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SIGNIFICANT METALLIFEROUS AND SELECTED NON-METALLIFEROUS LODE DEPOSITS AND PLACER DISTRICTS FOR THE RUSSIAN FAR EAST, ALASKA, AND THE CANADIAN CORDILLERA

By

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INTRODUCTION

This report is a written tabular compilation of the significant metalliferous and selected non-metalliferous lode deposits and placer districts of the Russian Far East, Alaska, and the Canadian Cordillera. The report provides detailed summaries of the important features of the significant lode deposits and placer districts along with a summary of mineral deposit models, and a bibliography of cited references. Data are provided herein for 1,079 significant lode deposits and 158 significant placer districts of the region. The tabular data are provided in Table 1 for significant lode deposits, and in Table 2 for significant placer districts at the end of report. Alphabetical indices of the tabular data are provided after Tables 1 and 2.

The Alaskan and Canadian mineral deposit data are derived from revisions of Dawson (1984), Nokleberg and others (1987, 1993, 1994a, b), from new unpublished data of the authors, and from recent publications. The Russian Far East mineral deposit data represent new compilations by the Russian authors using cited references and unpublished data of the authors.

This report is published in digital format on a CD-ROM. This report is one of a series of studies on the mineral deposits, metallogenic belts, bedrock geology, and tectonics of the Russian Far East, Alaska, and the Canadian Cordillera. Published major companion studies are: (1) a report on the metallogenesis of mainland Alaska and the Russian Northeast (Nokleberg and others, 1993); and (2) a tectonostratigraphic terrane map of the Circum-North Pacific (Nokleberg and others, 1994c). A companion version of this report was published in paper format (Open-File Report 96-513-A).

METALLOGENIC AND TECTONIC DEFINITIONS

The following key definitions are provided.

Deposit. A general term for any lode or placer mineral occurrence, mineral deposit, prospect, and (or) mine.

Metallogenic belt. A geologic unit (area) that either contains or is favorable for a group of coeval and genetically-related, significant lode and placer deposit models.

Mine. A site where valuable minerals have been extracted.

Mineral deposit. A site where concentrations of potentially valuable minerals for which grade and tonnage estimates have been made.

Mineral occurrence. A site of potentially valuable minerals on which no visible exploration has occurred, or for which no grade and tonnage estimates have been made.

Overlap assemblage. A postaccretion unit of sedimentary or igneous rocks deposited on, or intruded into, two or more adjacent terranes (Jones and others, 1983; Howell and others, 1985; Nokleberg and others, 1994c). The sedimentary and volcanic parts either depositionally overlie, or are interpreted to have originally depositionally overlain, two or more adjacent terranes, or terranes and the craton margin. Overlapping plutonic rocks, which may be coeval and genetically related to overlap volcanic rocks, link or stitch together adjacent terranes, or a terrane and a craton margin.

Prospect. A site of potentially valuable minerals in which excavation has occurred.

Significant mineral deposit. A mine, mineral deposit, prospect, or occurrence that is judged as important for the metallogenesis of a geographic region.

Terrane. A fault-bounded geologic entity or fragment that is characterized by a distinctive geologic history that differs markedly from that of adjacent terranes (Jones and others, 1983; Howell and others, 1985; Nokleberg and others, 1994c). Constitutes a physical entity, i.e., a stratigraphic succession bounded by faults, inferred faults, or an intensely-deformed structural complex bounded by faults. Some terranes may be displaced (faulted) facies of other terranes.

LODE AND PLACER MINERAL DEPOSIT MODELS

Classification of Mineral Deposits

Metalliferous and selected non-metalliferous lode and placer deposits in this report are classified into various models or types described below. This classification of mineral deposits was derived mainly from the mineral deposit types of Eckstrand (1984), Cox and Singer (1986), Nokleberg and others (1987, 1993, 1994a, b), cited references for specific models, and unpublished data of the Russian authors. The lode deposit types are grouped according to host rock lithologies and (or) origin. Lode deposit types that share a common origin, such as contact metasomatic deposits, or porphyry deposits, are grouped together under a single heading.

The mineral deposit types used in this report consist of both descriptive and genetic information that is systematically arranged to describe the essential properties of a class of mineral deposits. Some types are descriptive (empirical), in which instance the various attributes are recognized as essential, even though their relationships are unknown. An example of a descriptive mineral deposit type is the basaltic Cu type in which the empirical datum of a geologic association of Cu sulfides with relatively Cu-rich metabasalt or greenstone is the essential attribute. Other types are genetic (theoretical), in which case the attributes are related through some fundamental concept. An example is the W skarn deposit type in which case the genetic process of contact metasomatism is the essential attribute. For additional information on the methodology of mineral deposit types, the reader is referred to the discussions by Eckstrand (1984) and Cox and Singer (1986). For each deposit type, the principal references are listed in parentheses.

Deposits Related to Marine Felsic to Mafic Extrusive Rocks

Kuroko Zn-Pb-Cu massive sulfide (Ag, Au, Cd, Sn, Sb, Bi, barite) (D.A. Singer in Cox and Singer, 1986; Franklin, 1993)

This deposit type consists of volcanogenic massive to disseminated sulfides that occur in felsic to intermediate marine volcanic, pyroclastic, and bedded sedimentary rocks. The deposit minerals are mainly pyrite, chalcopyrite, sphalerite, and lesser galena, tetrahedrite, tennantite, and magnetite. Local alteration to zeolites, montmorillonite, silica, chlorite, and sericite may occur. The volcanic rocks are mainly rhyolite and dacite flows and tuff with subordinate basalt and andesite. Deposits commonly associated with subvolcanic intrusions that focus heat and provide energy for circulating hydrothermal fluids and leaching reactions. Strata above intrusions display extensive high-temperature alteration, including metal depletion, extreme alkali modification, and silicification. Deposits may be associated with major units of epiclastic breccia and with local growth faults, either rift or caldera-collapse faults. Alteration pipes may develop in portions of

faults that immediately underlie the deposits. The depositional environment is mainly hot springs related to marine volcanism in island arcs or in extensional regimes behind island arcs.

Besshi Cu-Zn massive sulfide (Cu, Zn, Ag) (D.P. Cox in Cox and Singer, 1986; Slack, 1993)

This deposit type consists of thin sheet-like bodies of massive to well-laminated pyrite, pyrrhotite, and chalcopyrite and sphalerite, and lesser sulfide minerals, within thinly laminated clastic sedimentary rocks, basalt, and mafic tuff. Lesser minerals are magnetite, galena, bornite, and tetrahedrite, with gangue quartz, carbonates, albite, white mica, and chlorite. The rock types are mainly marine clastic sedimentary rocks, basaltic and less commonly andesitic tuff and breccia, and local black shale and red chert. Wall rocks may include sericite- and chlorite-rich schist, coticule, tourmalinite, and albite that common form strata-bound lenses or envelopes around the massive sulfide deposit, or may extend as much as five to ten meters into the adjacent host rocks. Coticule, tourmalinite, and albite may occur as stratiform layers that may extend laterally hundreds of meters beyond the massive sulfide deposit. These wall rocks form by hydrothermal alteration and (or) chemical sedimentation coeval with deposition of massive sulfide. Alteration is sometimes difficult to recognize because of metamorphism. Deposits typically form stratiform lenses and sheetlike accumulations of semi-massive to massive sulfide. Footwall feeder zones may occur. The depositional environment is interpreted as submarine hot springs related to the deeper zones of submarine basaltic volcanism along spreading oceanic ridges, possibly in areas where a spreading oceanic ridge occurs near a continental margin that is supplying clastic detritus.

Cyprus Cu-Zn-Ag massive sulfide (Au, Pb, Cd, Sn) (D.A. Singer in Cox and Singer, 1986)

This deposit type consists of massive sulfides in pillow basalt. The deposit minerals are mainly pyrite, chalcopyrite, sphalerite, and lesser marcasite and pyrrhotite. The sulfides occur in pillow basalt that is associated with tectonized dunite, harzburgite, gabbro, sheeted diabase dikes, and fine-grained sedimentary rocks, all part of an ophiolite assemblage. Beneath the massive sulfides is sometimes stockwork pyrite, pyrrhotite, minor chalcopyrite, and sphalerite. The sulfide minerals are sometimes brecciated and recemented. Alteration in the stringer zone consists of abundant quartz, chalcedony, chlorite, and lesser illite and calcite. Some deposits are overlain by Fe-rich and Mn-poor ochre. The depositional environment consists of submarine hot springs along an axial graben in oceanic or back-arc spreading ridges, or hot springs related to submarine volcanoes in seamounts.

Volcanogenic Mn (R.A. Koski in Cox and Singer, 1986)

This deposit type consists of sheets and lenses of hausmannite-rhodochrosite, rhodochrosite, and oxidized braunite in intercalated shales, jasper, marine basalt flows, and mafic tuff. The host-volcanic rocks differ from normal tholeiite basalt in being relatively rich in potassium, sodium, and titanium. The deposits generally occur in sequences with abundant chert, rather than in sequences dominated by volcanic rocks. The deposits are often associated with volcanogenic Fe deposits, and sometimes contain complexly-oxidized ferromanganese minerals. The depositional environment is presumably related to hot springs associated with marine basaltic magmatism. No relation exists between zones of Mn-minerals and volcanic edifices.

Volcanogenic Fe (Shekhorkina, 1976)

This deposit type consists of sheeted magnetite, and rarely magnetite-hematite or magnetite-hydroxide that occur in interlayered dark-gray jasper, shale, sandstone, and sedimentary breccia that contain subordinate subalkaline mafic extrusive rocks,. Associated minerals are pyrite, pyrrhotite, chalcopyrite, arsenopyrite, and other sulfide minerals. Quartz is the dominant gangue mineral, along with Fe-rich chlorite, calcite, and gypsum. The depositional environment is presumably related to hot springs associated with marine mafic volcanism.

Deposits Related to Subaerial Extrusive Rocks

Au-Ag epithermal vein (D.L. Mosier and others in Cox and Singer, 1986; Sillitoe, 1993a)

This deposit type consists of quartz-adularia, and quartz-adularia-carbonate veins with a wide variety of minerals, including Au- and Ag-sulfosalts, pyrite, chalcopyrite, argentite, galena, sphalerite, cinnabar, and stibnite. Associated minerals include electrum, chalcopyrite, Cu- and Ag-sulfosalts, with lesser tellurides, bornite, barite, and fluorite. Alteration minerals include quartz, kaolinite, montmorillonite, illite, and zeolites. One class of epithermal vein deposits, such as those at Creede, Colorado and Dukat, Russian Northeast, has high concentrations of Pb, Zn, and Ag, sometimes high Cu and low Au; another class, such as those at Sado, Japan, has high Au, moderate to low Ag, sometimes high Cu, and generally low Pb and Zn concentrations. For both groups, the host volcanic rock composition ranges from subalkalic andesite to rhyolite. Some deposits are observed or inferred to overlie subvolcanic Cu-Au, Cu-Mo, or Sn magmatic-rock-related deposits. Deposits may be overlain by barren, acid-leached zones, or silicified horizons. The depositional environment is intermediate to felsic volcanic arcs and centers developed over miogeosynclinal rocks (Creede-type) or older volcanic and plutonic rocks (Sado-type).

Volcanic-hosted Hg (Plamennoe type) (Kuznetsov, 1974; Babkin, 1975)

This deposit type consists of massive to disseminated, veinlet-disseminated and brecciated cinnabar occurring either in: (1) in bed-like, lens-like and irregular bodies mostly in felsic and to a lesser extent, in intermediate and mafic volcanic horizons; or (2) at the contacts of subvolcanic intrusive and volcanic rocks. In addition to cinnabar, the deposit minerals commonly include stibnite, pyrite, and marcasite, with subordinate or rare arsenopyrite, hematite, Pb-, Zn-, and Cu-sulfides, and tetrahedrite, schwatzite, Ag-sulfosalts, gold, realgar, and native mercury. The gangue minerals are mainly quartz, chalcedony, sericite, hydromica, kaolinite, dickite, alunite, carbonate, chlorite, and solid bitumen. Cinnabar and associated minerals commonly occur in multiple layers. Wallrocks may be propylitically altered to quartz, sericite, kaolinite, and epidote. Native mercury is deposited mainly during intense alteration, and, to a lesser extent, by filling of open fissures and voids. This deposit type may be a variety of the epithermal quartz-alunite Au deposit type of Berger (1986). The depositional environment is generally the tectonic boundaries of major volcanic depressions and calderas.

Hot spring Hg (J.J. Rytuba in Cox and Singer, 1986)

This deposit type consists of cinnabar, antimony, pyrite, and minor marcasite and native mercury in veins and in disseminations in graywacke, shale, andesite and basalt flows, andesite tuff and tuff breccia, and diabase dikes. Various alteration minerals such as kaolinite, alunite, Fe oxides, and native sulfur occur above the paleo-groundwater table; pyrite, zeolites, potassium feldspar,

chlorite, and quartz occur below the paleo-groundwater table. The tectonic setting is continental-margin rifting associated with small-volume mafic to intermediate volcanism. The depositional environment is fault and fracture systems near paleo ground-water table in areas of former hot springs.

Silica-carbonate Hg (Kuznetsov, 1974; Voevodin and others 1979; J.J. Rytuba in Cox and Singer 1986)

This deposit type consists of cinnabar and associated minerals at the contact between serpentinite and graywacke. The Russian equivalent for this deposit type is listwandite. The deposit minerals are mainly common Hg-minerals, including cinnabar, and native mercury, along with stibnite, pyrite, realgar, orpiment, native arsenic, sometimes Ni-and Co-minerals, and sometimes W-minerals, including tungstenite, scheelite, and wolframite. Gangue minerals are mainly dolomite, breunnerite and ankerite in association with quartz, opal, chalcedony, calcite, dickite, and talc. Massive, veinlet, and disseminated minerals commonly occur in irregular lens-like bodies and veins in crush belts and mylonite zones, and in adjacent sedimentary rocks. Cinnabar mineralization is closely associated with silica-carbonate and argillic alteration. The depositional environment consists of zones of normal faults, perhaps superposed on older thrusts, that contain lenses of serpentinite, ultramafic rocks, and graywacke.

Volcanic-hosted Sb (Au, Ag, As) vein (Berger, 1978)

This deposit type consists of veins, stockwork, and irregular mineralized zones that occur in felsic to intermediate volcanic sequences, intercalated volcaniclastic sedimentary rocks, flows, hypabyssal dikes and sills, and shallow parts of fractured granitic intrusions. The principal deposit mineral is stibnite with accessory arsenopyrite, pyrite, marcasite, berthierite, chalcopyrite, sphalerite, galena, native silver, native gold, native arsenic, cinnabar, realgar, orpiment, jamesonite, tetrahedrite-tennantite, Ag-sulfosalts, carbonate minerals, barite, fluorite, sericite, adularia, and clay minerals. Gangue minerals are mainly chalcedony, quartz and opal. Argillic hydrothermal alteration is common; other alterations may include carbonate minerals, pyrite, and zeolites. Associated volcanic rocks are generally of highly differentiated calc-alkalic composition. Mineralization commonly occurs on the flanks of subaerial volcanoes. Deposit type often occurs at the periphery of volcanic structures that host associated gold-silver, disseminated gold-sulfide, and mercury deposits. The depositional environment is subaerial, calc-alkaline volcanic flows and shallow intrusions.

Rhyolite-hosted Sn (B.L Reed and others in Cox and Singer, 1986)

This deposit type consists of cassiterite and wood tin that occur in discontinuous veinlets and stockworks, and in disseminations in rhyolite-flow dome complexes. Accessory minerals include topaz, fluorite, bixbyite, pseudobrookite, and beryl. Besides cassiterite and wood tin, the deposit minerals also include hematite, cristobalite, fluorite, tridymite, opal, chalcedony, adularia and zeolites. The associated wall-rock alteration minerals are generally cristobalite, fluorite, smectite, kaolinite and alunite. The host rhyolites commonly contain more than 75 percent silica and are enriched with potassium. Mineralization is controlled by fractured and brecciated zones occurring in the most permeable upper portions of flow-dome complexes. The depositional environment is regions of felsic volcanism erupted onto continental crust.

Sulfur-sulfide (S, FeS_2) (Vlasov, 1976)

This deposit type consists of three subtypes: (1) surficial sulfur deposited from gases and solutions; (2) lacustrine deposits formed in volcanic craters; and (3) most valuable economically, replacement deposits formed as metasomatic sheets and as irregular bodies in porous and fractured rocks. All three subtypes are genetically and spatially associated with andesite. The deposit minerals are generally diverse and consist mainly of sulfur and pyrite with lesser variable realgar, orpiment, metacinnabar, stibnite, sphalerite, and molybdenite. Sulfide content increases with the depth grading into massive sulfides. Host rocks are generally hydrothermally altered.

Stratiform Deposits in Fine-Grained Clastic and Siliceous Sedimentary Rocks

Sedimentary exhalative (SEDEX) Zn-Pb-Ag (J.A. Briskey in Cox and Singer, 1986; Goodfellow and others, 1993)

This deposit type consists of stratiform, massive to disseminated sulfides and barite occurring in sheet-like or lens-like tabular bodies that are interbedded with euxinic marine sedimentary rocks including dark shale, siltstone, chert, and sandstone. Many deposits form in half-graben basins, are asymmetrical zoned, and range in form from mound-shaped vent complexes to flanking, interbedded hydrothermal, biogenic, and epiclastic sedimentary accumulations. Generally occur in basinal sediments that cap thick, continental syn-rift sequences of coarse-grained clastic rocks. Sometimes close temporal and in many cases, spatial association with alkaline and tholeiitic basaltic rocks, dikes, and sills that indicate associated hydrothermal activity is related to high-level magmas. The deposit minerals include pyrite, pyrrhotite, sphalerite, galena, and barite, and rare celesite and chalcopyrite. Extensive hydrothermal alteration may occur near vents, including stockwork and disseminated sulfides, silica, albite, and chlorite. The depositional environment consists of marine epicratonal embayments and intracratonic basins with smaller local restricted basins.

Bedded barite (G.J. Orris in Cox and Singer, 1986)

This deposit type consists of stratiform, massive, and nodular barite interbedded with marine cherty and calcareous sedimentary rocks, mainly dark chert, shale, mudstone, and dolomite. The deposit type is often associated with sedimentary exhalative Zn-Pb or kuroko massive sulfide deposits (both described above). Alteration consists of secondary barite veining and local, weak to moderate sericite replacement. Associated minerals include minor witherite, pyrite, galena, and sphalerite. Also associated are phosphate nodules. The depositional environment consists of epicratonal marine basins or embayments, often with smaller local restricted basins.

Stratabound deposits in Coarse Clastic sedimentary Rocks and Subaerial Basalts

Sediment-hosted Cu (Kupferschiefer and Redbed) (Bogdanov and others, 1973; Eckstrand, 1984; D.P. Cox in Cox and Singer, 1986)

This deposit type consists of disseminated to less prevalent veinlet sulfide ores that occur in lens-like and layered bodies in red clastic sedimentary rocks, including shale, siltstone, and sandstone, that are often intercalated with basalts. The main deposit minerals are bornite, chalcocite, hematite, with rare chalcopyrite as large crystals, metasomatic veinlets, and clastic grains. Wall-rock alteration consists of disappearance of red color of host rocks, and occurrence of quartz-carbonate-sulfide veinlets. The latter are sometimes abundantly associated with low-

grade contact or greenschist facies regional metamorphism. Weathering results in development of green sinter and malachite and azurite crusts. The depositional environment is epicontinental, shallow marine basins that occur on passive continental margin shelfs, or adjacent to volcanic island arcs. This deposit type is commonly associated with Cu-bearing, island arc trachybasalts (shoshonites) formed at or near rift zones.

Basaltic Cu (Dzhalkan type) (Eckstrand, 1984; Kutyrev, 1984; D.P. Cox in Cox and Singer, 1986)

This deposit type consists of stratabound disseminated Cu minerals in basalt lavas erupted into shallow coastal marine basins, and more seldomly onto the subaerial parts of oceanic volcanic islands. The volcanic rocks are generally interbedded with red sandstone, conglomerate and siltstone. The basalts lavas are generally potassic or alkalic and may include shoshonites and trachybasalts. Major deposit minerals are bornite, chalcopyrite, chalcocite, pyrite and native copper. These minerals occur both in the matrix of, and as amygdules in the porous roofs of basalt flows, and in veinlets within the basalts. The wallrocks are altered mainly to epidote, calcite, chlorite and zeolites. The deposit type is often associated with sediment-hosted Cu deposit type (Kupferschiefer and Redbed, described above). The depositional environment is epicontinental, shallow marine basins that occur on passive or rifted continental margin shelfs, or adjacent to oceanic volcanic islands. The depositional environment includes porous roof of basalt flows and synvolcanic fissures.

Clastic sediment-hosted Hg (Nikitovka type) (Kuznetsov, 1974; Babkin, 1975)

This deposit type consists of cinnabar and associated minerals that occur in lenses, stockworks, and other structures in flysch sequences composed of siltstone, shale, and conglomerate. Ore bodies include stockworks, lenses, bed-like and irregular bodies, and simple and complex veins in fault zones. Mineralization is controlled by sets of fractures, and by feathering major faults in anticlinal structures and dome-like uplifts. The deposit type usually contains several ore horizons. Deposit minerals are mainly cinnabar with subordinate stibnite, realgar, orpiment, various other sulfide minerals and sulfosalts, and native arsenic and native mercury. Gangue minerals are mainly quartz, chalcedony quartz, carbonate minerals, and dickite. Wall rocks may be altered to quartz, argillite, and carbonate minerals. Associated igneous rocks are mainly felsic and intermediate dikes. Mineralization is interpreted to have formed from low-temperature hydrothermal fluids that were related to either deep magmatic chambers or to low-grade regional metamorphism. In many parts of Russia, clastic sediment-hosted Hg deposits commonly occur in rift environments in cratonal areas. However, in the Russian Far East, this model is also applied to Hg deposits that occur in clastic sedimentary rocks that are part of volcanic arc sequences.

Sandstone-hosted U (C.E. Turner-Peterson and C.A. Hodges in Cox and Singer, 1986)

This deposit type consists of concentrations of uranium oxides and related minerals in localized, reduced environments in medium- to coarse-grained feldspathic or tuffaceous sandstone, arkose, mudstone, and conglomerate. The depositional environment is continental basin margins, fluvial channels, fluvial fans, or stable coastal plain, sometimes with nearby felsic plutons or felsic volcanic rocks. The deposit minerals include pitchblende, coffinite, carnotite, and pyrite.

Deposits in Carbonate and Chemical-Sedimentary Rocks

Kipushi Cu-Pb-Zn (D.P. Cox and L.R.. Bernstein in Cox and Singer, 1986)

This deposit type consists of stratabound, massive sulfides hosted mainly in dolomitic breccia. Generally no rocks of unequivocal igneous origin are related to the deposit. The deposit minerals include pyrite, bornite, chalcocite, chalcopyrite, carrollite, sphalerite, and tennantite with minor reinerite and germanite. Local alteration to dolomite, siderite, and silica may occur. The depositional environment consists mainly of high fluid flow along faults or karst(?)-breccia zones.

Southeast Missouri Pb-Zn (J.A. Briskey in Cox and Singer, 1986; Leach and Sangster, 1993)

This deposit type consists of stratabound, carbonate-hosted deposits of Pb-, Zn-, and Cu-sulfide minerals in rocks having primary and secondary porosity, commonly related to reefs on paleotopographic highs. This deposit type is also referred to as the Mississippi Valley type. The deposits are hosted mainly in dolomite, but are locally hosted in sandstone, conglomerate, and calcareous shale. The deposit minerals are mainly galena, sphalerite, chalcopyrite, pyrite, and marcasite, with minor siegenite, bornite, tennantite, barite, bravoite, digenite, covellite, arsenopyrite and other associated sulfide minerals. Alteration consists of regional dolomitization, extensive carbonate dissolution, and development of residual shale. The deposit minerals occur at interfaces between gray and tan dolomite, and also in traps at interfaces between permeable and impermeable units. Deposits do not normally display internal mineralogical or chemical zoning. The deposits commonly occur at the margins of clastic basins, generally in undeformed orogenic foreland carbonate platforms. Some occur in carbonate sequences in foreland thrust belts bordering foredeeps. Fewer are associated with rift zones. The depositional environment is areas of shallow-water marine carbonates, with prominent facies control by reefs growing on the flanks of paleotopographic basement highs.

Korean Pb-Zn massive sulfide (V.V. Ratkin, this study)

This deposit type consists of Pb- and Zn-sulfide minerals in carbonate rocks. The host rocks are mainly limestone, dolomite, and lesser marl. The deposit minerals are mainly pyrite, galena, sphalerite, fluorite, and magnetite. The deposit minerals occur mainly as lenses and beds conformable to bedding in host rocks. Magnetite also forms layers that are interbedded with sulfide minerals, fluorite, and carbonate minerals. Little to no hydrothermal alteration occurs; mainly diagenetic alteration occurs in carbonates and associated rocks. The deposit type is intermediate between the sedimentary exhalative Pb-Zn and Southeast Missouri Pb-Zn deposit types. Examples in the Russian Southeast are the Voznesenskoe and Chernyshevskoe mines. The depositional environment is typically Late Proterozoic to Early Paleozoic carbonate-rich sedimentary rocks in basins that overlap folded metamorphic complexes of the Sino-Korean shield.

Ironstone (Superior Fe) (Kosygin and Kulish, 1984;

R.A. Eremin and V.I. Shpikerman, this study; W.F. Cannon in Cox and Singer, 1986)

Chemical-sedimentary subtype (Kosygin and Kulish, 1984). This subtype consists of sheet-like horizons of magnetite and hematite-magnetite in clastic carbonate rocks that are associated with chert, quartz-sericite-chlorite schist, and dolomite. The deposits occur in early Paleozoic

sedimentary rocks formed in basins overlying Precambrian granitic and metamorphic complexes. This subtype is a Paleozoic analog of itabirites.

Prikolyma subtype (R.A. Eremin and V.I. Shpikerman, this study). This subtype consists of Fe and Ti minerals that occur in bed-like and lens-like bodies in sandstone grit and conglomerate. The deposit minerals are mainly clastic hematite, magnetite, ilmenite, and zircon grains that form concentrations that range up to 50 to 60 percent of the hosting clastic quartz, and feldspar-quartz sandstone beds. Bedded clastic rocks exhibit parallel-, cross-, and wavy-bedding. Ferruginous sandstones are sometimes interlayered with carbonate rocks, which sometimes form rich iron deposits. Conformable and crossing bodies of massive and brecciated hematite ores also occur in regional metamorphosed carbonate rocks. The deposit type is interpreted as ancient lithified sea beach placers that are often highly metamorphosed and deformed.

Stratabound W (Austrian Alps-type) (Denisenko and others, 1986; Rundquist and Denisenko, 1986; V.I. Shpikerman, this study)

This deposit type consists of stratabound, thin veinlet, and disseminated scheelite ores that occur in bedded carbonaceous calcareous siltstone and argillite, commonly metamorphosed to phyllite and greenschist. Igneous rocks are generally lacking, except for scarce metamorphosed basalt sills. The deposit minerals are mainly scheelite, pyrite, with lesser realgar, galena and chalcopyrite. The deposit minerals are concentrated in carbonaceous calcareous siltstone beds surrounded by shale or mudstone beds. The deposit minerals may also occur along minor crossing faults, and in associated calcite and quartz veinlets. W is geochemically associated with Sb, Hg, and As. The deposit type is interpreted as forming during metamorphism of carbonaceous sedimentary rocks initially enriched with W.

Carbonate-hosted Hg (Khaidarkan type) (Babkin, 1975; Fedorchuk, 1983)

This deposit type consists mainly of cinnabar in veinlets and in disseminations that occur in stratabound bodies in dolomite breccia and to a lesser extent in limestone breccia. The host rocks are reef and shelf limestones that formed in carbonate reefs and shelf areas of passive continental margins. The host rocks are subsequently altered to dolomite and brecciated during diagenesis and karst-formation. Mineralization is confined to deep fault zones and is localized under impermeable clay layers. Magmatic rocks are rare diabase sills. The deposit minerals are cinnabar and lesser pyrite, sphalerite, stibnite, and anthraxolite, and rare galena and fluorite. Wall-rock alteration consists of jasperoid, and quartz and calcite veinlets. The depositional environment is artesian thermal water with possible deep sources of Hg.

Stratiform Zr (Algama Type) (Zalishchak and others, 1991; Bagdasarov and others, 1990; Nekrasov and Korzhinskaya, 1991)

This deposit type consists of hydrozircon and baddeleyite in lenses and veins that occur mainly in a layer of cavernous dolomite marble that ranges up to about 40 m thick. The ore occurs as breccia composed of fragments of metamorphic quartz and dolomite cemented by an aggregate of hydrozircon and baddeleyite. Baddeleyite also occurs as loose aggregates formed by weathering of primary ore. Some caverns in the dolomite contain colloform, sinter-type aggregates of hydrozircon and baddeleyite, but breccia ores predominate. The cavern walls are coated with metamorphic quartz. The host dolomite is not hydrothermally altered. The one large deposit of this type occurs in the northern part of the Khabarovsk province and is hosted mainly in subhorizontal dolomite marble that, along with other miogeoclinal sedimentary rocks, form the Late Proterozoic and Early Paleozoic sedimentary cover of the Stanovoy block of the North Asian Craton. The origin of the deposit is speculative. According B. Zalischak (written commun., 1992) the deposit formed by discharge of hydrothermal solution along a layer of porous dolomite. A sudden pressure fall resulted in a blast. An U-Pb isotopic age of about 100 Ma was obtain for hydrozircon (J.N. Aleinikoff, written commun., 1993).

Sedimentary phosphorite (Shkolnik, 1973)

This deposit type consists of breccia composed of phosphorite, quartz, dolomite, and calcite that are closely associated with calcareous marine reef complexes. The reef complexes occur in sequences of jasper, shale, siltstone, and mafic volcanic rocks. Phosphorite breccias formed along the reef shelf and consist of fragments of primary phosphorite, limestone, and dolomite, and rarely jasper, volcanic rocks, chert, and shale. Primary phosphorite is rare and occurs as lenses of a coquina composed of inarticulate brachiopods and partly by trilobites that posses with phosphate-bearing shells. The boundaries of deposits are complex and are defined by the occurrence of phosphorite fragments in breccias. The length of the deposits ranges from a few tens of meters to several kilometers; the thickness ranges from 0.5 to 40 meters. The deposits are generally complex and discontinuous. The deposit type occurs mainly in the Galam terrane in the Russian Southeast and is associated with volcanogenic Mn and Fe deposits. The principal phosphorite deposits in the Galam terrane are the North-Shantary, Ir-Nimiiskoe, Nelkanskoe, and Lagapskoe deposits.

Deposits Related to Calc-Alkaline and Alkaline

Granitic Intrusions- Veins and Replacements

Polymetallic veins (D.P. Cox in Cox and Singer, 1986; N.A. Goryachev, this study)

This deposit type consists of quartz-carbonate veins often with Ag-bearing minerals, gold, and associated base-metal sulfides. The veins are related to hypabyssal intrusions in sedimentary and metamorphic terranes, or to metamorphic fluids forming during waning regional metamorphism. The associated intrusions range in composition from calcalkaline to alkaline and occur in dike swarms, hypabyssal intrusions, small to moderate size intermediate to granitic plutons, locally associated with andesite to rhyolite flows. The deposit minerals include pyrite, and sphalerite, sometimes with chalcopyrite, galena, arsenopyrite, tetrahedrite, Ag sulfosalts, native gold, electrum, and argentite. Alteration consists of wide propylitic zones, and narrow sericite and argillite zones. The depositional environment is near-surface fractures and breccias within thermal aureoles of small to moderate-size intrusions, including within the intrusions.

In the Russian Northeast, polymetallic veins are divided into: (1) Au-polymetallic veins that contain gold and Pb-Zn-Cu sulfide minerals and arsenopyrite; (2) polymetallic veins with varying amounts of cassiterite and (or) stannite with abundant Fe, Pb, Zn, and Cu sulfide minerals; and (3) Ag-polymetallic veins enriched with galena, and Ag and Pb sulfosalts. In this region, polymetallic veins occur: (1) mainly in flysch or olistostromes in Mesozoic accretionary wedges; or (2) sometimes in postaccretionary volcanic rocks. Polymetallic veins are analogs of skarn deposits and occur where noncalcareous clastic rocks dominate instead of carbonate rocks.

Sb-Au veins (simple Sb deposits) (J.D. Bliss and G.A. Orris in Cox and Singer, 1986; Nokleberg and others, 1987)

This deposit type consists of massive to disseminated stibnite and lesser gold in quartz-carbonate veins, pods, and stockworks that occur in or adjacent to brecciated or sheared fault zones, in sedimentary, volcanic and metamorphic rocks, adjacent to granitic plutons, in contact aureoles around granitic plutons, and peripheries of granodiorite, granite, and monzonite plutons. Some Sb-Au vein deposits grade into polymetallic vein deposits. Associated minerals are mainly arsenopyrite, chalcopyrite, and tetrahedrite, and sometimes cinnabar, galena, and sulfosalts. Alteration minerals are mainly quartz, sericite, and clay minerals. Associated granitic plutons are often strongly peraluminous. The depositional environment is faults and shear zones, epizonal fractures adjacent to or within the margins of epizonal granitic plutons.

Sn quartz veins (Rudny Gory or Replacement Sn) (Kosygin and Kulish, 1984; W.D. Sinclair and R.V. Kirkham in Eckstrand, 1984; B.L. Reed in Cox and Singer, 1986; Lugov, 1986)

This deposit type consists of simple and complex infilling and replacement veins, vein systems, and stockworks that occur in the apices of collisional mesozonal and hypabyssal granitoid plutons, and above granitic domes. The host rocks are commonly metamorphosed shale, sandstone, and sometimes carbonate rocks. This deposit type is commonly associated with multiple intrusions of biotite, two-mica, alkalic, alaskite granites. Granite, pegmatite and aplite dikes are common. Volatiles are dominated by fluorine, and boron content of granites is low. The deposits tend to occur within or above the apices of granitic cusps and ridges. The deposit minerals are cassiterite, wolframite, albite, muscovite, topaz, fluorite, arsenopyrite and löllingite. Less common are potassium feldspar, tourmaline, beryl, scheelite, molybdenite, Ta-Ni-minerals, Bi-minerals, pyrrhotite, sphalerite, galena, and chalcopyrite. Complex Sn-W ores are dominate. Quartz is the dominant gangue mineral. The dominant wall rock alteration is formation of greisen. The deposit type is associated with Sn-greisen and Sn-skarn, wolframite-quartz veins, and U and F deposits.

Sn silicate-sulfide veins (Cornish type) (Kosygin and Kulish, 1984; W.D. Sinclair and R.V. Kirkham in Eckstrand, 1984; Lugov, 1986; B.L. Reed in Cox and Singer, 1986)

This deposit type consists of fissure veins, mineralized zones, stockworks, and pipe-like bodies related to multiple granitoid plutons, and to isolated small intrusions of gabbro-diorite, quartz diorite, and potassic alaskite granites. Late-stage tourmaline-bearing granites and pegmatites also occur. The deposit type commonly occurs in late orogenic to post-orogenic settings. Sn mineralization is commonly fault-controlled, and occurs near and above intrusive rocks. The deposit minerals are mainly tourmaline, chlorite, and quartz, with lesser cassiterite, pyrrhotite, pyrite, chalcopyrite, galena, sphalerite, arsenopyrite, wolframite, scheelite, bismuthinite, axinite, fluorite, muscovite, sericite, stannite, sulfostannates, Pb-, Sb-, Cu- and Ag-sulfosalts, gold, silver, stibnite, calcite, and clay minerals. Alteration minerals are tourmaline, muscovite, quartz, and chlorite. The deposit type includes tourmaline and chlorite subtypes. The upper and lower portions of ore vein systems are dominated by sulfides, and silicates and quartz, respectively.

Sn polymetallic veins (Southern Bolivian type) (Lugov, 1986; Yukio Togashi in Cox and Singer, 1986)

This deposit type consists of cassiterite and associated minerals in veins, stockworks, mineralized zones and breccia pipes. The deposits are controlled by sets of regional faults and fractures in subvolcanic and volcanic structures. Associated igneous rocks are hypabyssal and subvolcanic diorite, granodiorite, and hypabyssal-andesite intrusions, and felsic, intermediate, and mafic dikes. The deposit minerals are cassiterite, pyrrhotite, pyrite, stannite, sphalerite, galena, chalcopyrite, wolframite, tetrahedrite, tennantite, Bi-minerals, sulfostannates, arsenopyrite, Pb-, Au-, and Sb- sulfosalts, with subordinate quartz, Mn-Fe carbonate minerals, sericite, and kaolinite. Tourmaline and chlorite may also occur. This deposit type may also include Sn-Ag deposits containing freibergite, pyrargyrite, polybasite, andorite, stephanite, argentite, argyrodite, canfieldite and others. The principal wall-rock alterations are sericite, chlorite, quartz, kaolinite, and alunite. The deposit type is associated with Sn-silicate-sulfide and Ag polymetallic vein, rhyolite-hosted Sn, porphyry Sn, and Au-Ag epithermal vein deposits. The depositional environment is fissures in and around felsic, continental marginal volcanic arcs. Mineralization occurs in volcanic rocks above intrusions, but may be far-removed from granitic rocks.

Co-arsenide polymetallic veins (Borisenko and others, 1984; (R.A. Eremin and V.I. Shpikerman, this study)

This deposit type consists of quartz-tourmaline and quartz-chlorite veins containing Co, As, Bi, and Ag and Au minerals. The veins are associated with hypabyssal intrusions varying from diorite to granite, and widespread albitized granite-porphyry dikes. Mineralization occurs in: (1) fractures and in brecciated zones in siltstone, shale, and sandstone; (2) contact metamorphic aureoles around intrusions or, more seldom, in intrusions; and (3) sometimes greisen and skarn. The deposits are often confined to cross-faults. The deposit minerals are arsenopyrite, pyrite, pyrrhotite, löllingite, cobaltite, skutterudite, smaltite, glaucodot, chloantite, bismuthinite, and Au-, Ag-, Pb-, and Bi-tellurides and selenides. Vein gangue minerals are quartz, chlorite, tourmaline, calcite, fluorite, and adularia.

Carbonatite-related Ta, Nb, REE stockwork and vein (Smirnov, 1982; Dawson and Curie, 1984)

This deposit type consists of stockworks, metasomatic veins, and lenses with various Ta-Nb and REE minerals. The ore minerals include pyrochlore, betafite, bastnasite, parisite, monazite, columbite, chevkinite, yttrialite, melanocerite, yttrotitanite, hydrothorite, and zircon. Ore mineralization is often associated with alkaline metasomatic rocks (fenite) that alter alkaline granite and syenite. The stockworks, vein, and lenses are associated with alkaline igneous complexes that presumably include carbonatite at depth. The igneous complexes include large zoned batholiths, zoned stocks, alkalic dikes series, and carbonate veins. The zoned batholiths and stocks generally contain two or more of the following lithologies: pyroxenite, gabbro, urtites, ijolite, foyaite, nephelinite, alkaline syenite, granite, and various carbonatites. Zonation commonly consists of carbonatites in the center, medial zones of ultramafic rocks, and peripheral zones of ijolite and nepheline syenite. Locally the zonation sequence may be reversed or more complex. The carbonatites generally consist of various assemblages of augite-diopside-calcite, forsterite-calcite, aegirine-dolomite, aegirine-ankerite, calcite, ankerite, and other minerals. This type of deposit is interpreted as having formed during craton rifting, or within terranes that formed by rifting of cratons.

Deposits Related to Calc-Alkaline and Alkaline

Granitic Intrusions - Skarns and Greisens

Cu (±Fe, Au, Ag, Mo) skarn (contact metasomatic) (D.P. Cox and T.G. Theodore in Cox and Singer, 1986)

This deposit type consists of chalcopyrite, magnetite, and pyrrhotite in calc-silicate skarns that replace carbonate rocks along intrusive contacts with plutons ranging in composition from quartz diorite to granite, and from diorite to syenite. Zn-Pb-rich skarns tend to occur farther from the intrusion; Cu- and Au-rich skarns tend to occur closer to the intrusion. Associated minerals are pyrite, hematite, galena, molybdenite, sphalerite, and scheelite. Mineralization is multistage, with several stages of mineral deposition. The deposit type is commonly associated with porphyry Cu-Mo deposits. The depositional environment is mainly calcareous sedimentary sequences intruded by felsic to intermediate granitic plutons.

Zn-Pb (±Ag, Cu, W) skarn (contact metasomatic) and associated Manto replacement deposits (D.P. Cox in Cox and Singer, 1986)

This deposit type consists of sphalerite and galena in calc-silicate skarns that replace carbonate rocks along intrusive contacts with plutons varying in composition from quartz diorite to granite, and from diorite to syenite. Zn-Pb-rich skarns tend to occur farther from the intrusion relative to Cu- and Au-rich skarns. Associated minerals are pyrite, chalcopyrite, hematite, magnetite, bornite, arsenopyrite, and pyrrhotite. Metasomatic replacements consist of a wide variety of calc-silicate and related minerals. In the Russian Far East, the deposit type generally occurs at a considerable distance from source granitic intrusions, at the contacts of limestones with siltstones and felsic volcanic rocks. Ore bodies are rather narrow, but may extend down dip to 1 km. The deposits are controlled by ring faults around volcanic-tectonic depressions. The depositional environment is mainly calcareous sedimentary sequences intruded by felsic to intermediate granitic plutons.

Au, Co, and As skarn (Nekrasov and Gamyanin, 1962; Bakharev and others, 1988; N.A. Goryachev, this study)

This deposit type forms along the contacts between siltstone and marble beds during contact metamorphism near intrusions of granodiorite and granite. The skarn is typically composed of pyroxene, grossularite-andradite garnet, and lesser axinite and scapolite. The ore bodies consist of small masses of sulfoarsenides and arsenides along with gersdorffite, arsenopyrite, lollingite, and cobaltite. Native gold occurs in association with bismuth and Te-minerals, including native bismuth, joseites, hedlyite, and bismuthine. Gold grade ranges up to 20 g/t; size is usually less than 0.1 mm, and fineness ranges from 640 to 999.

W skarn and greisen (adapted from D.P. Cox in Cox and Singer, 1986)

This deposit type consists of scheelite in calc-silicate skarns that replace carbonate rocks along or near intrusive contacts of quartz diorite to granite plutons. Associated minerals are molybdenite, pyrrhotite, sphalerite, chalcopyrite, bornite, pyrite, and magnetite. Metasomatic replacements consist of a wide variety of calc-silicate and related minerals. In the Russian Far East, scheelite typically occurs in quartz-topaz and quartz-mica greisen that formed during replacement of older skarns. The depositional environment is along contacts and in roof pendants in batholiths, and in contact metamorphic aureoles of stocks that intrude carbonate rocks.

Fe (±Au, Cu, W, Sn) skarn (D.P. Cox in Cox and Singer, 1986)

This deposit type consists of magnetite and (or) Fe sulfides in calc-silicate skarn that replace carbonate rocks or calcareous clastic rocks along intrusive contacts with diorite, granodiorite, granite, and coeval volcanic rocks. The chief associated mineral is chalcopyrite. Metasomatic replacements consist of a wide variety of calc-silicate and related minerals. The depositional environment is calcareous sedimentary sequences intruded by granitic or siliceous volcanic stocks.

Sn greisen and skarn (B.L. Reed in Cox and Singer, 1986)

These two deposit types commonly occur in the same area, and may grade into one another. The Sn greisen deposit type consists of disseminated cassiterite, cassiterite-bearing veinlets, and Sn sulfosalts in stockworks, lenses, pipes, and breccia in granite altered to greisen, mainly biotite and (or) muscovite leucogranite emplaced in a mesozonal to deep volcanic environment. Sn greisens are generally postmagmatic and are associated with late-stage, fractionated granitic magmas. Associated minerals include molybdenite, arsenopyrite, beryl, scheelite, and wolframite. Alteration minerals consist of incipient to massive replacement by quartz, muscovite, tourmaline, and fluorite.

The Sn skarn deposit type consists of Sn, W, and Be minerals in skarns, veins, stockworks, and greisen near intrusive contacts between generally epizonal(?) granitic plutons and limestone. The deposit minerals include cassiterite, sometimes with scheelite, sphalerite, chalcopyrite, pyrrhotite, magnetite, and fluorite. Alteration consists of greisen near granite margins, and metasomatic andradite, idocrase, amphibole, chlorite, chrysoberyl, and mica in skarn.

Sn-B (Fe) Skarn (Ludwigtite type) (Lisitsin, 1984; V.I. Shpikerman, this study)

This deposit consists of metasomatic replacement of dolomite by mainly ludwigite and magnetite adjacent to granitic plutons thereby forming Sn-B (Fe) magnesium skarn deposits. Ludwigite forms up to 70 to 80 percent of some ore bodies, and Sn occurs as an isomorphic admixture in ludwigite. Other minerals in the magnesian skarns include magnetite, suanit (Mg_2B_5O), ascharite, kotoite, datolite, harkerite, monticellite, fluroborite, clinohumite, calcite, periclase, forsterite, diopside, vesuvianite, brucite, garnet, axinite, phlogopite, serpentine, spinel, and talc. Interlayered limestone is metasomatically replaced by pyroxene-garnet-calcite skarn that is commonly altered to greisen thereby forming Sn skarn composed of cassiterite, scheelite, pyrrhotite, arsenopyrite, sphalerite, chalcopyrite, and löllingite. The magnesium and associated calcic skarn ore bodies generally form near highly irregular (convoluted) contacts of granite plutons, and in large xenoliths of carbonate rocks. Most granitic rocks associated with these deposits are interpreted as having formed in collision environments.

Boron skarn (datolite type) (Nosenko and others, 1990; Ratkin, and others, 1992; Ratkin and Watson, 1993)

This deposit type consists of a boron skarn composed of danburite and datolite that is associated with garnet-hedenbergite-wollastonite skarn. The boron-bearing skarn is interpreted as having formed during successive metasomatic replacement of limestone with silicates (wollastonite, grossularite-andradite, and hedenbergite) and subsequently by borosilicates (danburite, datolite, and axinite), quartz, and calcite. The deposit is characterized by thin-banded wollastonite that forms kidney-shaped

aggregates of pyroxene and datolite that formed the walls of paleohydrothermal cavities in limestone. The hydrothermal cavities occur to depths of up to 500 m from the paleosurface, above a zone of a metasomatic wollastonite and grossularite. The central part of these cavities (0.5 to 50.0 m across) was filled with danburite druses. Danburite was decomposed after the second (boron) metasomatic event, and remobilized boron was redeposited at higher paleogypsometric levels as datolite associated with garnet-hedenbergite skarn. The origin of neighboring Pb-Zn deposits is related to these late skarns. Boron isotopic data indicate the source for boron solutions was a deep-seated granitoid intrusion. The formation of early grossular-wollastonite skarns, thin-banded wollastonite aggregates with datolite, and danburite accumulations occurred, by geological data, at depths, simultaneous to the formation of postaccretion ignimbrite sequence, overlying the accretionary wedge. The geologic setting for the deposit is large tectonic lens of limestone, with lateral dimensions of 0.5 by 2.0 km, in an accretionary wedge containing a highly-deformed matrix of siltstone and sandstone matrix. The accretionary wedge is overlain by felsic volcanic rocks. The one example of this deposit is the large Dalnegorsk B mine in the Russia Southeast that constitutes the main source of boron in Russia.

Fluorite greisen (Govorov, 1977)

The deposit type consists of fine-grained, dark-violet rock composed of fluorite (63 to 66%) and micaceous minerals, mainly muscovite (25 to 35%), along with lesser ephesite and phlogopite. Subordinate minerals are (in decreasing order) tourmaline, sellaite, cassiterite, topaz, sulfides, and quartz. The ore bodies occur as veins and concordant to limestone layers as lenticular and flame-shape bodies, consist of apocarbonate greisens. The deposit type occur in limestone intruded by lithium-fluorine S-type granites. Metasomatic rocks, replacing limestone, occur at and above the contact with granitic intrusions. Pegmatoid-type muscovite-quartz veins with molybdenite-cassiterite-salite, vesuvianite-salite-andradite, and scapolite skarn also occur near intrusive contacts and are interpreted as having formed prior the formation of fluorite-mica greisen. Geologic setting is thick clastic limestone sequences that formed along an active continental margin. Boron isotopic composition of tourmaline indicate a primary evaporite source (V. Ratkin, written commun., 1994) suggesting that deep-seated evaporites in the zone of granitic magma generation were the source of fluorine. Scarce quartz and the absence of paragenetic calcite suggest an extremely high activity of fluorine in silica-poor solutions. The deposit closest to this type in Alaska is at Lost River. The largest deposit of this type in the southern Far East Russia is at Voznesenka that constitutes the largest known Russian fluorspar deposit.

Deposits Related to Calc-Alkaline and Alkaline Granitic Intrusions-

Porphyry and Granitic Plutons-Hosted Deposits

Porphyry Cu-Mo (Au, Ag) (D.P. Cox in Cox and Singer, 1986; Titley, 1993)

This deposit type consists of stockwork veinlets and veins of quartz, chalcopyrite, and molybdenite in or near porphyritic intermediate to felsic intrusions. The veinlets and veins contain mainly quartz and carbonate minerals. The intrusions occur mainly in stocks and breccia pipes that intrude granitic, volcanic, or sedimentary rocks. Associated minerals are pyrite and peripheral sphalerite, galena, and gold. Alteration minerals consist of quartz, K-feldspar, and biotite or chlorite. Most deposits exhibit varying amounts of hypogene alteration, including sodic, potassic, and phyllic alteration. Alteration is systematic, but variable between districts. Supergene alteration is a key factor in the initial discovery of deposits. The host igneous rocks are felsic and calc-alkalic. Widespread, episodic development of abundant joints in intrusions and wall rocks. The depositional environment is high-level intrusive porphyries that are contemporaneous with abundant dikes, faults, and breccia pipes that formed in the evolution of andesite stratovolcanoes. The tectonic environment is mainly weakly to strongly alkalic granitic plutons emplaced in back-arc settings of subduction zones.

Porphyry Mo (±W, Sn, Bi) (T.G. Theodore in Cox and Singer, 1986; Carten and others, 1993)

The porphyry Mo deposit type consists of quartz-molybdenite stockwork veinlets in granitic porphyries and adjacent country rock. The porphyries range in composition from tonalite to granodiorite to monzogranite. Associated minerals are pyrite, scheelite, chalcopyrite, and tetrahedrite. Alteration consists of potassic grading outward to propylitic, sometimes with phyllic and argillic overprints. Deposit type divided into two associations: (1) high-grade, rift-related deposits with fluorine-rich, highly evolved rhyolitic stocks that belong to a high-silica rhyolite-alkalic suite; and (2) low-grade, arc-related deposits accompanied by fluorine-poor, calc-alkalic stocks or plutons that belong to a differentiated monzogranite suite. The high-grade, fluorine-rich deposits are also associated with intraplate alkaline igneous rocks. The depositional environment for porphyry Mo deposits is epizonal levels of a thick continental crust.

Porphyry Sn (B.L. Reed in Cox and Singer, 1986; Evstrakhin, 1988; Menzie and others, 1992; R.A. Eremin, this study)

This deposit type consists of mainly cassiterite and associated minerals in stockworks, veinlets, and disseminations that occur in veins, pipes, and shoots. The deposit minerals are cassiterite, quartz, pyrrhotite, pyrite, arsenopyrite, chalcopyrite, sphalerite, galena, stannite, wolframite, muscovite, chlorite, tourmaline, albite, adularia, siderite, rhodochrosite, calcite, topaz, fluorite, sulfostannates, and Ag and Bi minerals. Mineralization occurs in shallow complex multiphase granitic plutons, granitic porphyry stocks, subvolcanic and volcanic rhyolite breccias, and also in coeval volcanic rocks and surrounding clastic rocks. Associated features are magmatic-hydrothermal breccias, and extensive metasomatic propylitic alteration along with formation of quartz, tourmaline, sulfide minerals, and sericite. Some deposits exhibit a quartz-tourmaline core with a peripheral zone of sericite. The deposit type is often associated with Sn- and Ag-bearing polymetallic veins. Other features of this deposit type are complex ore composition, variable mineral composition, extensive development of stockworks, extensive metasomatic alteration, both veinlet and disseminated. The depositional environment is mainly volcanic-plutonic igneous arcs formed on continental crust. For simplicity, this deposit type also includes Sn deposits that occur in granitic plutonic rocks. This type of granitoid-hosted Sn deposit may eventually be defined as a new mineral deposit type.

Granitoid-related Au (R.I. Thorpe and J.M. Franklin, in Eckstrand, 1984; Sidorov and Rozenblum, 1989; Aksenova, 1990; Gamyanin and Goryachev, 1990, 1991; Sillitoe, 1993b; N.A. Goryachev, this study)

This deposit type consists of two subtypes: (1) porphyry Au; and (2) Au-REE quartz vein. The porphyry Au subtype consists of fissure veins, en-echelon vein systems, and veinlet-stockwork zones with disseminated gold and sulfide minerals that occur generally in complex small granitic intrusions in volcanic-plutonic complexes.

The deposit minerals are native gold, Au-bearing tellurides and sulfide minerals, with accessory quartz, tourmaline, muscovite, sericite, chlorite, feldspar, carbonate minerals, and fluorite. Disseminated sulfide minerals in wall rocks, especially arsenopyrite, are commonly enriched in Au and Ag. Alteration to greisen is common with formation of quartz, sericite, tourmaline, chlorite. Plutonic rock composition includes gabbro, diorite, granodiorite, and granite of both calc-alkalic and sub-alkalic compositions. The deposits are associated with composite porphyry stocks of steep, cylindrical form that commonly intrude coeval volcanic piles. Stocks and associated volcanic rocks range in composition from low-potassium calc-alkalic through high-potassium calc-alkalic to potassic alkalic. The deposits may occur as disseminations within granitic plutons, at apices of plutons, or in contact metamorphic aureoles. The deposit type displays systematic mineralogy and chemical environment; and is often associated with polymetallic vein deposits with disseminated Au-bearing sulfide minerals, Au-bearing epithermal vein, and porphyry deposits. Advanced argillic alteration is widespread in shallow parts of deposit. Underlying sericitic alteration is typically minor. In Alaska and the Canadian Cordillera, the depositional environment is tentatively interpreted as subduction-related, epizonal plutons intruded into miogeoclinal sedimentary rocks that in some cases were regionally metamorphosed and deformed before intrusion.

The Au-REE quartz vein subtype, common in the Russian Northeast, consists of quartz veins and stockworks that occur in the apical portions of small granodiorite and granite plutons, and rarely in contact metamorphosed rocks above the plutons. The quartz veins and stockworks are dominated by quartz along with muscovite, tourmaline, and K-feldspar. The main deposit minerals are gold, arsenopyrite and Co-arsenopyrite, lollingite, wolframite, scheelite, pyrrhotite, and niccolite. Native gold is associated with bismuth and Bi-Te-minerals. Au-Ag telluride minerals are scarce. The host rocks exhibit incipient alteration to greisen with occurrence of quartz, white mica, carbonate minerals, and chlorite. The quartz veins and stockworks are often associated with post-contact metamorphic Au-quartz and Sn-W-quartz veins.

Felsic plutonic U-REE (Nokleberg and others, 1987)

This deposit type consists of disseminated uranium minerals, thorium minerals, and REE-minerals in fissure veins and alkalic granite dikes in or along the margins of alkalic and peralkalic granitic plutons, or in granitic plutons, including granite, alkalic granite, granodiorite, syenite, and monzonite. The deposit minerals include allanite, thorite, uraninite, bastnaesite, monazite, uranothorianite, and xenotime, sometimes with galena and fluorite. The depositional environment is mainly the margins of epizonal to mesozonal granitic plutons.

W veins (Kosygin and Kulish, 1984; D.P. Cox and W.C. Bagby in Cox and Singer, 1986)

This deposit type consists mainly of massive and disseminated wolframite and molybdenite in quartz veins. Other deposit minerals are bismuthinite, pyrite, pyrrhotite, arsenopyrite, bornite, chalcopyrite, scheelite, cassiterite, beryl, and fluorite. The veins occur in the upper level, apices of granitic plutons, including alaskite, and in peripheral, contact metamorphosed sandstone and shale. Associated hydrothermal alteration includes formation of greisen, albite, chlorite, and tourmaline. The depositional environment is tensional fractures in epizonal granitoid plutons that intruded, and in some cases formed from anatectic melting of continental crust. The deposit type is sometimes associated with Sn-W vein, Mo-W vein, and Sn greisen deposits.

Deposits Related to Mafic and Ultramafic Rocks

Zoned mafic-ultramafic Cr-PGE (±Cu, Ni, Au, Co, Ti, or Fe) (Alaskan PGE) (N.J Page and Floyd Gray in Cox and Singer, 1986)

This deposit type consists of crosscutting ultramafic to mafic plutons with approximately concentric zoning that contain chromite, native PGE, PGE minerals and alloys, and Ti-V magnetite. The deposit minerals include combinations of chromite, PGE minerals and alloys, pentlandite, pyrrhotite, Ti-V magnetite, bornite, and chalcopyrite. In most areas of Alaska, the depositional environment consists of intermediate-level intrusion of mafic and (or) ultramafic plutons that are interpreted as the deeper-level magmatic roots to island-arc volcanoes.

Zoned ultramafic, mafic, felsic, and alkalic PGE-Cr and apatite-Ti (Marakushev and others, 1990)

This deposit type consists of veinlets, disseminations, and zones of hydrothermal metasomatic alteration in dunites associated with ultramafic to mafic alkalic-potassic intrusions. PGE minerals are associated with, and are intergrown with chromite and olivine. In metasomatic zones, where chromium pyroxene occurs, PGE minerals are intergrown with magnetite, pyroxene, and phlogopite. The major PGE mineral is ferroplatinum with inclusions of iridosmine. Accessory sulfide and arsenide minerals also occur, including cooperite, sperrylite, hollingworthite, konderite, inaglyite, laurite-euclimanite, and others. In associated pyroxene-hornblende gabbro and pyroxenites intrusions, apatite-Ti minerals may also occur, including disseminated apatite, titanomagnetite, ilmenite, and local PGE minerals. Weathered pyroxenites could be a raw material for vermiculite. The depositional environment is the intermediate-level intrusion of mafic and (or) ultramafic plutons that are interpreted as the magmatic roots to island-arc volcanoes.

Anorthosite apatite-Ti-Fe (Kosygin and Kulish, 1984; Force in Cox and Singer, 1986)

This deposit type occurs in anorthosite plutons composed of andesine and andesine-labradorite. The anorthosite plutons are highly-alkalic and are associated with gabbro, ferrodiorite, syenite, alkalic granite, and sometimes mangerite that intrude granulite-facies country rocks. The principal deposit minerals are apatite, titanomagnetite, and ilmenite that occur either as: (1) disseminations near melanocratic gabbro, pyroxenites, and dunites along the margins of the anorthosite plutons; or (2) rich apatite (nelsonite) veins that occur in tectonically weak zones. Associated minerals are lesser ilmenite and magnetite. The depositional environment is intrusion into the lower crust under hot, dry conditions.

Gabbroic Ni-Cu (synorogenic-synvolcanic; irregular gabbro pipes and stocks) (N.J Page in Cox and Singer, 1986)

This deposit type consists of massive lenses, matrix, and disseminated sulfides in small to medium-size composite mafic and ultramafic intrusions in metamorphic belts of metasedimentary and metavolcanic rocks. The deposit minerals include pyrrhotite, pentlandite, and chalcopyrite, sometimes with pyrite, Ti- or Cr-magnetite, and PGE minerals and alloys. Accessory Co-minerals also occur in some deposits. In most areas of Alaska, the depositional environment consists of post-metamorphic and post-deformational, intermediate-level intrusion of norite, gabbro-norite, and ultramafic rocks.

Podiform Cr (J.P. Albers in Cox and Singer, 1986)

This deposit type consists of podlike masses of chromite in the ultramafic parts of ophiolite complexes, locally intensely faulted and dismembered. The host rock types are mainly dunite and harzburgite, commonly serpentinized. The depositional environment consists of magmatic cumulates in elongate magma pockets. Associated minerals are magnetite and PGE-minerals and alloys.

Hornblende-Peridotite Cu-Ni (Shcheka and Chubarov, 1987)

This deposit type consists of pentlandite, Zn-bearing chrome spinel, pyrrhotite, chalcopyrite, and bornite that occur in veinlets and as disseminations in hornblendite-peridotite-norite-diorite intrusions. A paragenetic sequence of magmatic amphibole, olivine commonly garnet indicate formation at great depth. The host intrusions are characterized by graphite and native iron, and subordinate aluminum and magnesium-free chromite that indicate reducing crystallization conditions. Examples are the Kvinum, Shanuch, and Kuvalorog deposits in the southern Kamchatka Peninsula.

Serpentine-hosted asbestos (N.J Page in Cox and Singer, 1986)

This deposit type consists of chrysotile asbestos developed in stockworks in serpentinized ultramafic rocks. The depositional environment is usually an ophiolite sequence, sometimes with later deformation of igneous intrusion. Associated minerals are magnetite, brucite, talc, and tremolite.

Deposits Related to Regionally Metamorphosed Rocks

Au quartz veins (includes concordant vein, and shear zone Au) (B.R. Berger in Cox and Singer, 1986)

This deposit type includes low-sulfide Au quartz vein, turbidite-hosted, concordant vein, and shear zone Au deposits types and consists of gold in massive, persistent quartz veins in regionally metamorphosed volcanic rocks, metamorphosed graywacke, chert, and shale. The veins are generally late synmetamorphic to postmetamorphic and locally cut granitic rocks. Associated minerals are minor pyrite, galena, sphalerite, chalcopyrite, arsenopyrite, and pyrrhotite. Alteration minerals include quartz, siderite, albite, and carbonate minerals. The depositional environment is low-grade metamorphic belts.

Disseminated Au-sulfide (Maiskoe type) (Sidorov, 1987)

This deposit type consists of fine-grained, disseminated sulfide minerals with subordinate veinlets and veins that occur in deformed and metamorphosed clastic metasedimentary rocks, mainly black shale. Gold occurs mainly in finely-dispersed sulfide minerals, mainly in acicular arsenopyrite, and Au-rich pyrite. Other deposit minerals are subordinate pyrrhotite, sphalerite, galena, chalcopyrite, various sulfosalts, quartz, and stibnite. Quartz-stibnite is the latest-formed assemblage. The deposits occur at the base of volcanic arcs in orogenic zones, and are controlled by extensive ductile shear zones, complex folds, and dome structures. Host rocks generally exhibit greenschist facies metamorphism. No relation exists between deposit type and granitic intrusions, except for local dikes. This deposit type may be associated with epithermal vein, granitoid-related Au, polymetallic vein, and various Sb and Hg deposits. The deposits type is interpreted to have formed from deep-seated, reducing, hydrothermal-metamorphic fluids.

Clastic sediment-hosted Sb-Au (Berger, 1978, 1993)

This deposit type consists of stibnite and associated minerals that occur in simple and complex ladder and reticulate veins and veinlets, sometimes with subconformable disseminations. The main ore minerals are stibnite, berthierite, pyrite, arsenopyrite, and gold, with subordinate sphalerite, galena, chalcopyrite, tetrahedrite, chalostibite, scheelite, sphalerite, galena, tetrahedrite, pyrrhotite, marcasite, gudmundite, gersdorffite, native antimony, and native silver. Gangue minerals are mainly quartz and lesser ankerite, and lesser calcite, dolomite, siderite, sericite, and gypsum. Wall rocks are altered to varying combinations of quartz, carbonate, sericite, and pyrite. The host rocks for this deposit are: (1) Archean greenschist derived from mafic and ultramafic volcanic and volcaniclastic rocks; (2) interbedded carbonaceous black shale and volcanogenic-clastic rocks; or (3) to a lesser extent, retrogressively-metamorphosed granitic rocks. The deposit type occurs mainly in linear zones of folding and mylonites associated with regional strike-slip faults. Deposit type is associated with low-grade greenschist facies regional metamorphism; this association suggests a hydrothermal-metamorphic origin. The depositional environment is strongly-deformed fold belts developed along the former intracratonic rift troughs. The deposit type may also be associated with Au-quartz vein deposits.

Cu-Ag quartz vein (vein Cu) (Nokleberg and others, 1987)

This deposit type consists of Cu sulfides and accessory Ag in quartz veins and disseminations in weakly regionally metamorphosed mafic igneous rocks, mainly basalt and gabbro, and in lesser andesite and dacite. The veins are generally late-stage metamorphic. The deposit minerals include chalcopyrite, bornite, lesser chalcocite, and rare native copper. Alteration minerals include epidote, chlorite, actinolite, albite, quartz, and zeolites. The depositional environment is low-grade metamorphic belts.

Kennecott Cu (adapted from basaltic Cu deposit type by D.P. Cox in Cox and Singer, 1986, and from Nokleberg and others, 1987)

This deposit type consists of Cu-sulfides in large pipes and lenses in carbonate rocks within a few tens of meters of disconformably underlying subaerial basalt. Subsequent subaerial erosion of Cu-bearing basalt, and low-grade regional metamorphism may concentrate Cu-sulfides into pipes and lenses. The deposit minerals are chalcocite and lesser bornite, chalcopyrite, other Cu sulfide minerals, and oxidized Cu minerals. Alteration minerals are sometimes obscured by, or may include, malachite, azurite, metamorphic chlorite, actinolite, epidote, albite, quartz, zeolites, and secondary dolomite. The depositional environment consists of subaerial basalt overlain by mixed shallow marine and nearshore carbonate sedimentary rocks, including sabkha-facies carbonate rocks.

Deposits Related to Surficial Processes: Placer, Paleoplacer, and Laterite Deposits

Placer deposits are classified primarily by metals and secondarily by sedimentary processes. The principal sedimentary processes are fluvial and glaciofluvial, shoreline, and eluvial or residual. Fluvial and glaciofluvial deposits form where river velocities lessen at hydraulic flexures, on the inside of meanders, below rapids and falls, and beneath boulders. Shoreline deposits form in areas of strandline accumulations that are caused by shoreline drift, beach storms, wind, and wave actions. Eluvial and residual deposits form by the mechanical and (or) chemical disintegration of bedrock in the general absence of the concentrating force of water.

Placer and paleoplacer Au (W.E. Yeend in Cox and Singer, 1986)

This deposit type consists of elemental gold as grains and rarely as nuggets in gravel, sand, silt, and clay, and their consolidated equivalents in alluvial, beach, eolian, and rarely in glacial deposits. The major deposit minerals are gold, sometimes with attached quartz, magnetite or ilmenite. The depositional environment is high-energy alluvial where gradients flatten and river velocities lessen as at the inside of meanders, below rapids and falls, beneath boulders, and in shoreline areas where the winnowing action of surf causes gold concentrations found in raised, present, or submerged beaches.

Placer Sn (Nokleberg and others, 1987)

This deposit type consists of mainly cassiterite and elemental gold in grains in gravel, sand, silt, and clay, and their consolidated equivalents, mainly in alluvial deposits. The depositional environment is similar to that of placer Au deposits.

Placer PGE-Au (W.E. Yeend and N.J Page in Cox and Singer, 1986)

This deposit type consists of PGE minerals and alloys in grains in gravel, sand, silt, and clay, and their consolidated equivalents in alluvial, beach, eolian, and rarely in glacial deposits. In some areas, placer Au and placer PGE deposits occur together. The major deposit minerals are Pt-group alloys, Os-Ir alloys, magnetite, chromite, and ilmenite. The depositional environment is high-energy alluvial where gradients flatten and river velocities lessen as at the inside of meanders, below rapids and falls, beneath boulders, and in shoreline areas where the winnowing action of surf causes PGE and gold concentrations in raised, present, or submerged beaches.

Placer Ti (E.R. Force in Cox and Singer, 1986)

This deposit type consists of ilmenite and other heavy minerals concentrated by beach processes and enriched by weathering. The hosting sediment types are medium- to fine-grained sand in dune, beach, and inlet deposits. The depositional environment is a stable coastal region receiving sediment from bedrock regions. The major deposit minerals are low-Fe ilmenite, sometimes with rutile, zircon, and gold.

CLASSIFICATION OF LODE MINERAL DEPOSITS INTO METALLOGENIC BELTS

This study classifies the lode mineral deposits of the Russian Far East, Alaska, and the Canadian Cordillera into metallogenic belts according to known significant mineral deposits, mineral deposit types, tectonic setting, and tectonic environment. This classification uses the following subdivision of deposits, based on tectonic setting: (1) pre-accretionary deposits that formed early in the geologic history of each tectono-stratigraphic terrane and are thereby unique to each terrane; (2) (syn)accretionary deposits that formed during periods of major structural juxtaposition, regional deformation, and penetrative deformation that generally occurred during collision of now adjacent terranes; and (3) post-accretionary deposits that formed late in the geologic history of groups of terranes, and generally occur in two or more adjacent terranes. The metallogenic belts defined in this report are based on the significant deposits of the region which were selected to be representative of the metallogeny of the region. Other, less well-defined metallogenic belts may be defined for larger groups of relatively small mineral deposits.

The major tectonic environments used to characterize metallogenic belts in this study are: (1) accretionary wedge; (2) continental-margin arc; (3) continental rift; (4) island arc; (5) metamorphic; (6) oceanic crust, seamount, and ophiolite; and (7) subduction zone. Definitions of these environments are provided above. The tectonic classifications of lode mineral deposits is currently a topic of considerable debate (Sawkins, 1990); however classification of lode mineral deposits by mineral deposit types and tectonic environment can be extremely useful. These classifications can be used for regional mineral exploration and assessment, for research on the critical or distinguishing characteristics of metallogenic belts, and for synthesizing of metallogenic and tectonic models. To describe the metallogenic belts of the region, the significant lode deposits are classified both according to mineral deposit type and tectonic environment.

EXPLANATION OF TABLES ON SIGNIFICANT LODE DEPOSITS AND PLACER DISTRICTS

Tabular Descriptions for Sizes of Lode Deposits

Size categories for lode mineral deposits, adapted from Guild (1981), are listed below. These size categories define the terms *world class, large, medium, and small*. These size categories are used mainly in the parts of Table 1 on the lode deposits in the Russian Far East where specific tonnage and grade data are not yet available. The *small* category may include occurrences of unknown size. Units are metric tons of metal or mineral contained, unless otherwise specified.

Metal	World Class >	Large >	Medium >	< Small
Antimony		50,000	5,000	
Barite ($BaSO_4$)		5,000,000	50,000	
Chromium (Cr_2O_3)		1,000,000	10,000	
Cobalt		20,000	1,000	
Copper	5 million	1,000,000	50,000	
Gold		500	25	
Iron (ore)		100,000,000	5,000,000	
Lead	5 million	1,000,000	50,000	
Magnesium ($MgCO_3$)		10,000,000	100,000	
Manganese (tons of 40% Mn)		10,000,000	100,000	
Mercury (flasks)		500,000	10,000	
Molybdenum	500,000	200,000	5,000	
Nickel	1 million	500,000	25,000	
Niobium-Tantalum (R_2O_5)		100,000	1,000	
Platinum group		500	25	
Pyrite (FeS_2)		20,000,000	200,000	
Rare earths (RE_2O_3)		1,000,000	1,000	
Silver		10,000	500	
Tin		100,000	5,000	
Titanium (TiO_2)		10,000,000	1,000,000	
Tungsten	30,000	10,000	500	
Vanadium	30,000	10,000	500	
Zinc	5 million	1,000,000	50,000	

Descriptions of Headings for Tabular Descriptions for Significant Lode Deposits and Placer Districts

Map Number, Name, Major Metals

Map number refers to a specific deposit in a given region. Lode deposits and placer districts are numbered separately within individual quadrants bounded by integer values of 4° of latitude and 6° of longitude (Sheets 1-7). The quadrants are numbered from west to east, and are lettered from south to north. A latitude and longitude location is stated for each deposit in degrees and minutes. Names of lode deposits are derived from published sources or common usage. In some cases, two deposits are grouped together and both names are given. In other cases, an alternate name is given in parentheses. Major metals are the known potentially valuable metals reported for each deposit, and are listed in order of decreasing abundance and(or) value, and are shown by standard chemical symbols.

Lode Deposit Type

Type of lode deposit, or lode deposit model is an interpretation that was made by examining the summary of the deposit and then classifying the deposit using the deposit models previously described. The type is queried where insufficient description precludes precise determination. For a few deposits, either the closest two deposit models are listed, or else a short description is given in parentheses.

Summary with References

The summary is a brief description of the major features of the deposit. Where known, the major economic minerals, gangue minerals, and the deposit form are stated. Form of deposit denotes the physical aspect of a deposit, whether, for example, a vein, disseminated mineral grains, or masses of minerals. Form is descriptive, and is distinct from genetic terms such as "contact metasomatic" or "volcanogenic," which imply origin or history. Because lode deposits may be geologically complex, a deposit may contain more than one form, and certain forms may be gradational. Where known, estimates of tonnage and grade are listed, or else the terms small, medium, or large size, and low-, medium-, or high-grade are used. Tonnages are listed in tonnes (metric tons). Grades are stated either in percent (%), for abundant metals, or in grams per tonne (g/t) for scarce and precious metals. In many deposits, the only available information is on the grade(s) of grab samples. The metric system (SI) is used for all volume and weight measurements. If publicly known, the length, width, and depth of the deposit are stated. Additional information on the host rocks and their relation to the deposit are also stated. Information on extent of underground or surface workings and on the period of mining or development is given, if known. Sources of information, stated at the end

of each summary, are the references and oral or written communications used to compile the data for each deposit. Unpublished data gathered expressly for this report are indicated by the terms "written communication" or "oral communication."

Tabular Descriptions for Significant Placer Districts

Table headings for deposits in placer districts are described only for headings differing from those for lode deposits. In Alaska, data are compiled for only those important districts with over 31,300 g (1,000 oz) gold production, whereas in the Russian Far East, data are compiled for only large (major) districts. District refers to the name of a group of geologically and geographically related placer deposits, as derived from published sources or from general usage. In some cases, two or more districts are grouped together and both names are given. In other cases, an alternate name is given in parentheses. Type refers to the placer deposit type as determined by examining the description of the district and then classifying using one of the deposit models described above. Economic and significant heavy minerals are reported for each district, listed in order of decreasing abundance.

Abbreviations in Tables

Standard chemical symbols: for example, Au, gold; Cu, copper; Fe, iron; U, uranium
PGE: Platinum-group elements--minerals and alloys
REE: Rare-earth elements
mm, cm, m, km: millimeter, centimeter, meter, kilometer
g, kg, t: gram, kilogram, metric ton
g/t, g/m^3: grams per metric ton, grams per cubic meter
tonne: metric ton
%: percent
sq: square

Conversion Factors for Tables

The following conversion factors were used to convert weight and volume from U.S. Customary to metric quantities:

1 cubic yard = 0.765 cubic meter
1 troy ounce per short ton = 34.29 grams per metric ton
1 part per million = 1 gram per metric ton
1 pound = 0.454 kilogram
1 troy ounce = 31.10 grams
1 short ton = 0.907 metric ton
1 flask (76.0 pounds mercury) = 34.7 kilograms

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Alphabetical Index for Significant Lode Deposits of the Russian Far East, Alaska, and the Canadian Cordillera

Deposit Name	Deposit Number	Deposit Type	Major Metals
Adanac-Adera (Ruby Creek)	O08-04	Porphyry Mo	Mo, W
Afanas'evskoe	N53-21	Au quartz vein	Au
Aga-Kukan	R52-04	Southeast Missouri Pb-Zn and sediment-hosted Cu	Pb, Zn, Cu
Agat	P56-46	Au-Ag epithermal vein	Au, Ag
Aginskoe (Aga)	N57-03	Au-Ag epithermal vein	Au, Ag, Te
Agranai	P59-03	Volcanic-hosted Hg	Hg
Agylki	Q53-23	W skarn	W, Cu
Agyndja	Q55-03	Basaltic Cu and sediment-hosted Cu	Cu
Aida	P55-03	Au-Ag epithermal vein	Ag, Au
Ainatvetkin	P58-11	Sn polymetallic vein	Sn, Ag
Ainsworth District	M11-22	Ag polymetallic vein	Zn, Pb, Ag
Ajax	N09-06	Porphyry Mo	Mo
Ak-Altyn	Q53-07	Au-Ag epithermal vein	Au
Akie	O10-08	Sedimentary exhalative Zn-Pb	Zn, Pb, Ag, Ba
Alamo	N09-32	Kuroko massive sulfide(?)	Ag, Au, Cu, Zn
Alaska Oracle, Gilpatrick	P06-38	Au quartz vein	Au
Alaska-Juneau	O08-13	Au quartz vein	Au
Aldigych	P57-16	Au-Ag epithermal vein	Au, Ag
Aleshkino	Q54-03	Au quartz vein	Au
Aley	O10-06	Carbonatite-related REE	Nb, Phosphate, REE
Algaminskoe	O53-07	Carbonate-hosted Zr (Algoma type)	Zr, W
Alice Arm Silver (Dolly Varden, North Star, Wolf, Toric)	N09-03	Kuroko Zn-Pb-Cu massive sulfide	Ag, Pb, Zn
Altaiskoe	P54-07	Ag polymetallic vein	Pb, Zn, Ag
Altinskoe	R54-05	Polymetallic vein	Pb, Zn
Alto	Q07-01	Stratabound Fe	Fe
Alyaskitovoe	Q54-16	Sn-W greisen	Sn, W
Alys-Khaya	Q53-15	Sn polymetallic vein	Sn
Ametistovoe	P58-05	Au-Ag epithermal vein	Au, Ag
Anderson Mountain	P06-02	Kuroko massive sulfide?	Cu, Pb, Zn, Ag
Ann, (Ernie Lake)	Q05-02	Polymetallic vein (metamorphosed)	Pb, Zn, Ag
Anna-Emeskhin	R52-05	Au quartz vein	Au
Anniv (OP)	P09-10	Sedimentary exhalative Pb-Zn	Zn, Pb
Anomalnoe	N57-11	Metamorphic REE(?)	Ta, Nb
Anomalnoe	Q52-14	Sn silicate-sulfide vein	Sn
Anyox Area (Hidden Creek, Bonanza)	N09-05	Cyprus massive sulfide	Cu, Ag, Au
Apex and El Nido	O08-24	Au quartz vein	Au, Ag
Apollo-Sitka	N04-06	Au-Ag epithermal vein	Au, Ag, Pb, Zn, Cu
Aquila	N04-05	Au-Ag epithermal vein	Au, Ag
Aragochan	R53-07	Polymetallic vein	Pb, Zn
Arbatskoe	R55-02	Co skarn	Co
Arctic	Q04-04	Kuroko massive sulfide	Zn, Cu, Pb, Ag, Au
Argin	R53-11	Sn quartz vein	Sn
Ariadnoe	L53-19	Zoned mafic-ultramafic Ti	Ti
Arnold prospect	P04-14	Granitoid-related Au	Au,Ag
Arsenyevsky	L53-31	Sn silicate-sulfide vein	Sn
Arylakh	P56-10	Au-Ag epithermal vein	Ag, Au
Asachinskoe	N57-18	Au-Ag epithermal vein	Au, Ag, Se
Asarco	P07-04	Porphyry Cu-Mo	Cu, Mo
Asbestos Mountain	Q04-06	Serpentine-hosted asbestos	Asbestos, jade, asbestos, talc
Asket	Q58-03	Porphyry Cu-Mo and Polymetallic vein	Cu, Mo, Au
Askold	K53-08	Granitoid-related Au	Au
Aurora Creek	Q03-19	Kuroko massive sulfide?	Zn, Pb, Cu, Ba, Ag, Au
Avan	R04-01	Podiform Cr	Cr, PGE
Avnet (Buzby)	Q05-10	Mn-Ag vein	Mn, Ag
Axe (Summers Creek, Axe)	M10-21	Porphyry Cu-Mo	Cu
Badran	Q54-24	Au quartz vein	Au
Baidakh	R53-04	Sb-Au vein	Sb

Deposit Name	Deposit Number	Deposit Type	Major Metals
Baikal	L52-02	Porphyry Cu-Mo	Cu, Mo
Bailey (Pat)	P09-16	W skarn	W, Cu
Balaakkalakh, Diring-Yuryak	O54-02	Sn polymetallic vein	Sn
Balbuk	Q52-16	Pb polymetallic vein	Pb
Balykovskoe	K53-09	Granitoid-related Au	Au
Balyktaah, Ploskoe	R56-03	Sn greisen	Sn
Bamskoe (Chul'bango)	N51-01	Au-Ag epithermal vein	Au, Ag
Banjo	P05-08	Polymetallic vein	Au, Ag, Pb, Zn, Sb
Baran'evskoe	N57-06	Au-Ag epithermal vein	Au, Ag
Barin	Q02-02	Ag polymetallic vein and replacement	Ag, Zn
Baryllyelakh	P54-03	Sn greisen	Sn, W
Baryllyelakh-Tsentralny	P54-04	Sn polymetallic vein	Sn, Ag
Bastion	P56-09	Sn greisen	Sn
Batko	P55-07	Basaltic Cu	Cu
Baultoff, Horsfeld, Carl Creek	P07-09	Porphyry Cu	Cu
Bazovskoe	Q54-19	Au quartz vein	Au
Bear Mountain	R07-02	Porphyry Mo	Mo, W
Bear-Twit	Q09-02	Southeast Missouri Pb-Zn	Zn, Pb
Beaver Creek	Q05-12	Polymetallic vein	Ag, Pb, Zn
Beaver Mountains	P04-21	Porphyry Cu-Au	Cu, Au, Ag
Bebekan	Q57-09	Porphyry Cu-Mo	Mo, Cu
Bedrock Creek	Q06-15	Porphyry Cu(?)	Cu, W, Th
Bee Creek	O04-08	Porphyry Cu	Cu, Au
Bekkem	Q54-28	W-Mo-Sn vein and greisen	W
Belaya Gora	N54-03	Au-Ag epithermal Vein	Au, Ag
Bell Copper (Newman)	N09-14	Porphyry Cu-Au (Mo)	Cu, Au, Ag
Bell Moly (Alice Arm)	N09-07	Porphyry Mo	Mo, W
Benevskoe	K53-06	W skarn	W
Benson Area (Empire, Coast Copper)	M09-03	Cu-Fe skarn	Cu, Fe
Berezitovoe	N51-02	Polymetallic sufide and Au vein	Zn, Pb, Au, Ag
Bereznyakovskoe	L54-04	Volcanogenic Mn	Mn
Berezovaya	P59-02	Sn polymetallic vein	Sn
Berezovogor	Q59-06	Au-Ag epithermal vein	Au, Ag, Pb
Berezovska	Q57-04	Polymetallic vein and Kuroko massive sulfide	Pb, Zn, Cu, Ag
Berg	N09-25	Porphyry Cu-Mo	Cu, Mo
Bernard Mountain, Dust Mountain	P06-25	Podiform Cr	Cr, PGE
Bethlehem-JA	M10-08	Porphyry Cu-Mo	Cu, Mo
Betyugen	Q52-04	Sb vein	Sb
Bezymyannoe	Q52-13	Ag polymetallic vein	Ag, Pb
Bichinskoe	N54-06	Sn greisen	W, Sn
Big Hurrah	Q03-15	Au quartz vein	Au
Big Ledge (Pingston Creek)	M11-15	Sedimentary exhalative Zn-Pb	Zn, Pb
Big Onion	N09-17	Porphyry Cu-Mo	Cu, Mo
Billyakh	Q53-03	Au-Sb polymetallic vein	Sb, Au
Blende (Braine)	Q08-07	Sedimentary exhalative Pb-Zn	Zn, Cu, Pb, Au, Ag
Blue Lead, Tibbs Creek, Gray Lead	Q06-24	Polymetallic vein or Sb-Au vein	Au, Ag, Sb
Bluff	P07-03	Porphyry Cu-Mo	Cu, Mo
Bochiyskoe	Q52-08	Sn polymetallic vein	Sn
Bogatyr	P55-40	Sn silicate-sulfide vein	Sn
Bogidenskoe	N53-01	Anorthosite apatite Ti-P	Ti, P
Bohemia Basin (Yakobi Island)	O08-14	Gabbroic Ni-Cu	Ni, Cu
Bokan Mountain (Ross-Adams)	N08-03	Felsic plutonic U-REE	U, Th, Be, Nb, Pb, REE
Bokhapcha	P56-39	W vein and greisen	W
Bolshoy Kanyon	P56-06	Sn skarn	Sn
Bonanza Creek	Q05-08	W skarn	W, Ag, Cu
Bonanza Hills	P05-19	Polymetallic vein and Porphyry Cu	Ag, Cu, Pb, Au
Borong	O53-10	Sediment-hosted Cu	Cu
Boss Mountain	N10-11	Porphyry Mo	Mo
Boulder Creek (Purkeypile)	P05-11	Sn greisen(?)	Sn
Bowser Creek	P05-17	Pb-Zn skarn	Ag, Pb, Zn

Deposit Name	Deposit Number	Deposit Type	Major Metals
Brady Glacier	O08-23	Gabbroic Ni-Cu	Cu, Ni, PGE
Bralorne, Pioneer (Bridge River Area)	M10-05	Au-Sb polymetallic vein	Au
Brenda (Peachland Area)	M10-23	Porphyry Cu-Mo	Cu, Mo
Brewery Creek (Loki Gold)	Q07-09	Sb-Au vein	Au
Brisco Area	M11-14	Ba vein and breccia	Ba, Mg
Britannia	M10-19	Kuroko Cu-Zn massive sulfide	Cu, Zn
Broken Shovel, Iditarod	P04-06	Polymetallic vein	Ag, Pb, Sb
Brucejack Lake (West Zone, Shore Zone)	O09-23	Au-Ag polymetallic vein	Au, Ag
BT, Jerri Creek	Q05-04	Kuroko massive sulfide	Cu, Zn, Pb, Ag
Bugdogar	Q53-18	Sn polymetallic vein	Sn
Bukhtyanskoe	N54-04	Au-Ag epithermal vein	Au, Ag
Bular	P53-06	Au quartz vein	Au
Bullion Creek	P07-19	Strataform gypsum	Gypsum
Bulunga	P55-25	Pb-Zn-Ag vein or skarn	Pb, Zn, Ag
Burea River	L54-05	W greisen(?)	W
Burgachan	Q53-16	Sn polymetallic vein	Sn
Burgagylkan	P55-43	Au-Ag epithermal vein	Au, Ag
Burgali	O54-01	Porphyry-Mo (W)	Mo, W
Burgavli	Q53-10	Sn quartz vein	Sn
Burguat	R53-01	Au quartz vein	Au
Burindinskoe	N51-04	Au-Ag epithermal vein	Au, Ag
Burkat	Q54-09	Sn quartz vein	Sn
Burkhala	P55-22	Au quartz vein	Au
Burmatovskoe	L54-02	Au-Ag epithermal vein	Au, Ag
Burnaby Iron (Jib)	N09-30	Fe skarn	Fe
Butugychag	P55-38	Sn quartz vein	Sn
Candle	P05-05	Polymetallic vein or porphyry Cu?	Cu, Pb, Ag
Canoe Bay	N04-02	Au-Ag epithermal vein	Au, Ag
Cantung (Canada Tungsten)	P09-14	W skarn	W, Cu
Canyon Creek	O04-10	Ironstone	Fe
Cape Mountain	Q03-03	Sn quartz vein	Sn
Capoose Lake	N10-05	Ag-Au polymetallic vein	Ag
Cariboo-Barkerville District (Aurum, Mosquito Creek, Island Mountain)	N10-06	Au quartz vein	Au
Caribou Mountain, Lower Kanuti River, Holonada	Q05-07	Podiform Cr	Cr
Carmi Moly	M11-27	Porphyry Mo	Mo, Cu
Carpinsky Caldera	M56-01	Porphyry Mo	Mo
Cash, (Klazan, Johnny)	P08-05	Porphyry Cu-Mo	Cu, Mo
Casino (Patton Hill)	P07-05	Porphyry Cu-Mo	Cu, Mo
Cassiar (Mount McDame)	O09-05	Serpentine-hosted asbestos	Asbestos, jade
Castle Island, Kupreanof Island	O08-17	Bedded barite, kuroko Ba-Zn-Pb-Cu massive sulfide	Ba
Castle Mountain (Mastadon, Mabel)	M11-32	Podiform Cr-Ni	Ni, Cr
Catface	M10-24	Porphyry Cu-Mo	Cu
Cathedral Creek, Braided Creek	O04-06	Polymetallic vein	Cu, As, Zn, Pb
Cathy ((Bar, Walt, Hess))	P09-04	Sedimentary exhalative Ba	Ba, (Pb, Zn, Ag)
Chaantal	Q01-01	Sn quartz vein and Sn greisen	Sn, W
Chagoyan	N52-07	Stratiform Pb-Zn	Pb, Zn, Ag
Chai-Yurya	P55-19	Au quartz vein	Au
Chalet Mountain (Cornelius Creek)	O05-08	Au quartz vein	W, Au, Ag
Chandalar district (Mikado, Little Squaw)	Q06-05	Au quartz vein	Au
Chechekuyum	Q02-06	Pb-Zn skarn	Pb, Zn, Cu, Ni
Chelbanya	P55-20	Au quartz vein	Au
Chempura	O57-03	Volcanic-hosted Hg	Hg
Chepak	P56-11	Granitoid-related Au	Au, W, Bi
Cherninskoe	P56-05	Fe (Cu, Pb, Zn) skarn	Fe
Chernyshevskoe	L53-38	Korean Zn massive sulfide	Zn, Pb
Chibagalakh	R54-15	Sn-B skarn	B, Sn

Deposit Name	Deposit Number	Deposit Type	Major Metals
Chichigof, Hirst-Chichagof	O08-16	Au quartz vein	Au
Chicken Mountain (Flat District)	P04-08	Granitoid-related Au-Ag (Cu)	Au, As, Hg, Sb, Cu, Mo
Chineyveem	Q59-05	Au-Ag epithermal vein	Au, Ag
Chip-Loy	P05-15	Gabbroic Ni-Cu(?)	Ni, Co, Cu
Chirynai	P60-01	Podiform Cr	Cr, PGE
Chistochina District	P06-22	Porphyry Cu and polymetallic vein	Cu, Pb, Ag, Au
Chistoe	R54-14	Pb-Zn vein	Pb, Zn
Chistoe	R56-04	Granitoid-related Au	Au
Chochimbal	Q52-10	Polymetallic vein	Au, Ag, Pb
Chokurdakh	S54-01	Sn silicate tourmaline, Sn silicate-sulfide vein	Sn
Chu Chua	M10-02	Cyprus massive sulfide	Cu, Zn, Au, Ag
Churchill (Davis Keays)	O10-01	Cu vein	Cu
Churpunnya	R54-01	Sn silicate-sulfide vein	Sn
Cinnabar Creek	P04-17	Hot-spring Hg	Sb, Hg
Cinola (Specogna, Babe)	N08-04	Au epithermal vein	Au
Cirque (Stronsay)	O10-03	Sedimentary exhalative Pb-Zn	Pb, Zn, Ag, Ba
Cirque, Tolstoi	P04-04	Polymetallic vein and porphyry Cu	Cu, Ag, Sn
Claim Point	O05-07	Podiform Cr	Cr
Clear Creek	Q04-08	Felsic plutonic U	U
Clear Creek (Gem)	M10-20	Porphyry Mo	Mo
Cleary Summit	Q06-18	Polymetallic vein, Au-quartz vein	Au, Ag
Cliff (Port Valdez)	P06-28	Au quartz vein	Au
Clinton Creek	Q07-07	Serpentine-hosted asbestos	Asbestos
Coal Creek	P06-10	Sn greisen(?) and Sn vein	Sn, Ag, W, Zn
Coates Lake (Redstone)	P09-11	Sediment-hosted Cu	Cu, Ag
Cobol	O08-25	Au quartz vein	Au
Copper Bullion, Rua Cove	P06-40	Besshi massive sulfide	Cu
Copper Mountain (Ingerbelle and others)	M10-31	Porphyry Cu-Au	Cu
Cottonbelt	M11-04	Sedimentary exhalative Pb-Zn	Pb, Zn, Ag
Craig (Tara, Nadaleen Mtn)	P08-03	Ag polymetallic vein	Pb, Zn, Ag, Au
Craigmont	M10-14	Cu-Fe skarn	Cu, Fe
Crevice Creek (McNeil)	O05-04	Cu-Au skarn	Au, Cu
Crown-Point, Kenai-Alaska	P06-39	Au quartz vein	Au
Daika Novaya	P55-17	Au quartz vein	Au
Dalnee	R54-04	Polymetallic vein	Pb, Zn
Dalnegorsk	L53-27	Boron skarn	B
Dalnetayozhnoe	L53-16	Sn polymetallic vein	Sn, Pb, Zn
Dalny	Q57-01	Porphyry Cu-Mo and polymetallic vein	Cu, Mo, Au
Daniels Creek, (Bluff)	Q03-16	Au quartz vein	Au, Ag
Darpir	Q54-10	Au quartz vein	Au
Darpir	Q55-08	Sn silicate-sulfide vein	Sn
Datsytovoe	P56-02	Porphyry Cu	Cu, Ag, Bi
Dawson	N08-07	Polymetallic vein	Au
Death Valley	Q03-11	Sediment-hosted U	U
DeCourcey Mountain	P04-09	Hot-spring Hg	Hg, Sb, As
Degdekan	P55-28	Au quartz vein	Au
Delta District	P06-20	Kuroko massive sulfide	Pb, Zn, Cu, Ag, Au
Delyuvialnoe	Q53-11	Granitoid-related Au	Au
Democrat (Mitchell Lode)	Q06-23	Granitoid-related gold	Au, Ag, Pb, Sb
Dempsey Pup	Q06-11	Sb-Au vein or polymetallic vein(?)	Sb, Au(?)
Denali (Pass Creek)	P06-14	Besshi massive sulfide?	Cu, Ag
Deputatskoe	R54-08	Sn polymetallic vein(?)	Sn
Dies	O54-06	Cu skarn	Cu
Dioritovoe	Q01-11	Sn polymetallic vein	Sn
Dirin-Yuryak	Q54-22	Au quartz vein	Au
Djaktardakh	R54-09	Sn polymetallic vein	Sn
Djelgala-Tyellakh	P55-24	Au quartz vein	Au
Dneprov	P56-42	Sn silicate-sulfide vein and Sn greisen	Sn
Dogdo	Q54-02	Volcanic-hosted Hg	Hg
Dokhsun	R55-04	Polymetallic vein	Pb, Zn, Cu
Donlin Creek	P04-22	Porphyry Au	Au
Dorothy	N09-12	Porphyry Cu-Mo	Cu, Mo

Deposit Name	Deposit Number	Deposit Type	Major Metals
Dorozhnoe	P55-14	Au quartz vein	Au
Draznyaschy, Upryamy	R59-10	Au-Ag epithermal vein	Au
Drenchwater	R04-04	Sedimentary Zn-Pb and (or) kuroko massive sulfide	Zn, Pb, Ag
Driftpile Creek (Saint, Roen)	O10-02	Sedimentary exhalative Pb-Zn	Pb, Zn, Ba
Druchak	P57-11	Au-Ag epithermal vein	Ag, Au
Duet	O53-04	Au quartz vein	Au
Dukat	P56-18	Au-Ag epithermal vein	Ag, Au
Duke Island	N09-37	Zoned mafic-ultramafic Cr-PGE	Cr, PGE
Duncan Lake Area	M11-17	Sedimentary exhalative Zn-Pb	Pb, Zn
Dushnoe	L56-01	Cu-Pb-Zn polymetallic vein	Cu, Zn, Pb
Dvoinoi	R60-01	Au quartz vein	Au
Dyabkhanya	Q52-15	Au polymetallic vein	Au, Ag
Dzhagdag	O53-13	Basaltic Cu	Cu
Dzhalinda	M52-02	Rhyolite-hosted Sn	Sn
Dzhalkan	P53-01	Basaltic Cu	Cu
Dzhaninskoe	N53-04	Anorthosite apatite Ti-P	Ti, P
Dzhaton	P54-17	Pb-Zn polymetallic vein	Pb, Zn, Ag
Dzhuotuk	R53-02	Au quartz vein	Au
Eagle C3	Q07-04	Podiform Cr(?)	PGE
Eagle Creek	Q03-17	Felsic plutonic U	U, Th, REE
Eaglehead (Eagle)	O09-08	Porphyry Cu-Mo	Cu, Mo
Eaglet (Quesnel Lake)	N10-09	F vein	F
Ear Mountain area, (Winfield)	Q03-02	Sn skarn	Sn, Cu, Ag, Pb, Zn
Ebeko	M57-02	Sulfur-sulfide	S, FeS2
Ecstall	N09-23	Kuroko Zn-Pb-Cu massive sulfide	Zn, Cu, Au, Pb, Ag, Fe
Ege-Khaya	Q53-01	Sn polymetallic vein	Sn, Zn
Egorlyk	P56-03	Sn silicate-sulfide vein	Sn
Ekspeditsionnoe	P56-40	Au quartz vein	Au
Ekug	Q01-05	Porphyry Sn or Sn greisen	Sn, W
Ellamar	P06-31	Besshi massive sulfide	Cu, Au, Ag
Elmaun	Q01-09	Sn silicate-sulfide vein	Sn
Elombal, Yakor	Q58-02	Sb-Au vein?	Au, As, Sb
Elveney	R59-11	Au sulfide disseminated	Au, As
Emerald-Invincible	M11-38	W skarn	W. Mo
Endako	N10-04	Porphyry Mo	Mo
Enichan-Tolono	R52-07	Au quartz vein	Au
Enmyvaam	Q59-02	Au-Ag epithermal vein	Au, Ag
Enpylkhkan	Q01-12	Pb-Zn skarn	Pb, Zn, Cu, Ag
Equity Silver (Sam Goosly)	N09-22	Ag polymetallic vein	Ag, Cu
Erel	Q54-20	Clastic sediment-hosted Hg	Hg
Ergelyakh	P54-02	Granitoid-related Au	Au
Erickson	P07-17	Basaltic Cu	Cu
Erikag	Q53-22	Sn quartz vein	Sn
Erikson-Ashby	O08-10	Kuroko Zn-Pb-Ag massive sulfide and Zn Skarn	Ag, Pb, Zn, Au
Erulen	Q02-04	Sn silicate-sulfide vein	Sn
Eruttin	Q01-08	Sn silicate-sulfide vein	Sn
Eskay Creek-21B Zone	O09-19	Kuroko Zn-Pb-Cu massive sulfide	Au, Ag, Pb, Zn, Cu
Esotuk Glacier	R06-01	Pb-Zn skarn and fluorite vein	Pb, Zn, Sn, Cu, W
Ester Dome	Q06-21	Polymetallic vein(?)	Au, Ag
Etandzha	O54-08	Porphyry Cu-Mo	Cu, Mo
Evenskoe	P57-14	Au-Ag epithermal vein	Au, Ag
Ezop	N53-23	Sn polymetallic vein	Sn
Faro (Anvil)	P08-08	Sedimentary exhalative Pb-Zn	Zn, Pb, Ag
Fasolnoe	K53-04	Polymetallic vein	Pb, Zn
Festivalnoe	M53-06	Sn quartz vein	Sn
Fidalgo-Alaska, Schlosser	P06-33	Besshi massive sulfide(?)	Cu, Zn
Fish Lake	P06-15	Gabbroic Ni-Co	Cr, Ni
Fish Lake	M10-01	Porphyry Cu-Mo	Cu, Au
Fish River (Big Fish, Boundary, Rapid)	R08-01	Stratabound Fe-P	Fe, P, Mn, Gems
Fog Lake (Pond)	O05-02	Au-Ag epithermal vein	Au, Cu, Ag
Forgetmenot Pass	N11-01	Stratbound gypsum	Gypsum
Fort Knox	Q06-17	Granitoid-related gold	Au, Ag, Mo

Deposit Name	Deposit Number	Deposit Type	Major Metals
Fortyseven Creek	P04-15	Polymetallic vein(?)	Au, W
Fox Hills	P04-19	Porphyry Mo	Mo
Frasergold (Eureka Peak, Kay, Mac)	N10-10	Au quartz vein	Au
Frost	Q04-02	Cu-Zn-Pb-Ba vein	Cu, Zn, Pb, barite
Funter Bay	O08-32	Gabbroic Ni-Cu	Cu, Ni, Co
Gagaryah	P05-18	Sedimentary exhalative barite (Pb-Zn)	Ba
Gal-Khaya	R54-11	Carbonate-hosted Hg	Hg
Galamskoe	N53-11	Volcanogenic Fe	Fe
Galena Creek	R07-03	Polymetallic vein	Cu, Zn, Pb, Ag
Galimoe	P56-23	Sn silicate-sulfide vein	Sn, Ag
Galochka	Q52-11	Au quartz vein	Au
Galore Creek (Stikine Copper)	O09-15	Porphyry Cu-Au, Cu-Au skarn	Cu
Gambier Island	M10-18	Porphyry Cu-Mo	Cu, Mo
Gar	N52-06	Volcanogenic Fe	Fe
Gayna River	Q09-01	Southeast Missouri Pb-Zn	Zn, Pb
Gayumskoe	N53-02	Anorthosite apatitie Ti-P	Ti, P
Gerbikanskoe	N53-12	Volcanogenic Fe	Fe
Geroe Creek	Q06-04	Porphyry Cu-Mo	Cu, Mo
Gertrude Creek, Griffen, Ruth Creek	Q06-07	Sb-Au vein	Au, Sb
Giant Copper (Canam, A.M.)	M10-29	Porphyry Cu-Mo	Cu, Mo
Giant Nickel (Pride of Emory)	M10-28	Gabbroic Ni-Cu	Ni, Cu
Gibraltar (Pollyanna, Granite Mt)	N10-07	Porphyry Cu-Mo	Cu, Mo
Glacier Creek	O08-20	Kuroko massive sulfide	Ba, Cu, Zn
Glacier Fork	P05-20	Cu-Zn skarn	Cu, Au
Glacier Gulch (Hudson Bay Mountain)	N09-16	Porphyry Mo	Mo
Glinyanoe	L53-12	Au-Ag epithermal vein	Au, Ag
Glukhariny	Q56-05	Au quartz vein	Au
Gnat Lake Area (June, Stikine)	O09-09	Porphyry Cu	Cu
Gold King	P06-27	Au quartz vein	Au
Gold Standard (Helm Bay)	N08-14	Au quartz vein	Au
Golden Horn, Minnie Gulch, Malemute, Iditarod (Flat District)	P04-07	Polymetallic vein or Sb-Au vein	Au, Ag, Sb, Hg, W
Golden Zone	P06-08	Polymetallic vein and Au-Ag breccia pipe or Cu-Au porphyry	Au, Cu, Zn, As, Sb, Ag, Pb
Goldstream	N09-34	Au quartz vein	Au, Cu, Pb, Zn
Goldstream (Pat)	M11-05	Besshi massive sulfice	Cu, Zn, Ag
Goletsov (Golets)	P56-17	Au quartz vein	Au
Golovninskoe	K55-01	Sulfur-sulfide.	S, FeS
Gora Krassnaya	Q60-04	Porphyry Cu-Mo	Mo, Cu, Au
Gora Sypuchaya	R59-07	Au quartz vein and Au-sulfide disseminated	Au
Gornoe	Q56-02	Southeast Missouri Pb-Zn	Pb, Zn
Gornoe Ozero	O53-01	Carbonatite-related REE	REE, Ta, Nb
Gornostai	Q59-04	Au-Ag epithermal vein	Au, Ag
Goz Creek Area (Barrier Reef)	Q08-05	Southeast Missouri Pb-Zn	Zn, Pb
Granetnoe	Q01-06	Porphyry Mo	Mo
Granduc (South Leduc)	O09-25	Besshi massive sulfide	Cu
Granisle	N09-15	Porphyry Cu-Au (Mo)	Cu, Au, Ag
Granite	P06-36	Au quartz vein	Au
Granite Mountain	P08-06	Porphyry Cu-Mo	Cu, Mo
Gravity (BA)	P09-02	Sedimentary exhalative Ba	Ba
Greens Creek	O08-15	Kuroko Zn-Pb-Cu massive sulfide	Ag, Zn, Au, Pb
Grisha	P57-01	Au-Ag epithermal vein	Au, Ag
Groundhog Basin	O08-31	Polymetallic vein(?), Sn granite, Porphyry Mo	Ag, Pb, Zn
Guan-Ti (Arkhimed)	P54-20	Porphyry Mo	Mo, W
H.B. (Zincton)	M11-36	Sedimentary exhalative Pb-Zn	Zn, Pb, Ag
Haines	O08-06	Zoned mafic-ultramafic Fe-Ti	Fe, Ti
Halibut Bay	O05-09	Podiform Cr	Cr
Hannum Creek	Q03-08	Metamorphosed sedimentary	Pb, Zn, Ag

Deposit Name	Deposit Number	Deposit Type	Major Metals
		exhalative Zn-Pb?	
Harper Creek	M11-03	Cyprus massive sulfide	Cu, Ag, Au
Hart River	Q08-02	Sedimentary exhalative Zn-Cu-Pb	Zn, Cu, Ag
Hedley Camp (Nickel Plate, Mascot, and others)	M10-32	Au skarn	Au, Ag
Hi-Mars (Lewis Lake)	M10-35	Porphyry Cu-Mo	Cu, Mo
Highland Bell (Beaverdell)	M11-28	Ag polymetallic vein	Ag, Pb, Zn
Highmont (Gnawed Mountain)	M10-11	Porphyry Cu-Mo	Cu, Mo
Homestake (Squaam Bay)	M11-07	Kuroko Zn-Pb-Cu massive sulfide	Ag, Pb, Zn, Au, Cu, Ba
Hopkins (Giltana)	P08-12	Cu skarn	Cu
Hot Springs Dome	Q05-11	Polymetallic vein	Pb, Ag, Zn, Au
Howards Pass (XY)	P09-12	Sedimentary exhalative Pb-Zn	Zn, Pb
Huckleberry	N09-27	Porphyry Cu-Mo	Cu, Mo
Hudson Cinnabar	Q06-08	Hg quartz vein	Hg
Ichatkin	R58-01	Sn silicate-sulfide vein	Sn
Igumen	P55-37	Au quartz vein	Au
Ikrimun	O55-01	Porphyry Cu-Mo	Cu, Mo
Ilin-Tas	Q53-14	Sn silicate-sulfide vein	Sn
Illinois Creek	Q04-12	Manto-replacement deposit (polymetallic Pn-Zn, Au)	Cu, Ag, Au, Pb, Zn
Imnekan	Q53-19	Sb vein	Sb
Imtachan	P54-08	Sn polymetallic vein	Pb, Zn, Sn
Imtachan	Q54-11	Au quartz vein	Au
Imtandzha	Q52-09	Sn polymetallic vein	Sn
In' River	M54-02	Volcanic-hosted Hg	W, Hg, Cu
Independence	P04-05	Porphyry Au	Au
Independence	Q03-09	Polymetallic vein	Pb, Ag
Indian Mountain and Purcell Mountain	Q05-14	Porphyry Cu-Au	Cu, Au
Ingagli	N53-18	Au quartz vein	Au
Innakh	Q57-02	Polymetallic vein and Porphyry Cu-Mo	Cu, Mo, Au
Inskoe	M54-07	Volcanic-hosted Hg	Hg
Ippatinskoe	M53-01	Sn quartz vein	Sn
Ir-Nimiiskoe-1	N53-08	Volcanogenic Mn	Mn
Ir-Nimiiskoe-2	N53-07	Sedimentary phosphorite	P
Irbychan	P57-12	Au-Ag epithermal vein	Au, Ag
Ircha	P56-36	Porphyry Sn	Sn, Ag
Irgunei	Q58-10	Au-Ag epithermal vein	Au, Ag
Iron Mask Area (Afton, Ajax)	M10-12	Porphyry Cu-Au	Cu
Iserdek	Q52-03	Clastic sediment-hosted Hg	Hg
Island Copper (Rupert Inlet)	M09-02	Porphyry Cu-Mo	Cu, Mo, Au
It-Yuryak	P54-12	W vein, Sn (W)-quartz vein	W
Itchayvayam	P59-12	Volcanogenic Mn	Mn
Itmatinskoe	N53-14	Volcanogenic Fe	Fe
Iultin	Q01-02	Sn-W polymetallic vein and greisen	Sn, W
Ivolga	P58-08	Epithermal vein	Ag, Sn
Iyikrok Mountain	Q03-01	Podiform Cr	Cr
JC (Viola)	P09-21	Sn skarn	Sn
Jedway (Magnet, Jessie)	N09-31	Fe skarn	Fe
Jeff (Naomi, Baroid)	P09-01	Sedimentary exhalative Ba	Ba
Jersey	M11-39	Sedimentary exhalative Pb-Zn	Zn, Pb, Ag
Jim-Montana	Q06-01	Cu-Zn skarn	Cu, Zn, Ag, Pb
Johnson Prospect	P05-25	Kuroko massive sulfide	Au, Zn, Cu, Pb
Jordan River (Sunro)	M10-34	Gabbroic Cu	Cu, Ag, Au
Jualin	O08-08	Au quartz vein	Au
Julietta	P56-56	Au-Ag epithermal vein	Au, Ag
Jumbo district	N08-09	Cu-Au skarn	Fe, Ag, Au, Cu, Mo
June Creek (Baldwin, Shell)	P09-03	Sediment-hosted Cu	Cu, Ag
Kafen	L53-02	Porphyry Cu-Mo	Cu, Mo
Kagati Lake	O04-01	Sb-Hg vein	Sb, Hg
Kaiyuh Hills (Yuki River)	Q04-13	Podiform Cr	Cr
Kamenistoe	P56-29	Au quartz vein	Au
Kamenushinskoe	N52-05	Cu massive sulfide	Cu, FeS
Kandidatskoe	R55-03	Au skarn	Au, Co, As
Kandychan	P56-51	Sn polymetallic vein	Sn, Ag

Deposit Name	Deposit Number	Deposit Type	Major Metals
Kanelyveen	R58-02	Granitoid-related Au	Au
Kapral	M53-05	Porphyry Mo	Mo
Karagin group	O58-01	Gabbroic Cu	Cu, Zn, Au, Pt, Ni, Co
Karalveem	R58-05	Au quartz vein	Au
Karamken	P56-55	Au-Ag epithermal vein	Au, Ag
Kasaan Peninsula (Mount Andrew)	N08-02	Cu-Fe skarn	Cu, Fe
Kasna Creek (Kontrashibuna)	P05-23	Cu-Fe skarn	Cu
Katenskoe	L53-03	Zoned mafic-ultramafic Ti	Ti
Kathleen-Margaret	P06-17	Cu-Ag quartz vein	Cu, Ag, Au
Kawisgag (Ivanof)	N04-01	Porphyry Cu and (or) polymetallic vein	Cu, Mo, Au
Kegali	P57-08	Au-Ag epithermal vein	Au, Ag
Kekur	R59-01	Sn silicate-sulfide vein	Sn
Kemess (Kemess N., Kemess S.)	O09-16	Porphyry Cu-Au	Cu, Au
Kemuk Mountain	O04-02	Zoned mafic-ultramafic	Fe, Ti, PGE
Kennecott District	P07-13	Kennecott Cu	Cu, Ag
Kennedy Lake (Brynnor)	M10-25	Fe skarn	Fe
Keno Hill (Galena Hill)	P08-01	Ag polymetallic vein	Ag, Pb, Zn, Cd
Kensington	O08-08	Au quartz vein	Au
Kere-Yuryak	Q53-12	Sn-W greisen	Sn, W
Kerr (Main Zone)	O09-21	Porphyry Cu-Au	Cu, Au, Ag
Kester	Q53-05	Sn greisen	Sn, Ta, Nb, Li
Ketchem Dome	Q06-14	Sn greisen	Sn
Khaardak	P54-16	Sn polymetallic vein	Sn
Khakandya	P56-47	Porphyry Mo	Mo
Khakandzhinskoe (Khakandzha)	P54-24	Au-Ag epithermal vein	Au, Ag
Khamna	O53-05	Carbonatite-related REE	REE, Nb
Khangalass	Q55-06	Au quartz vein	Au
Khaptagai-Khaya	Q54-13	Au quartz vein	Au
Kharan	P55-29	Sn polymetallic vein	Sn
Kharga	N53-20	Au quartz vein	Au
Khataren-Industrial	P56-20	Sn silicate-sulfide vein	Sn
Khatynnakh-Sala	R54-13	Au quartz vein	Au
Khayyam	N08-08	Kuroko massive sulfide	Cu, Au
Khenikandja	P55-30	Sn silicate-sulfide and Sn polymetallic vein	Sn
Kheta	P56-43	Sn polymetallic vein	Sn, Zn, Pb, Cu, Bi, Ag
Khetagchan	P57-07	Granitoid-related Au	Au, W, Bi
Khingan	M52-01	Sn greisen	Sn
Kholbolok	Q52-07	Clastic sediment-hosted Hg	Hg
Khomustak	R56-01	Sn greisen	Sn
Khoron	P54-13	Sn polymetallic vein	Sn
Khotoidokh	Q54-04	Kuroko Pb-Zn massive sulfide	Pb, Zn, Ag
Khoton-Khaya	Q53-04	Sn-polymetallic vein, Sn silicate-sulfide vein	Sn
Khrustal (Khrustalnoe)	P58-09	Sn polymetallic vein	Sn
Khrustalnoe	L53-32	Sn silicate-sulfide vein	Sn
Khunkhada	Q53-21	W-Sn skarn	W, Sn
Khuren	P55-41	Sn polymetallic vein	Sn
Khvoshchovoe	L53-01	Porphyry Cu-Mo	Cu, Mo
Kijik River	P05-22	Polymetallic vein and porphyry Cu	Cu, Mo
Kilokak Creek	O04-04	Polymetallic vein(?)	Pb, Zn
Kinzhal	P56-28	Sn silicate-sulfide vein	Sn
Kirganik	N57-05	Porphyry Cu-Mo	Cu, Au
Kirovskoe	N51-03	Granitoid-related Au	Au
Kitkhoi	N57-15	Au-Ag epithermal vein	Au, Ag, Zn, Pb
Kitsault (BC Moly)	N09-09	Porphyry Mo	Mo
Klen	Q57-03	Au-Ag epithermal vein	Au, Ag
Klukwan	O08-05	Zoned mafic-ultramafic Fe-Ti	Fe, PGE, Ti, V
Knight Island, Pandora	P06-41	Cyprus massive sulfide	Cu
Koksharovskoe	L53-30	Zoned mafic-ultramafic Ti	Ti
Kolkhida	P56-52	Au-Ag epithermal vein	Ag, Au, Sn

Deposit Name	Deposit Number	Deposit Type	Major Metals
Komissarovskoe (Vorob'eva plad)	L52-01	Au-Ag epithermal vein	Au, Ag
Kondakovskoe	R55-05	Southeast Missouri Pb-Zn	Pb, Zn
Kondyor	O53-11	Zoned mafic-ultramafic Cr-PGE	Pt
Kontrandya	P55-09	Au quartz vein	Au
Kootenay River Gypsum	M11-19	Strataform gypsum	Gypsum
Kopach	Q56-04	Au quartz vein	Au
Koshkina	M57-01	Polymetallic vein	Cu, Zn, Pb
Kougarok	Q03-06	Sn greisen with Ta and Nb	Sn, Ta, Nb
Krasivoe	O54-05	Au-Ag epithermal vein	Au, Ag
Krasnogorskoe	L53-33	Polymetallic vein	Pb, Zn
Krasnogorskoe	N57-12	Porphyry Cu-Mo	Mo
Krassnaya Gora	P60-04	Podiform Cr	Cr, PGE
Krassnaya Gorka	P59-08	Clastic sediment-hosted Hg or hot-spring Hg?	Hg
Krinichnoe	K53-07	Granitoid-related Au	Au
Krishtofovich Volcano	L55-01	Sulfur-sulfide	S, FeS2
Krokhalin	P56-25	Sb-Au vein (simple Sb)	Sb, Au
Kubaka	P57-03	Au-Ag epithermal vein	Au, Ag
Kuekvun	R60-06	Granitoid-related Au	Au, Bi, Te, Sn, W
Kuibiveen	P59-06	Porphyry Cu-Mo	Mo, Cu, Au
Kukenei	R60-03	Sn polymetallic vein	Sn, Ag
Kulpolney	Q58-04	Volcanic-hosted Hg	Hg
Kumroch	N57-02	Au-Ag epithermal vein	Au, Ag, Cu, Pb, Zn
Kunarev	P56-04	Pb-Zn-Cu-Ag skarn	Pb, Zn, Cu, Ag
Kuolanda	Q52-02	Ag polymetallic vein	Pb, Zn, Ag
Kuranakh-Sala	P55-10	Sn silicate-sulfide vein	Sn
Kurpandja	P53-02	Sediment-hosted Cu	Cu
Kurumskoe	N53-13	Volcanogenic Fe	Fe
Kutcho Creek (Sumac, Esso)	O09-11	Kuroko Zn-Pb-Cu massive sulfide	Cu, Zn, Pb
Kuvalorog	N57-14	Hornblendite peridotite Cu-Ni	Ni, Cu, Co, Pt
Kuy	O05-03	Au-Ag epithermal vein	Au, Ag, Cu
Kuzmichan	P56-27	Clastic sediment-hosted Hg or hot-spring Hg?	Hg
Kvinum	N57-13	Gabbroic Cu-Ni	Ni, Cu, Co, Au, Pt
Kyongdei	R52-02	Sediment-hosted U	U
Kysylga	Q53-02	Au-Ag epithermal vein	Au, Ag
Kyttamlai	R59-08	Clastic sediment-hosted Hg or hot-spring Hg?	Hg, Sb
Kyuchyuss	R53-06	Sb-Au-Hg vein	Au, Hg, Sb
Kyurbelykh	P55-15	Sn silicate-sulfide vein and Sn polymetallic vein	Sn
Lagapskoe	N53-10	Sedimentary phosphorite	P
Lalankytap	P59-07	Porphyry Cu-Mo	Mo, Cu
Lamut	Q59-11	Volcanic-hosted Hg	Hg
Langeriiskoe	M54-03	Au quartz vein	Au
Laryukov	P56-31	Au quartz vein	Au
Lassie Lake Area (Blizzard)	M11-26	Paleoplacer U	U
Lastochka	Q58-11	Mo greisen and vein	Mo
Latouche, Beatson	P06-13	Besshi massive sulfide(?)	Cu, Ag, Zn
Lazo	P56-07	Sn silicate-sulfide vein	Sn
Lazo	Q53-08	Au quartz vein	Au
Lazurnoe	L53-39	Porphyry Cu-Mo	Cu, Mo
Leguil Creek (Letain)	O09-02	Bedded barite	Ba
Lened (Rudi, Godfrey)	P09-13	W skarn	W, Cu
Lenotap	Q01-03	Au quartz vein	Au
Lermontovsky	L53-05	W skarn and greisen	W
Letain (Kutcho Creek)	O09-10	Serpentine-hosted asbestos	Asbestos
Levo-Dybin	P54-10	Granitoid-related Au	Au, W, Bi
Liberty Bell	Q06-22	Kuroko massive sulfide(?) or polymetallic gold vein	Au, Ag, Cu, Bi
Lidovskoe	L53-34	Pb-Zn polymetallic vein	Pb, Zn
Lik	R03-01	Sedimentary exhalative Zn-Pb-barite	Zn, Pb, Ag, Barite
Lime Peak	Q06-09	Sn greisen and Sn vein	Sn, Ag, Zn, U, W
Lime Point	N08-11	Bedded barite	Ba

Deposit Name	Deposit Number	Deposit Type	Major Metals
Lodestone Mountain Area	M10-30	Zoned mafic-ultramafic Fe-V	Fe, V
Logan	P09-17	Zn-Ag polymetallic vein	Zn, Ag
Logtung (Logjam Creek)	P09-22	Porphyry W-Mo	W, Mo
London and Cape	P07-11	Porphyry Cu-Mo	Cu, Mo, Ag
Lornex	M10-10	Porphyry Cu-Mo	Cu, Mo
Lorraine (Duckling Creek)	N10-01	Porphyry Cu-Mo	Cu
Loshadinayagriva (Main)	M53-03	Sn quartz vein	Sn
Lost River	Q03-05	Sn-W skarn, Sn greisen, Carbonate-replacement Sn(?)	Sn, W, F, Be
Lower Liard (Gem, Tee, Tam)	O09-03	Southeast Missouri Ba-F	F, Ba
Lucky Hill, Timberline Creek	P06-23	Au quartz vein	Au, Ag
Lucky Ship	N09-19	Porphyry Mo	Mo
Lucky Strike (Palmer Creek)	P06-37	Au quartz vein	Au
Lugun	O53-06	Southeast Missouri Pb-Zn	Pb, Zn
Lunnoe	R60-05	Sn silicate-sulfide vein	Sn, W
Lussier River (United Gypsum)	M11-25	Strataform gypsum	Gypsum
Lyapganai	P59-11	Clastic sediment-hosted Hg or hot-spring Hg?	Hg, Sb
Lyglykhtakh	P56-12	Sedimentary Mn	Mn
Lynn Creek	M10-26	Zn-Pb skarn	Zn, Pb
Lyukamskoe	M54-05	Volcanogenic Mn	Mn
MacKenzie Basin	Q10-01	Stratform salt	Salt
MacMillan Pass (Tom, Jason East, Jason Main)	P09-06	Sedimentary exhalative Pb-Zn	Pb, Zn, Ag, Ba
MacTung (MacMillan Tungsten)	P09-05	W skarn	W, Cu
Maggie (Bonaparte River)	M10-06	Porphyry Cu-Mo	Cu, Mo
Magnetite Island (Tuxedni Bay)	P05-24	Fe skarn	Fe, Ti
Maimakanskoe	N53-03	Anorthosite apatite Ti-P	Ti, P
Maiskoe	R59-06	Disseminated Au-sulfide	Au, As, Sb, Ag
Malakhitovoe	L53-04	Porphyry Cu-Mo	Cu, Mo
Malakhitovoe	N57-09	Porphyry Cu-Mo	Cu, Mo
Maldyak	P55-13	Au quartz vein	Au
Maletoivayam	P58-13	Sulfur-sulfide	S
Malinovskoe	L53-21	Porphyry Cu	Cu
Mallard Duck Bay	O04-07	Porphyry Cu-Mo and(or) polymetallic vein(?)	Cu, Mo
Malomyr	N52-04	Au quartz vein	Au
Maltan	Q54-29	Sb-Au vein	Au, Sb
Maltan Stock	P56-41	Granitoid-related Au	Au, Bi, Te
Maly Ken	P56-16	Sn polymetallic vein	Sn, Ag
Maly Komui	O53-14	Cu skarn	Cu
Maly Peledon	Q59-03	Au-Ag epithermal vein	Au, Ag
Malyutka	O53-09	Au quartz vein	Au
Manganiler	R52-01	Southeast Missouri Pb-Zn	Pb, Zn
Mangazeika	Q52-12	Ag polymetallic vein	Pb, Ag
Marg	P08-02	Kuroko Zn-Pb-Cu massive sulfide	Zn, Pb, Cu, Ag, Au
Margerie Glacier	O08-21	Porphyry Cu and lesser polymetallic vein	Cu, Ag, Au
Marysville	M11-30	Strataform magnesite	Magnesite
Mastadon (J&L)	M11-10	Sedimentary exhalative Pb-Zn (?)	Zn, Pb, Au, Ag
Matachingai	Q01-07	Silica-carbonate Hg	Hg
Matt Berry	P09-15	Sedimentary exhalative Pb-Zn	Pb, Zn, Ag, Cu, Sb
McGinnis Glacier	P06-05	Kuroko massive sulfide	Zn, Cu, Pb, Ag
McLean Arm district	N08-13	Porphyry Co-Mo	Co, Mo
McLeod	P04-01	Porphyry Mo	Mo
McMillan (Quartz Lake)	P09-19	Pb-Zn skarn and manto	Pb, Zn, Ag
Mechta	P56-15	Ag-Pb-Zn vein , Polymetallic vein(?)	Ag, Pb, Zn
Medfra	P05-02	Fe skarn	Fe, Cu, Zn, Au
Medgora	Q57-06	Mo-Cu skarn	Mo, Cu
Mel (Otter Creek)	P09-20	Sedimentary exhalative Pb-Zn	Pb, Zn, Ba
Melyul	Q02-03	Pb-Zn-(Cu)-Ag skarn	Pb, Zn, Ag, (Cu)

Deposit Name	Deposit Number	Deposit Type	Major Metals
Michigan Creek	Q05-03	Kuroko massive sulfide	As, Au, Ag, Cu, Zn, Pb
Midas	P06-30	Besshi massive sulfide(?)	Cu, Ag, Au, Zn
Midas (Berg Creek)	P07-12	Cu-Au skarn	Au, Cu, Ag
Midway (Silver Tip)	O09-01	Pb-Zn-Ag skarn and manto	Ag, Pb, Zn
Mike	O04-05	Porphyry Mo	Mo
Milkanskoe	N53-09	Volcanogenic Fe	Fe
Miller House	Q06-13	Au-As polymetallic vein	Au
Millie Mack	M11-20	Au-Ag polymetallic vein	Au, Ag
Mineral King	M11-24	Zn-Pb skarn and manto	Zn, Pb, Ag
Mineral King (Herman and Eaton)	P06-35	Au quartz vein	Au
Minto Copper (Def)	P08-04	Porphyry Cu-Au	Cu
Mirror Harbor	O08-26	Gabbroic Ni-Cu	Ni, Cu
Misheguk Mountain	R04-02	Podiform Cr	Cr, PGE
Miss Molly (Hayes Glacier)	P05-21	Porphyry Mo	Mo
Mission Creek, Headwall, Louise, and Owhat Prospect	P04-11	Polymetallic vein	Au, Ag, Cu, As
Mitrei	Q55-02	Au quartz vein	Au
Miyaoka, Hayes Glacier	P06-04	Kuroko massive sulfide	Cu, Pb, Zn, Au, Ag
Mnogovershinnoe	N54-02	Au-Ag epithermal vein	Au, Ag
Moinskoe	M54-11	Porphyry Mo	Mo
Molybdenitovy	P54-19	Porphyry Mo	Mo
Molybdenum Mountain	P04-20	Porphyry Mo	Mo
Monarch, Cub Bear, American	Q03-18	Stratabound Fe-Mn	Fe, Mn, F
Monarch, Jewel	P06-34	Au quartz vein	Au
Monarch (Kicking Horse)	M11-11	Southeast Missouri Pb-Zn	Zn, Pb, Ag
Moonshine	N08-10	Carbonate-hosted massive sulfide	Ag, Pb
Moose (Spartan, Racicot)	P09-08	Sedimentary exhalative Ba	Ba
Mopau	M54-08	Porphyry Sn	Sn
Morrison	N09-13	Porphyry Cu-Au (Mo)	Cu, Ag, Au
Mosquito	P07-01	Porphyry Cu-Mo	Cu, Mo
Moth Bay	N09-35	Kuroko massive sulfide	Cu, Zn
Mount Brussilof (Baymag)	M11-16	Stratabound Mg	Magnesite
Mount Copeland	M11-08	Porphyry Mo	Mo
Mount Hurst	P04-02	Podiform Cr	Cr, PGE
Mount Igikpak and Arrigetch Peaks	Q05-01	Polymetallic vein, Au quartz vein, Sn skarn, Cu-Pb-Zn skarn	Cu, Pb, Zn, Ag, Au, Sn, W, As
Mount Milligan	N10-02	Porphyry Cu-Au	Cu, Au
Mount Ogden (Nan, Moly-Taku)	O08-12	Porphyry Mo	Mo
Mount Thomlinson	N09-10	Porphyry Mo	Mo
Moyie (St. Eugene)	M11-41	Ag polymetallic vein	Pb, Ag
Mramornoe	R60-09	Sn polymetallic vein	Sn, Ag
Mt. Haskin West (Joem, Rain, Moly Zone)	O09-06	Porphyry Mo-W, Mo skarn	Mo, W
Mt. Polley (Cariboo-Bell)	N10-08	Porphyry Cu-Au	Cu, Au
Mt.Sicker Area (Lenora-Tyee, Twin J, Lara, Copper Canyon)	M10-33	Kuroko Zn-Pb-Cu massive sulfide	Cu, Zn, Ag
Muddy Lake (Golden Bear, Totem)	O08-19	Au quartz vein	Au
Muromets	O53-08	Cu-Mo skarn	Cu, Mo, W
Mutnovskoe	N57-17	Au-Ag epithermal vein	Au, Ag, Cu, Zn, Pb
Mymlerennet	Q60-03	Sn silicate-sulfide vein	Sn
Nabesna Glacier and adjacent areas.	P07-08	Polymetallic vein(?)	Cu, Zn, Au
Nabesna, Rambler	P07-06	Fe-Au skarn	Au
Nadezhda	P56-22	Au quartz vein	Au
Nadina (Silver Queen)	N09-21	Ag polymetallic vein	Zn, Pb, Ag, Au, Cu
Nakhtandjin, Lora	O56-03	Porphyry Cu	Cu
Nanika (DW, New Nanik)	N09-24	Porphyry Cu-Mo	Cu
Natalka	P55-32	Au quartz vein	Au
Nelkanskoe	N53-06	Sedimentary phosphorite	P
Nelson (Glacier Creek)	P07-16	Kennecott Cu	Cu, Ag
Neptun	P59-09	Clastic sediment-hosted Hg or hot-	Hg, Sb, As

Deposit Name	Deposit Number	Deposit Type	Major Metals
		spring Hg?	
Nesterovskoe	L53-13	Porphyry Cu	Cu
Netchen-Khaya	P56-37	Granitoid-related Au	Au, Mo, Bi
Nevenrekan	P57-17	Au-Ag epithermal vein	Au, Ag
Nevskoe	P56-24	Porphyry Sn	Sn, W, Se
Nezhdaninka	P54-14	Au quartz vein	Au, Ag
Niblack	N08-12	Kuroko massive sulfide	Cu, Au, Ag
Nick	Q08-03	Sedimentary exhalative Ni-Zn	Ni, Zn, PGE
Nikolaevskoe	L53-28	Pb-Zn Skarn	Pb, Zn
Nikolaevskoe, Otkrytoe	R52-03	Au quartz vein	Au
Nikolai	P07-14	Cu-Ag quartz vein	Cu, Ag
Nim, Nimbus, Silver King	P06-09	Polymetallic vein and Porphyry Cu(?)	Au, Ag, Cu
Nimiuktuk	R04-03	Bedded barite	Barite
Nivandzha	P54-21	Polymetallic vein	Pb, Zn, Ag
Nixon Fork-Medfra	P05-04	Cu-Au skarn	Au, Cu, Ag, Bi, Sn, W, Th
Nizhnee	K53-02	Sn polymetallic vein	Sn, Pb, Zn
Nochnoe	M54-09	Porphyry Cu	Cu
Nome district, Mt. Distin	Q03-13	Au quartz vein	Au
North Bradfield Canal	O09-27	Fe skarn	Fe, Cu
North-Shantarskoe	N53-05	Sedimentary phosphorite	P
Novikovskoe	L54-06	Cyprus massive sulfide(?)	Cu, Zn, Pb
Novinka	P54-18	Au quartz vein	Au
Novoe	L55-07	Sulfur-sulfide	S, FeS2
Novoe	R53-10	Granitoid-related Au	Au
Novy Djagyn	P56-14	Porphyry Sn	Sn
Nugget Creek	P07-10	Cu-Ag quartz vein	Cu, Ag
Nuka Bay District (Nualaska, Lost Creek, Alaska Hills)	O05-05	Au quartz vein	Au
Nunatak (Muir Inlet)	O08-01	Porphyry Mo-Cu	Mo
Nutekin	P60-03	Au quartz vein	Au, Hg
Nyavlenga	P56-49	Au-Ag epithermal vein	Au, Ag
O.K.	M10-13	Porphyry Cu-Mo	Cu, Mo
O'Connor River	O08-03	Stratabound gypsum	Gypsum, Anhydrite
Obyknovennoe	Q57-08	Au-Ag epithermal vein	Au, Ag
Odinokoe	R54-06	Sn greisen	Sn
Oganchinskoe	N57-07	Au-Ag epithermal vein	Au, Ag
Ohio Creek	P06-06	Sn greisen and Sn vein	Sn
Oira	P55-45	Au-Ag epithermal vein	Au, Ag
Okhotnichie	P56-33	Sn silicate-sulfide vein	Sn
Olcha	Q57-07	Au-Ag epithermal vein	Au, Ag
Olgakanskoe	N53-24	Sn greisen	Sn
Olyndja	P57-15	Au-Ag epithermal vein	Ag, Au
Olyutor	P58-12	Clastic sediment-hosted Hg or hot-spring Hg?	Hg, Sb, As
Omar	Q04-01	Kipushi Cu-Pb-Zn	Cu, Pb, Zn, Ag, Co
Omilak area	Q03-12	Polymetallic vein	Pb, Ag, Sb
Omrelkai	Q59-01	Volcanic-hosted Hg	Hg, Sb
Omulev	Q55-05	Stratabound W	W
Onello (Lider)	P53-04	Au quartz vein	Au
Opyt	P56-01	Cu-Ag quartz vein?	Cu, Au, Pb, Zn, Ag, Au
Orange Hill, Bond Creek	P07-07	Porphyry Cu-Mo and Cu-Au skarn	Cu, Mo, Au
Orange Point	O08-07	Kuroko Zn-Pb-Cu massive sulfide	Zn, Cu
Orlinoe	P57-13	Porphyry Mo	Mo
Orlovka	P59-01	Epithermal vein	Au, Zn, Cu, Hg
Oro (Buc, Mar, Dar, Tang)	P09-09	Sedimentary exhalative Ba	Ba
Oroek	Q56-06	Sediment-hosted Cu	Cu
Osennee, Oksa, Usinskoe	O56-01	Porphyry Cu-Mo	Mo, Cu
Ossolonyn	P56-38	Sn greisen	Sn
Ostrinskoe	M54-06	Silica-carbonate Hg	Hg
Owl Creek district	M10-07	Porphyry Cu-Mo	Cu, Mo
Ox Lake	N09-28	Porphyry Cu-Mo	Cu, Mo
Ozernoe	R58-04	Au quartz vein	Au
Ozernovskoe	O57-02	Au-Ag epithermal vein	Au, Ag, Te
Palyan	R59-05	Clastic sediment-hosted Hg or hot-	Hg

Deposit Name	Deposit Number	Deposit Type	Major Metals
		spring Hg?	
Parkhonai	Q59-10	Sn polymetallic vein and Sn silicate-sulfide vein	Sn
Parson	M11-12	Ba vein	Ba
Partin Creek	P06-11	Polymetallic vein or Cu-Ag quartz vein	Cu, Au, Ag
Partizanskoe (Soviet 2, Svetliy Otvod)	L53-26	Pb-Zn skarn	Pb, Zn
Pavel-Chokhchurskoe	R54-02	Sn polymetallic vein and greisen	Sn
Pavlik	P55-34	Au quartz vein	Au
Pebble Copper	O05-01	Porphyry Au-Cu	Au, Cu, Mo
Pelvuntykoinen	R59-12	Granitoid-related Au	Au, Bi, Te
Pepenveem	Q01-10	Au-Ag epithermal vein	Au, Ag
Perseverance	Q04-11	Polymetallic vein(?)	Pb, Ag, Sb
Pervenets	P59-05	Silica-carbonate Hg	Hg, As, Sb
Peschanka	Q58-05	Porphyry Cu-Mo	Cu, Mo, Au
Phoenix-Greenwood District	M11-31	Cu-Au skarn	Cu, Au, Ag, Fe
Pil	P54-01	Au quartz vein	Au
Pinchi Lake	N10-03	Silica-carbonate Hg	Hg
Pioneer	N52-02	Granitoid-related Au	Au
Plamennoe	R60-08	Volcanic-hosted Hg	Hg, Sb
Plastun	L53-29	Porphyry Cu	Cu
Pobeda	Q56-03	Ironstone	Fe
Podgornoe	P56-19	Au-Co-As vein	Au, Co, Bi, Te, (As)
Poiskovoe	N53-15	Granitoid-related Au	Au
Poison Mountain (Copper Giant)	M10-04	Porphyry Cu-Mo	Cu, Mo
Pokrovskoe	N52-03	Au-Ag epithermal vein	Au, Ag
Polaris-Taku (Whitewater)	O08-18	Au quartz vein	Au, Ag, Cu, As, Sb
Polevaya	R55-06	Au-Ag polymetallic vein	Au, Ag
Polyarnoe	R54-07	Sn greisen and vein	Sn, W
Poplar	N09-20	Porphyry Cu-Mo	Cu, Mo, Ag
Porcupine Lake	R06-02	Polymetallic vein(?)	Cu, Zn, Ag, F
Porozhistoe	K53-11	Granitoid-related Au	Au
Porozhistoe	P55-33	Sn polymetallic vein	Sn
Potato Mountain	Q03-04	Sn quartz vein	Sn
Prairie Creek (Cadillac)	P10-02	Pb-Zn skarn and manto	Pb, Zn, Ag
Prasolovskoe	L55-09	Au-Ag epithermal vein.	Au, Ag
Pravourmiiskoe	M53-02	Sn greisen	Sn
Primer (North Zone)	M10-22	Porphyry Cu	Cu, Fe
Primorskoe	R56-02	Sn polymetallic vein	Sn
Prizovoe	P55-05	Bedded barite	Ba
Prognoz	Q53-17	Ag polymetallic vein	Ag, Pb
Progress	K53-10	Granitoid-related Au	Au
Prolivnoe	P55-06	Southeast Missouri Pb-Zn	Pb, Zn
Promezhutochnoe	R59-09	Au-Ag epithermal vein	Au, Ag
Prosperity-Porter Idaho	N09-01	Ag-Pb-Zn polymetallic vein	Ag, Pb, Zn
Purdy	Q07-08	Au quartz vein	Au
Pyramid	N04-03	Porphyry Cu	Cu, Au
Pyrkakai	R59-03	Porphyry Sn	Sn, W
Quartz Creek	Q04-10	Polymetallic vein	Pb, Zn, As, Ag
Quartz Hill	N09-04	Porphyry Mo	Mo
Quigley Ridge	P05-09	Polymetallic vein	Ag, Au, Pb, Zn
Rainbow Mountain	P06-19	Porphyry Cu	Cu, Ag
Rainy Creek District	P06-18	Cu-Ag skarn	Cu, Ag, Au
Ramsay-Rutherford	P06-29	Au quartz vein	Au
Rat Fork, Sheep Creek	P05-16	Cu-Pb-Zn skarn	Cu, Zn, Pb
Ray Gulch (Potato Hills, Mar)	Q08-06	W skarn	W
Rea Gold (Hilton)	M11-06	Kuroko Zn-Pb-Cu massive sulfide	Ag, Pb, Zn, Au, Cu
Ready Cash	P06-07	Polymetallic vein(?)	Au, Cu, Pb, Ag, Sn, Zn
Red Chris (Money)	O09-12	Porphyry Cu-Au	Cu, Au, (Zn, Pb, Mo)
Red Devil	P04-12	Clastic sediment-hosted Hg	Hg, Sb
Red Dog	R03-02	Sedimentary exhalative Zn-Pb-barite	Zn, Pb, Ag, Ba
Red Dog	M09-01	Porphyry Cu	Cu
Red Mountain	O05-06	Podiform Cr	Cr
Red Mountain	N09-02	Au-Ag polymetallic vein	Au, Ag

Deposit Name	Deposit Number	Deposit Type	Major Metals
Red Mountain (Bug, Fox, Boswell R.)	P08-13	Porphyry Mo	Mo
Red Mountain Moly (Coxey, Novelty, Nevada)	M11-33	Mo skarn	Mo
Red River	N09-36	Kuroko massive sulfide	Cu, Mo
Red Rose	N09-11	W polymetallic vein	W, Au, Cu, Ag
Redbird	N09-29	Porphyry Mo	Mo
Redfern L. (Egg, Foo, Be)	O10-04	Southeast Missouri Pb-Zn	Zn, Pb
Reechen	Q02-05	Fe-Pb-Zn-Sn skarn	Fe, Pb, Zn, Sn
Reef Ridge	P05-03	Southeast Missouri Pb-Zn	Zn, Pb
Reeves-MacDonald (Reemac)	M11-40	Southeast Missouri Pb-Zn	Zn, Pb, Ag
Reid Inlet	O08-22	Au quartz vein	Au, Pb
Reidovskoe	L55-04	Porphyry Mo	Mo
Rex	O04-03	Porphyry Cu	Cu, Au
Rexspar (Birch Island)	M11-02	Felsic plutonic U-REE	U, F, Sr, REE, Th
Reznikov	P58-10	Sn polymetallic vein	Sn, Ag, Au
Rifovoe	M57-04	Au-Pb-Zn epithermal vein	Au, Zn, Pb
Riondel (Blue Bell)	M11-23	Zn-Pb-Ag skarn and manto	Zn, Pb, Ag
Risby (Cab)	P08-11	W skarn	W
River Jordan (King Fissure)	M11-09	Sedimentary exhalative Zn-Pb	Pb, Zn, Ag
Riverside	O09-28	Au quartz vein or polymetallic vein	Ag, Au, Cu, Pb, W, Zn
Robb Lake	O10-05	Southeast Missouri Pb-Zn	Zn, Pb
Rock Creek	Q03-14	Au quartz vein	Au, Ag, W
Rodionov	P55-39	Au quartz vein	Au
Rodnikovoe	N57-16	Au-Ag epithermal vein	Au, Ag
Rogovik	Q56-07	Au-Ag epithermal vein	Ag, Au
Romanzof Mountains	R07-01	Polymetallic vein, Pb-Zn and possibly Sn skarn	Pb, Cu, Zn, Mo, Sn, Ag, F
Roosevelt Creek	Q05-06	Kuroko massive sulfide	Cu, Zn, Pb, Ag, Au
Rossland (Le Roi, War Eagle)	M11-34	Au-Ag polymetallic vein	Au, Ag
Roundy Creek	N09-08	Porphyry Mo	Mo
Roy Creek (former Mount Prindle)	Q06-10	Felsic plutonic U	U, Th
Ruby Creek, (Bornite)	Q04-05	Kipushi Cu-Pb-Zn	Cu, Co, Zn, Ag
Ruddock Creek	M11-01	Sedimentary exhalative Zn-Pb	Zn, Pb, Ag
Rudnikovskoe	L55-08	Sn silicate-sulfide vein	Sn, Pb, Zn
Russkoe	M55-01	Podiform Cr	Cr
Rusty Mountain (Vera, Val, Cavey)	Q08-04	Ag-Pb-Zn polymetallic vein	Ag, Pb
Rusty Springs (Termuende)	Q07-02	Southeast Missouri Zn-Pb-Ag	Ag, Zn, Cu
Rys'e	M55-02	Cyprus massive sulfide	Cu, Pb, Zn
Ryveem	R60-02	Au quartz vein	Au
Rzhavy	Q58-09	Porphyry Cu-Mo	Cu, Mo, Au
S.Q.E. (Storie, Casmo)	O09-07	Porphyry Mo	Mo
Sa Dena Hes (Mt. Hundere)	P09-18	Pb-Zn skarn and manto	Pb, Zn, Ag
Sagurskoe	N53-19	Au quartz vein	Au
Sakyryr	P54-11	Southeast Missouri Pb-Zn	Zn, CaF2
Salcha River	Q06-16	W skarn	W
Salt Chuck	N08-06	Zoned mafic-ultramaficCu-Au-PGE	Cu, Pd, Pt, Au
Salyut	L53-11	Au-Ag epithermal vein	Au, Ag
San Diego Bay	N04-04	Au-Ag epithermal vein(?)	Ag, Au, Cu, Pb, Zn
Sana	Q54-27	Au quartz vein	Au
Sardana	P53-07	Southeast Missouri Pb-Zn	Pb, Zn
Sarylakh	Q54-23	Sb-Au vein	Au, Sb
Sawtooth Mountain	Q06-06	Sb-Au vein	Sb
Schaft Creek (Liard Copper)	O09-13	Porphyry Cu-Mo	Cu, Mo
Scrafford	Q06-20	Sb-Au vein	Sb, Au
Sea Level	N09-33	Au quartz vein	Au, Ag
Sedanka (Biorka)	N03-01	Polymetallic vein	Zn, Pb, Cu
Sedoi	P57-02	Ag-Co arsenide vein and Fe-Pb-Cu-Ag-Au skarn	Ag, Co
Segenyakh	P53-03	Southeast Missouri Pb-Zn	Pb, Zn, CaF2
Mississippi Pb, Zn			
Seikimyan	Q54-26	Clastic sediment-hosted Hg	Hg
Selerikan	Q54-25	Sb vein	Sb

Deposit Name	Deposit Number	Deposit Type	Major Metals
Senduchen	P54-05	Sb-As vein	As, Sb
Seneca (Harrison)	M10-27	Kuroko Zn-Cu-Pb massive sulfide	Zn, Cu, Pb, Ag
Senon, Utro, Serebryanoe	P55-42	Epithermal vein and volcanic-hosted Sb vein	Ag, Au, Sb
Sentachan	Q53-09	Sb-Au vein or clastic sediment-hosted Sb-Au	Sb
Sentyabr	P55-44	Au-Ag epithermal vein	Ag, Au
Serb Creek	N09-18	Porphyry Mo	Mo
Serdtse-Kamen	Q02-01	Pb-Zn skarn	Pb, Zn, Cu, Sn, Ag
Sergeev	P58-01	Au-Ag epithermal vein	Au, Ag
Sernaya River	L55-05	Au epithermal vein	Au, Zn, Cu
Serovskoe	Q59-08	Au-Ag epithermal vein	Au, Ag
Serpentine Hot Springs	Q03-07	Polymetallic vein	Pb, Zn, As, Ag, Au, Sn
Severny Uy	O53-12	Sediment-hosted Cu	Cu
Shakh, Zhilny	Q60-06	Au-Ag epithermal vein	Au, Ag
Shanuch	N57-04	Hornblendite peridotite Cu-Ni	Ni, Cu, Co, Au, Pt
Shcherbakovskoe	K53-03	Polymetallic vein	Pb, Zn
Sheep Creek	P06-01	Kuroko massive sulfide?	Zn, Pb, Ag, Sn
Sheep Creek Area (Kootenay Belle, and others)	M11-37	Au-Ag polymetallic vein	Au, Ag, Pb, Zn
Shell Creek	Q07-06	Ironstone	Fe
Shellabarger Pass	P05-12	Besshi massive sulfide	Cu, Ag, Fe, Zn
Shirokoe	Q55-01	Au-Ag epithermal vein	Au, Ag
Shkolnoe	P55-35	Granitoid-related Au	Au
Shturm	P55-16	Au quartz vein	Au
Shumagin	N04-07	Au-Ag epithermal vein	Au, Ag
Shurykan	R60-07	Porphyry Cu-Mo	Mo, Cu
Sigilyakh	R53-08	Sn silicate-sulfide vein	Sn
Silbak-Premier (Premier Gold)	O09-26	Au-Ag epithermal vein	Au, Ag, Pb, Zn
Silverton District (Sandon, Silver Ridge)	M11-21	Ag polymetallic vein	Ag, Pb, Zn
Singyami	Q53-20	Clastic sediment-hosted Hg	Hg
Siniktanneyak Mountain	R04-05	Podiform Cr	Cr, Ni, PGE
Sischu Creek	P05-01	Felsic plutonic U	U, Th
Skalistaya	Q60-07	Basaltic Cu	Cu
Skalistoe	K53-01	Porphyry Mo	Mo
Skarn	P57-06	Fe (ñAu, Cu, W, Sn) skarn	Fe
Skarnovoe	P56-50	Pb-Zn-Ag skarn	Zn, Pb, Ag
Skrytoe	L53-20	W skarn	W
Slate Creek	P06-21	Porphyry Cu(?)	Cu, Ag, Au
Slate Creek, Eagles Den, Caribou Creek	P05-10	Sb-Au vein	Sb
Slate Creek (Fortymile)	Q07-05	Serpentine-hosted asbestos	Asbestos
Slavyanovskoe	K52-01	As quartz vein	As
Sleitat	P04-18	Tin Greisen and Skarn	Sn, Ag, W, As
Slezovka	Q56-01	Southeast Missouri Pb-Zn	Pb, Zn
Smirnovskoe	L53-24	Polymetallic vein	Pb, Zn, Sn
Smucker	Q04-03	Kuroko massive sulfide	Cu, Zn, Pb, Ag
Snake River (Crest Iron)	Q08-01	Ironstone	Fe
Snezhnoe	P59-10	Zoned mafic-ultramafic Cr-PGE	Cr, PGE
Snip (Shan)	O09-17	Au-Pb-Zn polymetallic vein	Au
Snippaker Creek (E & L)	O09-18	Gabbroic Ni-Cu	Ni, Cu
Snow Gulch-Donlin	P04-10	Sb-Au vein	Sb, Au, As, Hg
Snowfields (Sulphurets)	O09-22	Au-Ag polymetallic vein	Au, Ag
Sof'ya	L55-03	Au epithermal vein	Au
Sokh	Q54-18	Au quartz vein	Au
Solkuchan (Khatys)	Q54-14	Sn polymetallic vein	Ag, Sn
Solnechnoe	M53-04	Sn quartz vein	Sn
Solur	R53-05	Granitoid-related Au	Au
Sopka Rudnaya	R60-04	Au-Ag epithermal vein	Au, Ag
Soyuz	K53-05	Au-Ag epithermal vein	Ag, Au
Spiridonovskoe	L55-11	Sn polymetallic vein	Sn, Pb, Zn
Spiridonych, Teply	P57-19	Au-Ag epithermal vein	Au, Ag
Spirit Mountain	P06-26	Gabbroic Ni-Cu	Ni, Cu, Co, Ag
Spruce Creek	P05-07	Polymetallic vein	Au, Ag, Pb, Zn, Sb

Deposit Name	Deposit Number	Deposit Type	Major Metals
Sprut	P58-06	Au-Ag epithermal vein	Ag, Au
Sredne-Ichuveem	R59-04	Au quartz vein	Au
Srednekan	P56-26	Au quartz vein	Au
Stakhanov	P55-12	Au quartz vein	Au
Stampede	P05-06	Sb-Au vein	Sb
Stepovich Lode	Q06-19	W skarn	W, Au
Stibnitovoe	P54-06	Sb vein	Sb
Story Creek	R04-06	Pb-Zn-Au-Ag vein	Pb, Zn, Ag, Au
Sukakpak Mountain	Q06-02	Sb-Au vein	Au, Sb, Mo
Sukharikovskie Grebni	N57-01	Au-Ag epithermal vein	Au, Ag
Sukhoe	L54-03	Au-Ag epithermal vein	Au, Ag
Sukhoi Creek	M54-10	Porphyry Cu-Mo	Cu, Mo
Sullivan (Kimberley)	M11-29	Sedimentary exhalative Pb-Zn	Pb, Zn, Ag
Sulphurets (Gold Zone)	O09-20	Porphyry Cu-Au	Au, Cu
Sumdum	O08-29	Kuroko massive sulfide(?)	Ag, Cu, Zn
Sumdum Chief	O08-30	Au quartz vein	Au, Ag, Cu, Pb, Zn
Sun, (Picnic Creek)	Q05-05	Kuroko massive sulfide	Cu, Zn, Pb, Ag, Au
Sustut Copper	O09-24	Basaltic Cu	Cu
Sutlahine River Area (Thorn, Kay)	O08-11	Porphyry Cu-Mo	Cu, Mo, Ag
Suvorov	P56-44	Rhyolite-hosted Sn	Sn
Svetlin	Q58-01	Au quartz vein	Au
Svetloe	P56-48	Sn polymetallic vein	Sn
Svetloe	R01-02	Sn quartz vein	Sn, W
Svetloe, Kholodnoe	P55-18	Au quartz vein	Au
Svetloe, Medvezhje	Q54-08	Sn quartz vein and greisen	Sn, W
Svetlovskoe	M54-04	Silica-carbonate Hg	Hg
Svetly	P53-05	Au quartz vein	Au
Sweetheart Ridge	O08-28	Kuroko massive sulfide	Ag, Au, Cu, Pb, Zn
Swim (Sea, SB)	P08-10	Sedimentary exhalative Pb-Zn	Zn, Pb, Ag
Syncha-I & II	Q52-01	Au quartz vein	Au
Syugyunyakh-Kende	R52-06	Au quartz vein	Au
Table Mountain	Q06-12	Sn polymetallic vein	Au
Taboga	P55-11	Au quartz vein	Au
Takalkan	R54-10	Sn greisen	Sn
Talalak	Q54-21	Au quartz vein	Au
Talaminskoe	N53-22	Sb-Au vein	Sb, Au
Talov	P58-03	Podiform Cr	Cr
Tamvatney	P60-02	Silica-carbonate Hg	Hg, W, As
Tankist	P55-36	Porphyry Mo	Mo
Tasu Sound (Wesfrob, Tasu, Garnet)	N08-05	Fe skarn	Fe, Cu
Taurus	P07-02	Porphyry Cu-Mo	Cu, Mo
Taylor Mountains	P04-16	Hg-Ag epithermal vein(?)	Hg, Au
Tayozhnoe	L53-17	Ag epithermal vein	Ag
Tea (Brock)	P09-07	Sedimentary exhalative Ba	Ba
Tektonicheskoe	P55-23	Pb-Zn-Ag vein	Pb, Zn, Ag, Sn
Telekai	Q60-01	Sn silicate-sulfide vein and Sn greisen	Sn
Teleneut	Q58-08	Podiform Cr	Cr, Ni
Tenkergin	R01-01	Sn quartz vein	W, Sn
Terrassnoe	P55-04	Pb-Zn skarn	Pb, Zn
Tet'yaevskoe	L55-02	Cu-Pb-Zn polymetallic vein	Cu, Zn, Pb
Texada Iron	M10-17	Fe skarn	Fe
Texada (Vananda, Marble Bay, and others)	M10-16	Cu-Au skarn	Cu, Au, Ag
Three Castle Mountain	Q07-03	Sedimentary exhalative Pb-Zn	Pb, Zn
Threeman, Standard Copper	P06-32	Cyprus massive sulfide	Cu, Au, Ag
Tidit	P56-13	Ag-Pb-Zn vein, Polymetallic vein(?)	Ag, Pb, Zn
Tigrets-Industriya	P55-26	Sn polymetallic vein	Sn, Ag, Pb, Zn
Tigrinoe	L53-08	Sn-W greisen	Sn, W, Ta, Nb, In
Tikas	P57-18	Porphyry Mo	Mo
Tikhon	Q54-06	Au-Ag epithermal vein	Ag, Au
Tikhorechen	P58-04	Podiform Cr	Cr
Tin Creek	P05-13	Cu-Pb-Zn skarn	Pb, Zn, Cu

Deposit Name	Deposit Number	Deposit Type	Major Metals
Tirekhtyak district (Nagornoe, Podgornoe, Poputnoe)	R53-03	Sn quartz vein	Sn, W
Titovskoe	Q54-01	Sn (B) magnesian skarn	B
Tokichan	P55-27	Au quartz vein	Au
Tokur	N53-17	Au quartz vein	Au
Tommot	R54-12	Carbonatite-related REE (Ta, Nb)	REE, Ta, Nb
Toodoggone District (Lawyers)	O09-14	Au-Ag epithermal vein	Au, Ag
Travka	Q59-09	Porphyry Mo	Mo
Treadwell	O08-27	Au quartz vein	Au, Ag, Pb
Treasure Creek	P06-12	Porphyry Cu-Mo	Mo, Cu
Trood	P56-34	Sn polymetallic vein	Sn, Pb Zn, Ag
Trout Lake	M11-13	Porphyry Mo	Mo
Tsirkovy	P58-02	Granitoid-related Au	Au, Ag, Cu, W, Bi
Tuguchak-1	R55-01 Mo	Mo quartz vein	
Tuguchak-2	R55-01	Granitoid-related Au	Au, W, Bi, Te
Tulsequah Chief (Big Bull)	O08-09	Kuroko Zn-Cu-Pb massive sulfide	Zn, Cu, Au, Ag, Pb
Tumannaya	Q57-10	Au-Ag epithermal vein	Au, Ag
Tumannoe	N57-10	Au quartz vein	Au
Tumannoe	Q01-04	Disseminated Au-sulfide	Au, As, Sb
Tumannoe	Q54-07	Au quartz vein	Au
Tungsten Queen (Silverquick, Manitou)	M10-03	Silica-carbonate Hg	Hg
Tunguss	Q55-07	Au quartz and Sb vein	Au, Sb
Tuora-Tas	Q54-17	Au quartz vein	Au
Tutkhlivayam	O57-01	Au-Ag epithermal vein	Au, Ag, Cu, Pb, Zn, Te, Cd
Tyrskoe	N54-05	Porphyry Cu	Cu
Uchui	Q54-05	Au quartz vein	Au
Ugryumoe	P60-05	Kuroko Cu-Zn-Ag massive sulfide(?)	Cu, Zn, Pb, Au
Ukachilkan	R54-03	Sn polymetallic vein	Sn
Ulakhan-Egelyakh	Q53-06	Sn silicate-sulfide vein	Sn
Ulakhan-Sala	R53-09	Sn silicate-sulfide vein	Sn
Ulkanskoe	O53-15	Felsic plutonic REE	REE, Be, Zr
Union Bay (Cleveland Peninsula)	N08-01	Zoned mafic-ultramafic Cr-PGE	Fe, V, Ti, Cr, PGE
Unnei	P58-07	Sn polymetallic vein	Sn, Ag, Au
Uochat	P55-01	Carbonate-hosted Hg	Hg
Upper Kanuti River	Q05-09	Polymetallic or epithermal vein	Pb, Zn, Ag
Uralskoe	Q58-07	Volcanic-hosted Hg	Hg, Sb, Au, Ag
Urui	O53-03	Southeast Missouri Pb-Zn	Pb, Zn
Urultun	P55-02	Southeast Missouri Pb-Zn	Pb, Zn
Ussuri deposits	L53-18	Ironstone	Fe
Ust-Belaya	Q59-07	Podiform Cr	Cr, PGE
Utessnoe	P56-54	Au-Ag epithermal vein	Ag, Au, Hg
Utinka	P56-21	Au quartz vein	Au
Uzlovoe	Q53-13	Sb-Au vein or clastic sediment-hosted Sb-Au	Au, Sb
Vaegi	P59-04	Au quartz vein	Au
Valentinovskoe	L55-10	Kuroko Cu-Pb-Zn massive sulfide	Cu, Pb, Zn
Valkumei	R59-02	Sn silicate-sulfide vein	Sn
Valley Copper	M10-09	Porphyry Cu-Mo	Cu, Mo
Valunistoe	Q60-05	Au-Ag epithermal vein	Au, Ag
Vangorda Creek (Grum, Firth, DY)	P08-09	Sedimentary exhalative Pb-Zn	Zn, Pb, Ag
Vechernee	P57-05	Porphyry Mo-Cu	Mo, Cu
Verkhne-Khakchan	P55-08	Au quartz vein	Au
Verkhne-Khatynnakh	P55-21	Sn quartz vein	Sn
Verkhne-Naanchan	R56-05	Polymetallic vein	Pb, Zn
Verkhne-Seimchan	P56-08	Co-As vein	Co, Bi
Verkhne-Seimkan	P56-53	Co-Bi-As vein	Co, Bi
Verkhnebidzhanskoe	M52-03	Sn quartz vein	Sn
Verkhnee Menkeche	P54-09	Ag polymetallic vein	Pb, Zn, Ag
Verkhnenyotskoe	O54-07	Au-Ag epithermal vein	Au, Ag
Verkhnezolotoe	L53-06	Porphyry Cu	Cu, Sn

Deposit Name	Deposit Number	Deposit Type	Major Metals
Verkhny-Koargychan	P57-10	Au-Ag Polymetallic vein	Au, Ag, Pb, Zn
Verkhny-Omolon	P57-09	Ironstone	Fe
Vesennee	Q58-06	Au-Ag epithermal vein	Au, Ag
Vesnovka	Q55-04	Kipushi Cu-Pb-Zn	Cu, Pb, Zn, Ge
Vetrenskoe	P55-31	Au quartz vein	Au
Vetvisty	P56-32	Au-Ag epithermal vein	Ag, Au
Victor, Venus, Evelyn Lee, and Ebo	Q06-03	Porphyry Cu and Cu skarn	Cu, Ag, Mo
Viking	O56-04	Porphyry Cu-Mo	Cu, Mo
Vine	M11-42	Ag-Au polymetallic vein	Pb, Zn, Ag, Au
Vinesale Mountain	P04-23	Porphyry Au	Au
Vodorazdelnoye	Q60-02	Sn silicate-sulfide vein	Sn
Von Frank Mountain	P05-26	Porphyry Cu-Ag	Cu, Ag
Voskhod	P54-22	Au quartz vein	Au
Vostok-2	L53-07	W skarn	W
Voznesenka-I	L53-35	Korean Zn massive sulfide	Zn
Voznesenka-II	L53-36	Fluorite greisen	Fluorite
Vysokoe	L55-06	Sulfur-sulfide	S, FeS2
Vysokogorskoe	L53-25	Sn silicate-sulfide vein	Sn
Warner Bay (Prospect Bay)	O04-09	Porphyry Cu, Polymetallic vein	Cu, Mo, Pb, Zn
Wasi Lake Area (Suzie, Beveley, Regent)	O10-07	Southeast Missouri Pb-Zn	Pb, Zn, Ag, Ba
Wellgreen	P07-18	Gabbroic Ni-Cu	Ni, Cu, PGE
Westmin (Buttle Lake- Myra, Lynx, H-W, Battle)	M10-15	Kuroko Zn-Cu massive sulfide	Zn, Cu, Ag, Au
Westover	P07-15	Kennecott Cu	Cu, Ag
Wheeler Creek	Q04-07	Felsic plutonic U	U
Whit (Whiting Creek)	N09-26	Porphyry Mo-Cu	Mo, Cu
White Mountain	P05-14	Carbonate-hosted Hg(?)	Hg
Whitehorse Copper Belt (Little Chief, War Eagle, and others)	P08-14	Cu skarn	Cu, Au, Ag
Whoopee Creek	R04-07	Zn-Ag-Au vein	Zn, Ag, Au
Williams Creek	P08-07	Porphyry Cu-Au	Cu
Willow Creek District (Gold Cord, Independence, Thope, and others)	P06-24	Au quartz vein	Au
Win-Won or Cloudy Mountain	P04-03	Sn polymetallic vein	Sn, Ag, Cu
Windermere Creek (Western Gypsum)	M11-18	Strataform gypsum	Gypsum
Windy (Balsam, Star, Kuhn, Dead Goat)	O09-04	W skarn	W, Mo
Windy Craggy (Alsek River Area)	O08-02	Cyprus massive sulfide	Cu, Co
Windy Creek	Q03-10	Porphyry Mo	Mo
Wolf Mountain	P04-13	Felsic plutonic U	U, Th, As, Nb, Mo, REE
Wrigley (Fry Group)	P10-01	Southeast Missouri Pb-Zn	Zn, Pb, Ag
WTF, Red Mountain	P06-03	Kuroko massive sulfide	Cu, Pb, Zn, Ag, Au
Yagodnoe	L54-01	Au-Ag epithermal vein	Au, Ag
Yantarnoe	L53-09	Porphyry Sn	Sn
Yapon	O56-02	Porphyry Cu	Cu
Yaroslavskoe	L53-37	Sn greisen	Sn
Yasnoe	M54-01	Silica-carbonate Hg	Hg
Yassnoe	R58-03	Clastic sediment-hosted Hg or hot-spring Hg?	Hg
Ymir-Erie Creek (Yankee Girl)	M11-35	Au-Ag polymetallic vein	Au, Ag
Yolochka	P57-04	Au-Ag epithermal vein	Au, Ag
Yugler	P56-30	Au quartz vein	Au
Yukhondja	Q54-12	Au quartz vein	Au
Yur	O53-02	Au quartz vein	Au
Yurievka	O54-04	Au-Ag epithermal vein	Au, Ag
Yuzhno-Khingan	M52-04	Ironstone	Fe
Yuzhno-Tominskoe	N54-01	Podiform Cr	Cr
Yuzhnoe	L53-22	Polymetallic vein	Pb, Zn, Ag
Yuzhnoe	R56-06	Polymetallic vein	Pb, Zn

Deposit Name	Deposit Number	Deposit Type	Major Metals
Zabytoe	L53-14	W-Sn greisen	W, Sn, Bi
Zackly	P06-16	Cu-Au skarn	Au, Cu, Ag
Zaderzhnoe	P54-23	Au quartz vein	Au
Zagadka	Q52-05	Clastic sediment-hosted Hg	Hg, Sb
Zane Hill	Q05-13	Porphyry Cu-Au	Cu, Au
Zane Hills	Q04-09	Felsic plutonic U	U, Th
Zaozernoe	M57-03	Sulfur-sulfide	S, FeS2
Zarechnoe	L53-23	Porphyry Cu	Cu
Zarnitsa, Kutinskoe	P54-15	Polymetallic vein	Pb, Zn, Ag
Zatessnoe	P56-35	Au quartz vein	Au
Zazubrinskoe	N53-16	Au quartz vein	Au
Zeballos Iron (Ford)	M09-04	Fe skarn	Fe
Zerkalnoe	P56-45	Au-Ag epithermal vein	Au, Ag, Bi, Te
Zet	Q57-05	Au-Ag epithermal vein	Au, Ag
Zhar	O54-03	Au quartz vein	Au
Zhdannoe	Q54-15	Au quartz vein	Au
Zimnee	L53-15	Sn polymetallic vein	Sn, Pb, Zn
Zolotaya Gora	N52-01	Au quartz vein	Au
Zolotoi	N57-08	Au-Ag epithermal vein	Au, Ag
Zolotoi Stream (Sofie-Alekseevskoe)	L52-03	Au quartz vein	Au
Zvezdnoe	L53-10	Porphyry Sn	Sn
Zvezdochka	Q52-06	Clastic sediment-hosted Hg	Hg

District Name	District Number	Deposit Type	Major Metals

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Adychan	Q53-02	Placer Au	Au
Aliskerov	Q58-01	Placer Au	Au
Allakh-Yun	P54-01	Placer Au	Au
Aniak	P04-04	Placer Au-Hg	Au, Ag, W, Cr, Hg, Pt
Atlin Camp	O08-02	Placer Au	Au
Bayimka	Q58-03	Placer Au	Au, Ag, Cu, Pt
Big Bend Camp	M11-01	Placer Au	Au
Big Salmon-Teslin	P08-03	Placer Au	Au
Blagoveshchensk-Svobodnensky district	M52-02	Placer Au	Au
Bonnifield	P06-01	Placer Au	Au, Ag, Hg, Pt, Sn, W
Boundary-Kettle River	M11-05	Placer Au	Au
Bridge River Camp	M10-01	Placer Au	Au
Cariboo-Barkerville-Wells	N10-04	Placer Au	Au
Cariboo-Hixon Camp	N10-03	Placer Au	Au
Cariboo-Quesnel-Horsefly	N10-05	Placer Au, Pt	Au
Cassiar Camp	O09-01	Placer Au	Au
Chaanay	Q59-01	Placer Au	Au
Chandalar	Q06-01	Placer Au	Au, Sb, Ag, W
Chisana	P07-04	Placer Au	Au, Ag
Chistochina	P06-04	Placer Au	Au, Pt, W, Cr, Zn, Hg, Pb
Chokurdak	S54-01	Placer Sn	Sn
Circle	Q06-03	Placer Au	Au, Ag, Sn, Sb, W, Pb, REE, Mo, Hg
Coquihalla River Camp	M10-05	Placer Au, Pt	Au
Council (Includes Solomon)	Q03-04	Placer Au	Au, W, Hg, Cu
Dambuki	N52-02	Placer Au	Au
Debin-Orotukan-Srednikan	P56-01	Placer Au	Au
Delta River	P06-03	Placer Au	Au
Dzhagdy	N52-03	Placer Au	Au
Eagle	Q07-01	Placer Au	Au, Ag, Cr, Pt
Fairbanks	Q06-04	Placer Au	Au, Sb, W, Sn, Ag , Bi
Fairhaven (Includes Candle and Inmachuk)	Q04-03	Placer Au	Au, Pb, W, Pt, Ag
Fortymile	Q07-02	Placer Au	Au, REE, Pb, Sn, W, Hg
Fraser River	M10-02	Placer Au, Pt, Ir	Au
Goltsovka	N57-08	Placer Au	Au
Gonzhinsky (Gonzha)	N51-04	Placer Au	Au
Goodnews Bay, Bethel	O04-01	Placer PGE-Au	Pt, Au
Gorelaya River	P58-05	Placer Au	Au
Hope	P06-07	Placer Au	Au, Cu, Sb, Hg, Pb
Hot Springs	Q05-05	Placer Au-Sn-Nb	Au, Sn, Cr, REE, Cu, Pb, Ag, Ni, Hg, W, Bi, Nb
Hughes-Koyukuk	Q05-03	Placer Au	Au, Cu, Pb, Ag, Sn, Pt, Zn
Ichuveem	R59-03	Placer Au, Sn	Au, Sn, W
Iditarod	P04-03	Placer Au	Au, Hg, Sb, Sn, W, Cr, REE, Ag
Il'inka River	L54-01	Placer Au	Au
Innakh	Q57-02	Placer Au	Au
Innoko	P04-01	Placer Au	Au, Ag, Hg, Pt, Sn, W
Iudumich Creek	N57-04	Placer Au	Au
Iultin	R01-01	Placer Sn, W	Sn, W, (Au)
Juneau-Admiralty	O08-03	Placer Au	Au
Kamenisty Creek	N57-05	Placer Au	Au
Kameshkovoi-Polovinchik River	N57-07	Placer Au	Au
Kantishna	P05-01	Placer Au	Au, Ag, Sb, Pb, W, Mn
Kedrovy Creek	P58-02	Placer Au	Au
Keperveem	R58-01	Placer Au	Au, W, Sb
Kerbi	N53-03	Placer Au	Au
Khalaktyrskoe	N57-06	Placer magnetite	Ti, Fe

District Name	District Number	Deposit Type	Major Metals
Khatynnak-Sala	R54-02	Placer Au	Au
Kherpuchinskoe	N54-03	Placer Au	Au
Khetachan	Q57-01	Placer Au	Au
Kiana	Q04-01	Placer Au	Au, nephrite
Kichavayam River	P58-08	Placer Au	Au
Klondike	P07-02	Placer Au	Au
Klotassin-Dawson Range	P08-02	Placer Au	Au
Kluane	P07-05	Placer Au	Au
Kodiak	O05-01	Placer Au	Au, Ag, Cr, Pt
Kolchanskoe	N54-02	Placer Au	Au
Kondeur	O53-02	Placer PGE	PGE
Kougarok	Q03-02	Placer Au-Sn	Au, Sn, W
Koyuk	Q04-04	Placer Au, Pt	Au, Sb, W, Pt, Bi
Kronotsky Bay	N57-02	Placer magnetite	Ti, Fe
Kular	R53-01	Placer Au	Au
Kurun-Uryakh	O53-01	Placer Au	Au
Kuvet	R60-03	Placer Au	Au
Laird River	P09-01	Placer Au	Au
Langeriiskoe	M54-02	Placer Au	Au
Lardeau-Duncan and Lake-Bugaboo	M11-02	Placer Au, U Th, Nb	Au
Leech River Camp	M10-06	Placer Au	Au
Malokhingansky (Malokhingan) district	M52-03	Placer Au	Au
Manson Camp (Omineca)	N10-01	Placer Au	Au
Marshall	P04-02	Placer Au	Au, Ag, Pt
Mayo-McQuesten	P08-01	Placer Au	Au
McGrath	P05-02	Placer Au, Hg	Au, Sn, W, Bi, REE, Hg, Cu, Pb
Melozitna	Q05-04	Placer Au	Au, Sn, Pb, Ag, Zn, Cu
Monashee-Cherry Creek Camp	M11-04	Placer Au	Au
Moyie-Goat River Camp	M11-08	Placer Au	Au
Nelchina	P06-06	Placer Au	Au, Pt, W
Nizhnenyukzinsky district	O51-01	Placer Au	Au
Nizina	P07-06	Placer Au	Au, Ag, Sb, Cu, Pb, Mo
Noatak	Q05-01	Placer Au	Au
Nome	Q03-03	Placer Au	Au, Ag, W, Sb
North Thompson-Tranquille	M10-03	Placer Au	Au
Northern	R59-01	Placer Sn	Sn
Oemku	M54-01	Placer Au	Au
Okanagan Valley	M11-03	Placer Au	Au
Okhotsk	O54-01	Placer Au	Au
Oktyabrskoe	N54-04	Placer Au	Au
Omrelkai	Q59-02	Placer Sn	Sn
Ossora Bay	O58-01	Placer magnetite	Ti, Fe
Otrozhen	Q59-03	Placer Au	Au
Ozyornaya River	M57-01	Placer magnetite	Ti, Fe
Pegtymel	R60-01	Placer Sn	Sn
Pend D'Oreille-Sheep Creek	M11-07	Placer Au	Au
Penyelkhin	Q01-01	Placer Au	Au
Perkakay	R59-02	Placer Sn (Au, W)	Sn, (Au, W)
Perspektivny Creek, Kechichma River	P58-06	Placer Au	Au
Polousnensky	R54-01	Placer Sn	Sn
Porcupine-Haines	O08-01	Placer Au	Au
Port Clarence	Q03-01	Placer Au-Sn	Sn, Au, REE, W, Cr, Pb, Ag, Hg, Pt
Pravaya, Kondyreva River	P58-03	Placer Au	Au
Prizhimny Creek, Dobraya River	P59-02	Placer Au	Au
Rampart	Q05-06	Placer Au	Au, Ag, Bi, W, Sn
Rauchan	R59-04	Placer Au	Au
Richardson	Q06-05	Placer Au-Ag	Au, Ag
Ruby	Q05-07	Placer Au	Au, Sn, Bi, REE, Pb, W, Pt

District Name	District Number	Deposit Type	Major Metals
Ryveem	R60-02	Placer Au	Au, Ti, Agate
Sanga-Talon	P55-02	Placer Au	Au
Schmidtovskoe	N54-05	Placer Au	Au
Seinav-Galimanan	P58-09	Placer PGE	PGE
Shamanikho-Stolbov	Q56-01	Placer Au	Au
Shungnak	Q04-02	Placer Au	Au, Cu, Ag, Cr, Cd
Sixtymile	P07-01	Placer Au	Au
Skeena River	N09-01	Placer Au	Au
Smyaty and Grif Creeks	P58-07	Placer Au	Au
Sofiiskoe	N53-02	Placer Au	Au
Srednenuykzhinsk	N51-02	Placer Au	Au
Stadukhin	Q58-02	Placer Au	Au
Stewart River	P07-03	Placer Au	Au
Stikine River-Telegraph Creek	O09-02	Placer Au	Au
Susuman-Chai-Yuryuyen	P55-01	Placer Au	Au
Taigonoss	P57-01	Placer Au	Au
Temny Creek	N57-01	Placer Au	Au
Tenka	P55-03	Placer Au	Au
Tolovana	Q06-02	Placer Au	Au, Sn, Cu, Pb, Hg, W, Cr, Sb, REE, Bi
Tulameen-Similkameen Camp	M10-04	Placer Au-Pt-Ag	Au
Turansky district	M52-01	Placer Au	Au
Udachny Creek	N57-03	Placer Au	Au
Ulskoe	N54-01	Placer Au	Au
Ushkan'e River Basin	P58-04	Placer Au	Au
Valdez Creek	P06-02	Placer Au	Au, Cu, Pb
Verkhne-Indigirsky	Q54-01	Placer Au	Au
Verkhne-Yansky	Q53-01	Placer Sn	Sn
Verkhneamursk	N51-03	Placer Au	Au
Verkhnegilyui	N51-01	Placer Au	Au
Verkhneselemdzha	N53-01	Placer Au	Au
Verkhnezeisk	N52-01	Placer Au	Au
Verkhoyan	Q52-01	Placer Au	Au
Vesyoly Creek	P59-01 PGE	Placer PGE	
Vidny Creek	P58-01	Placer Au	Au
Visualnin	Q57-03	Placer Au, Ag	Au, Ag
Vital-Silver Creek Camp (Omineca)	N10-02	Placer Au, Cu, Ag, nephrite	Au
Wildhorse Creek Camp	M11-09	Placer Au-Pt	Au
Willow Creek	P06-05	Placer Au	Au, Cu, W, Pt
Wiseman (Koyukuk)	Q05-02	Placer Au	Au, Bi, Cu, W, Pb
Yakataga	P07-07	Placer Au	Au, Ag, Cr, Cu
Yakutat (Lituya Bay)	O07-01	Placer Au-Ti	Au
Yentna	P05-03	Placer Au	Au, Cu, Ag, Pt
Ymir-Nelson-Slocan Camp	M11-06	Placer Au-W	Au
Zeiya-Selemdzha	N52-04	Placer Au	Au
Zolotogorsk	Q60-01	Placer Au	Au