral Deposit Models (Major Deposits)	Country, Region	Unit or Strucutre Related to Origin of Belt	Age Range of Metallogenic Belt	Tectonic Event for Origin of Metallogenic Belt. Comments
Outer Zone Southwest Japan (OSJ)	Sn skarn; Sn-W greisen, stockwork, and quartz vein; Polymetallic Pb-Zn ± Cu (±Ag, Au) vein and stockwork; Clastic-sediment-hosted Sb-Au; Au-Ag epithermal vein (Kishu); Volcanic-hosted Hg; Ag-Sb vein; Zn-Pb (±Ag, Cu, W) skarn (Chichibu); W-Mo-Be greisen, stockwork, and quartz vein; Hg-Sb-W vein and stockwork (Yamatosuigin); Cassiterite-sulfide-silicate vein and stockwork (Obira); Clastic-sediment-hosted Sb-Au	Japan	Veins and replacements related to Neogene Japan sedimentary basin that overlies and intrudes Hiroshima granitic plutonic belt, Sambagawa, Shimanto, and Mino-Tamba-Chichibu terranes.	Middle Miocene. Isotopic age of 15.5 Ma to 13 Ma age for host siliceous igneous rocks.	Belt interpreted as forming along an island arc during back-arc rifting or axial part of an island arc that was related to subduction of Philippine Sea Plate.
Kyushu (Kus)	Au-Ag epithermal vein (Hishikari, Kushikino, Taio)	Japan	Veins and replacements related to Quaternary Japan volcanic belt and Neogene Japan sedimentary basin that overlie and intrude Akiyoshi-Maizuru, Shimanto, and Mino-Tamba-Chichibu terranes.	Pliocene to Quaternary	Belt is interpreted as forming during hydrothermal activitiy along a Pliocene and Quaternary island arc during back-arc rifting or the axial part of an island arc that was related to subduction of Philippine Sea Plate.