7 Regional Geological Setting and Mineralization

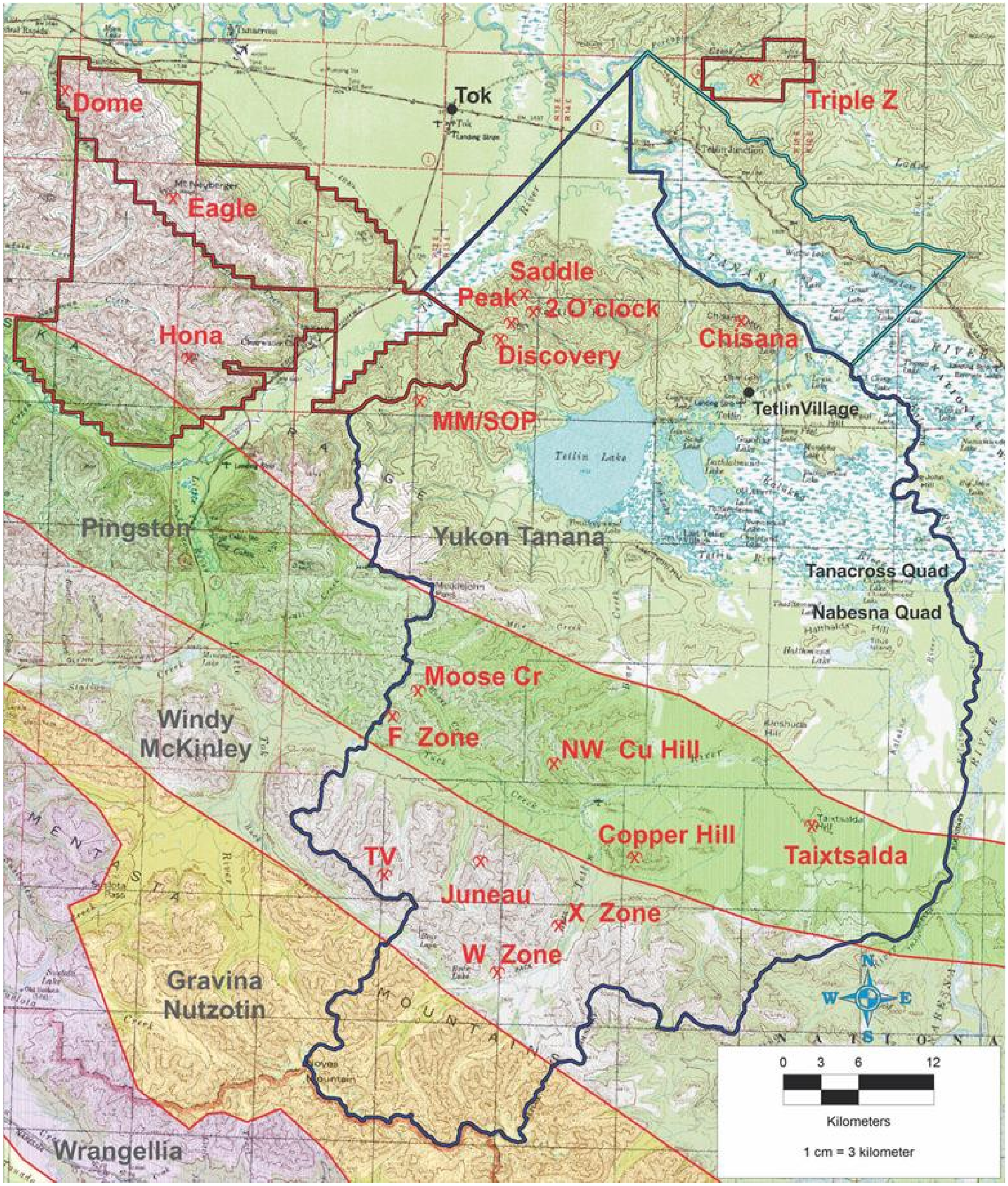
7.1.1 Regional Geology

Relative to most of Alaska, the Peak Gold Project is virtually unexplored and little specific information is available regarding the geological framework or metallic mineral endowment within the Peak Gold Project's boundaries. Terrane models of Alaska refer to the east-central portion of Alaska, between the Yukon River to the north and the Alaska Range to the south, as the Yukon-Tanana Terrane (YTT, Figure 7-1, Nokleberg and others, 1994). Recent work by Allen and others (2013) and Dusel-Bacon and others (2006) suggests the rocks underlying the northern portion of the Peak Gold Project are Middle Paleozoic parautochthonous rocks of ancestral North America that were formed in a continental margin setting before being sutured to the YTT in pre-Jurassic time. For purposes of this report, the distinction between YTT and parautochthonous rocks of ancestral North America will be ignored and the combined subterranes will be referred to collectively as YTT.

The northern 85% of the Peak Gold Project is hosted within the YTT. The current prevailing theory on the origin of the YTT suggests development of a Devonian volcanic arc along the continental margin of the North American craton (Aleinikoff, and others, 1981, Nokleberg, and others, 1994). The YTT in east-central Alaska is bounded on the north by the Tintina Fault and on the south by the Denali Fault. These parallel, dextral strike slip faults form major sutures with up to 400 km of offset since the middle Cretaceous (Flanigan and others, 2000).

Several smaller subterranes located within and adjacent to the YTT on the south have uncertain structural relationships with the YTT. The Windy McKinley and Pingston Terranes occur along the south margin of the YTT and north of the Denali fault. These two smaller terranes consist of a collection of island arc-related assemblages whose origins are complex and somewhat controversial. Foster and others (1994) refer to all of these island arc terranes, with the exception of the Windy McKinley terrane, as additional sub-terranes of the YTT. Allen and others (2013) lump Windy McKinley and Pingston Terranes into a single non-YTT subterrane while Nokleberg and others (1994) lump Windy McKinley and Pingston Terranes into the Jarvis Creek Glacier subterrane of the YTT, a simpler convention adopted by this report (Figure 7-2). The extreme southern end of the Peak Gold Project is part of the Gravina-Nutzotin terrane, a Jura-Cretaceous sedimentary on-lap assemblage comprised primarily of flysch-type sediments that occur immediately south of the Denali fault (Figure 7-1). The Gravina-Nutzotin terrane lies disconformably on the Wrangellia terrane, a complex assemblage of Pennsylvanian and Permian marine volcanic and sedimentary rocks overlain by a thick sequence of Late Triassic submarine and subaerial tholeiitic basalt of the Nikolai Greenstone and associated mafic and ultramafic intrusive rocks and shallow and deep-water calcareous sedimentary rocks.

Figure 7-1: Tectonic Map of the Peak Gold Project

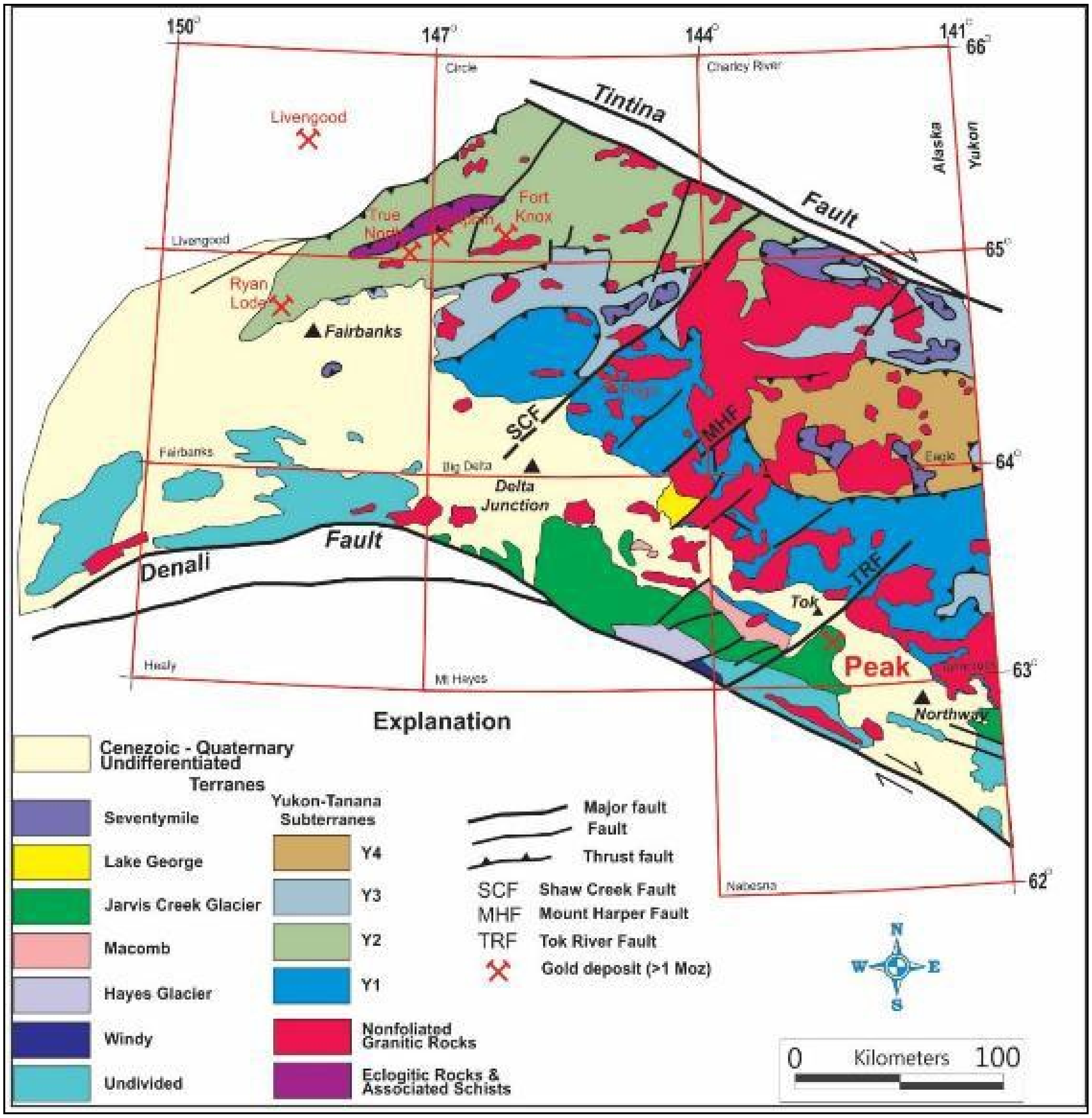


Notes: Gravina Nutzotin belt is a post-accretionary cover on older accreted terranes. Leased Land in blue outline, State Claims in red outline. Land status and prospect locations from Avalon (2018).

Source: Avalon (2018 – adapted from Silberling and others, 1994)

The Peak Gold Project is located largely within poly-metamorphic rocks of the YTT. Mapping by Foster (1970) and Richter (1976) has defined several broad lithologic packages which Nokleberg and others (1992) and Foster and others (1994) correlate with the Jarvis Creek Glacier subterrane, the southern-most of four regionally extensive subterranes identified within the YTT (Figure 7-2). Basement rocks in the Jarvis Creek subterrane are generally greenschist to granulite facies metamorphic rocks of Mississippian or older age. A brief description of these rock types on the Peak Gold Project follows.

Figure 7-2: Regional Geology of the Yukon Tanana Uplands, Eastern and Central Alaska



Source: Geology from Foster and Others (1994); modified by Avalon (2017)

The only published geologic maps available for the Leased Lands on the Peak Gold Project are 1:250,000 scale (1 inch equals 4 miles) quadrangle maps dating from the 1970's (Foster, 1970; Richter, 1976). These regional scale maps provide only a basic framework geology for the Peak Gold Project. The northern half of the Peak Gold Project, primarily in the Tetlin Hills and extending to the northwest onto the Peak Gold Project's Eagle claim block, is mapped as poorly exposed calcareous and non-calcareous quartz-muscovite schist, quartz-biotite gneiss and schist, quartz-hornblende gneiss, quartz-feldspar-biotite gneiss, augen gneiss, quartz-muscovite-garnet gneiss, and quartzite (Foster, 1970). Garnet is a common component in these rocks. Although not mapped by Foster (1970), the Tetlin Hills hosts a significant amount of carbonate- bearing rocks, ranging from clean marbles to calcareous schists with variable but significant carbonate content. These calcareous units, which are host to the Main Peak and North Peak skarn mineralization, generally are less than 2 m to 3 m in individual thickness but can form mixed calcareous schist – pelitic schist packages over 100 m in thickness. Calcareous racks are described in more detail under "Chief Danny Prospect Geology and Structures".

A gradational metamorphic isograd boundary separates higher grade schist and gneiss on the north from lower grade schist and phyllite units to the south. These lower grade rocks consist of light-pink, light green, tan, and gray phyllite, quartz-sericite schist, quartz-sericite-chlorite schist, quartzite, and marble. In the Alaska Range in the southwestern part of the Tanacross quadrangle, these rocks are primarily light pink, light green, gray, and tan phyllite with some included greenstone. Several discontinuous marble beds up to 50 feet thick and associated quartzite units occur in this rock package although they are not mapped separately by Foster (1970) or Richter (1976). Foster (1970) reported two age dates from the biotite gneiss and schist unit on the southeastern end of the Eagle claim block about 10 miles south of Tok near the Tok Cutoff to the Glenn Highway. A Rb87/Sr87 age date returned an age of 120 Ma from biotite while a muscovite sample returned a K40/Ar40 age date of 119 Ma and a Rb87/Sr87 age date of 524 Ma. A Rb87/Sr87 whole rock age date of 1,173 Ma suggesting that rocks are likely Precambrian to Paleozoic in age and have been reset by more than one period of regional metamorphism.

Southward, the rocks become more schistose with quartz-sericite schist, quartz-sericite-chlorite schist, quartz-graphite-schist, and quartzite becoming the dominant rock types. Rocks of this unit are primarily greenschist facies. These lower-grade schists and phyllites are intruded by small bodies of gray altered and metamorphosed diorite that occur as small sills, dikes, and plugs. Intrusives become more common to the south and extend into the northern Nabesna Quadrangle where Richter (1976) mapped these rocks as more continuous sillform bodies and described these units as fine to coarse-grained augite and hornblende- bearing diorite and gabbro. These rocks have an equigranular hypidiomorphic to ophitic textures consisting principally of ophitic augite, saussuritized calcic plagioclase, and minor hornblende. The primary plagioclase and the lack of foliation indicate these diorite to gabbro units were emplaced after the primary folding and metamorphic events in this part of the Alaska Range.

Dark-greenish-gray massive greenstone consisting chiefly of fine-grained epidote, chlorite and albitized feldspar occur in the Copper Hill area of the Peak Gold Project and appears to be in fault contact with overlying marine metasedimentary rocks to the south (Richter, 1976). These greenstone units often are actinolite-bearing and in the Copper Hill prospect area contain <0.5% disseminate fine grained pyrite. These mafic extrusive units are commonly in fault contact above and below with dark-gray phyllite, dark-gray to buff quartzite and calcareous quartzite, light-gray slate, buff to light-gray calcareous quartz mica schist, and light-gray marble. Rocks are isoclinally folded with axial-plane schistosity well defined in the phyllite and schist layers. These phyllite and quartzite units are structurally overlain by dark-to light-gray phyllite and brownish-gray metaconglomerate containing conspicuous stretched clasts and subordinate quartz mica schist, quartzite, calcareous mica schist, quartz-chlorite schist, and thin marble lenses. Rocks exhibit well- defined axial plane schistosity deformed by a later period of kink-folding. Thermal metamorphism has locally produced cordierite- and andalusite-bearing knotty schists peripheral to the widespread plutonic rocks just north of the Denali fault. Gray to dark-gray recrystallized limestone is interbedded with the marine schists and phyllite units, often forming resistant pinnacles along ridgelines. Rugose and tabulate corals from widely scattered localities indicate a Middle Devonian age (Richter, 1976).

The southernmost portion of the Peak Gold Project is hosted in post-accretionary Jura-Cretaceous rocks of the Gravina-Nutzotin terrane which are separated from metamorphic rocks of the YTT by the Denali fault. The Gravina-Nutzotin terrane lies disconformably on the regionally extensive Wrangellia terrane which crops out on the extreme southern edge of the Peak Gold Project (Richter, 1976; Foster and others, 1994). Rocks of the Gravina-Nutzotin terrane include a 900 m thick sequence of dark gray argillite and minor siltstone, mudstone, greywacke, and impure limestone. Conspicuous clasts of light-gray massive limestone, ranging in size from cobbles to house-size boulders, occur sporadically through the lowermost section. Sparsely distributed Buchia fossils throughout the unit indicate a Late Jurassic age. Clasts in the conglomerate consist of well-rounded volcanic and volcaniclastic rocks, limestone, chert, and crystalline igneous rocks derived from underlying strata, and white quartz and metamorphic rocks probably derived from the metamorphic terrane north of the Denali fault. These rocks are regionally extensive and correlative with Jura-Cretaceous flysch units of the Kahiltna Terrane to the southwest (Nokleberg and others, 1994; Silberling and others, 1994).

The Wrangellia Terrane is a regionally extensive allocthonous terrane separated from the YTT by the Denali fault (Nokleberg and others, 1994). The contact between the YTT and Wrangellia is obscured by the post- accretionary Gravina-Nutzotin terrane. Dextral offsets of up to 8 m in a single event have been documented on the Denali fault as recently as 2002. The southern edge of the Peak Gold Project is hosted in the Slana River subterrane, the northern of two east-west trending Wrangellia subterranes in this part of Alaska. The Slana River subterrane consists mainly of:

- A thick sequence of Pennsylvanian and Permian island-arc andesite and dacite overlain by marine limestone, argillaceous chert, volcaniclastics and tuffs of the Tetelna Volcanics, Slana Spur Formation and Eagle Creek Formation which are part of the Skolai arc;
- A 1,500 m thick sequence of disconformably overlying massive basalt flows of the Late Triassic Nikolai Group and co-genetic gabbroic and ultramafic intrusives; and
- Late Triassic limestone.

Rocks of the YTT, Pingston, Windy McKinley, Gravina-Nutzotin and Wrangellia Terrane are extensively intruded by Mesozoic and Cenozoic granitic rocks (Foster and others, 1994; Illig, 2015, Benowitz and others, 2017, Sicard and others, 2017, Twelker and others, 2018, Figure 7-1). These largely unfoliated, predominantly felsic to intermediate, plutonic rocks reach batholithic proportions east of the Shaw Creek fault (Foster and others, 1994, Figure 7-2). Radiometric age dates indicate that most of the plutonic rocks west of the Shaw Creek fault are mid-Cretaceous to early Tertiary, whereas plutonic rocks east of the Shaw Creek Fault range from Late Triassic to Late Tertiary. Age dates have been used to subdivide the plutonic rocks of the YTT into three distinctive groups:

1. Late Triassic – Early Jurassic (215 Ma – 188 Ma);
2. Mid- to Late Cretaceous (110 Ma – 85 Ma, with most clustering from 95 Ma – 90 Ma); and
3. Latest Cretaceous to Eocene (70 Ma – 50 Ma) in two subgroups that cluster around 70 Ma and 55 Ma.

The oldest suite consists of granite, granodiorite and diorite, and occurs only in the eastern YTT, largely confined the Y4 subterrane (Figure 7-2). This suite is thought to represent the roots of an island arc, and has been correlated with the Klotassin Suite in the Yukon Territory. The Triassic-Jurassic plutonic rocks include the Taylor Mountain and Mount Veta batholiths in the Eagle and northern Tanacross quadrangles. The mid- to Late Cretaceous suite consists largely of granite, but ranges from quartz monzonite to diorite, and has been correlated with the Tombstone suite in the Yukon Territory (Flanigan and others, 2000). These plutonic rocks probably were derived from crustal melts, but may be mantle-derived with significant contamination of continental material. The youngest suite generally consists of small plutons ranging from syenite to diorite. These plutons are generally quartz-rich and corundum-normative, suggesting derivation from crustal melts of continental material. The mid-Cretaceous intrusives are genetically linked to IRG deposits in the Tintina Gold Belt of Alaska-Yukon however IRG deposits have been documented in intrusive rocks as young as 56 Ma (Freeman, 2010). The 50 Ma to 70 Ma plutonic rocks are genetically associated with two ages of porphyry copper-molybdenum systems that are known in eastern Interior Alaska, including the Peak skarn deposits and the gold mineralization associated with the Hona prospect (Benowitz and others, 2017, Illig, 2015, Newberry and others, 1998).

Both argon-argon and uranium-lead dating was conducted by Illig (2015) on rocks from the Main Peak skarn and surrounding rocks. Age dates from the hornblende quartz monzonite on Mohawk Ridge immediately west of the Peak skarn deposit returned mean 40Ar / 39Ar ages for hornblende of 69.4 + 0.5 Ma and a nearly identical uranium-lead zircon age of 69.7+ 0.2 Ma. Both of these ages are slightly younger than the 40Ar / 39Ar ages of 71.5 + 0.5 Ma age returned from hornblende in the Peak skarn. Given these dates, the causative pluton responsible for the Peak skarn deposit and other skarn-related mineralization in the Chief Danny area remain unknown.

A multi-phase, batholithic-scale plutonic complex intrudes the southern end of the Peak Gold Project just north of the Denali fault (Richter, 1976). Mineralogical and petrological differences identified by Richter (1976) allowed this +20-mile long southeast trending plutonic body to be broken down into two major phases, the Cheslina and Tok-Tetlin plutons. The Tok-Tetlin pluton was further subdivided into three additional subphases, the Tetlin, the Mineral Cairn and the Tok phases. The Cheslina pluton is located southeast of Copper Hill and straddles the southwestern boundary of the Peak Gold Project. This pluton is predominantly medium-grained biotite-hornblende granodiorite with a marginal phase of hornblende-biotite quartz diorite and minor hornblende monzonite. The marginal phase is fine grained and locally porphyritic. The age of the Cheslina pluton is uncertain and its relationship, if any, to the larger Tok-Tetlin pluton is not known.

Within the southern Peak Gold Project area, the Tok-Tetlin plutonic body is the dominant plutonic rock type between Tuck Creek on the north and the Denali fault on the south. Contacts between the three main phases of the complex range from sharp between the Mineral Cairn and Tok phases to gradational between the Tok and Tetlin phases (Richter, 1976). All phases yield K-Ar ages within the interval of 92 Ma to 94 Ma. The Tetlin phase forms the bulk of the pluton and consists predominantly of porphyritic biotite-hornblende quartz monzonite locally gradational to biotite-hornblende granodiorite. Rocks contain abundant and conspicuous twinned phenocrysts of orthoclase, as much as 6 cm long, in a medium-to coarse-grained groundmass (Richter, 1976). The Mineral Cairn phase of the complex includes a long linear body and two segmented extensions immediately north of the Denali fault. This unit is characteristically foliated and consists predominantly of porphyritic biotite-hornblende granodiorite and quartz monzonite with minor biotite diorite containing phenocrysts of both plagioclase and orthoclase. The Tok phase of the complex was mapped from the Little Tok River on the west to about half way to the Tetlin River on the east where it is in gradational contact with the Tetlin phase of the complex. The Tok phase is chiefly fine to medium-grained biotite-hornblende granodiorite that is locally porphyritic with small phenocrysts of both plagioclase and orthoclase (Richter, 1976).

South of the Denali fault intrusives of the Buck Creek pluton intrude the Gravina-Nutzotin terrane country rocks (Richter, 1976). The Buck Creek pluton consists of three elongate plutons comprised chiefly of hornblende quartz diorite and syenodiorite with subordinate leucocratic hornblende granodiorite. The diorite contains small irregular masses and layers of pyroxene hornblendite and hornblende-mica peridotite. This plutonic rock is locally strongly foliated and likely has been structurally deformed due to its close proximity to the Denali fault.

Volcanic rocks were erupted during the Cretaceous and Cenozoic and are largely concentrated in the eastern YTT in the northern Tetlin Hills and across the Tanana River valley north of the Peak Gold Project. The Tertiary and Holocene volcanic rocks range from rhyolite to basalt. Interlayered bi-modal sequences occur locally. Foster (1970) mapped felsic volcanics capping the hills immediately north of the Peak Gold Project however, the rubble and outcrop pattern of the quartz porphyry (on the flanks of the main ridge) suggests a possible sill-form intrusion, or a steep, semi-circular-shaped (ring-dike) intrusion in this area.

Illig (2015) conducted argon-argon dating of hornblende from volcanic rocks on the North Saddle prospect about 600 m north of the Peak skarn. These volcanic rocks occur on the down-dropped (north) side of the northwest-trending Tors fault system. Diamond core drilling indicates the volcanic rocks lie disconformably on older metamorphic rocks. Age dates from the hornblende andesite volcanic rocks returned a mean $^{40}Ar/^{39}Ar$ age of 75.5+0.7 Ma, indicating these rocks are significantly older than both the Mohawk pluton and the Peak skarn, suggesting motion on the Tors fault was pre-mineral relative to the skarn deposits at Main Peak and North Peak. A more detailed discussion of the Late Cretaceous volcanics in the area is presented under "Chief Danny Prospect Geology and Structures".

Alpine glaciation has affected elevations above 4,500 feet on the southern edge of the Peak Gold Project however, most of the Peak Gold Project escaped Pleistocene continental glaciation (Foster, 1970; Foster and others, 1994; Richter, 1976). Variable thicknesses of aeolian silt were deposited on bedrock in most areas of the Peak Gold Project north of Tuck Creek. This silt ranges in thickness from a few centimeters to more than 10 m and forms discontinuous permafrost on north-facing slopes and in some of the larger river valleys. This extremely fine-grained exotic metal-barren silt rests on variably weathered bedrock and effectively masks the geochemical signature of underlying bedrock.

7.1.2 Regional Structure

Large-scale metamorphic and structural features within the Peak Gold Project area are closely tied to regional scale consolidation of autochthonous and allochthonous subterranes prior to 85 Ma and deformation of those sutured subterranes since that time (Flanigan and others, 2000, Figure 7-2). The precise ages of regional metamorphism in the Peak Gold Project are known only from associated age dating conducted in other parts of the YTT (Allen and others, 2013; Hansen and Dusel-Bacon, 1998, 2006; Day and others, 2000, Douglas, 1997). Sicard and others (2017) report $^{40}Ar/^{39}Ar$ ages of 121.6 Ma for greenschist facies rocks in the southern Hona claim block area and $^{40}Ar/^{39}Ar$ ages of 124.7 Ma for amphibolite facies rocks on the north side of the Hona block. Foster (1970) reported two age dates from the biotite gneiss and schist unit on the southeastern end of the Eagle claim block about 10 miles south of Tok near the Tok Cutoff to the Glenn Highway. A Rb^{87}/Sr^{87} age date returned an age of 120 Ma from biotite while a muscovite sample returned a K^{40}/Ar^{40} age date of 119 Ma. A Rb^{87}/Sr^{87} age date of 524 Ma and a Rb^{87}/Sr^{87} whole rock age date of 1,173 Ma suggest that rocks are likely Precambrian to Paleozoic in age and have been reset by more than one period of regional metamorphism. Palinspastic reconstruction of volcanic centers along the Tintina fault (Ptarmigan Hill, Grew Creek) suggest approximately 450 km of dextral displacement since 55 Ma (Flanigan and others, 2000).

While there is still debate about the causes of these metamorphic events, at least two reginal metamorphic events have been documented in Interior Alaska. The older event occurred from Late Permian to pre-Late Triassic time and metamorphosed rocks to the greenschist and lower amphibolite grades (Allen and others, 2013). The younger, better defined event, has been dated at several locations in Interior Alaska at 130 Ma to 105 Ma and ranged from lower greenschist to upper amphibolite facies (Douglas, 1997; Hansen and Dusel-Bacon, 1998). The district and prospect-scale northwest-trending structural fabric common to the Peak Gold Project area is thought to date from this younger metamorphic event, coinciding with underthrusting of the Farallon plate from south to north along what eventually became the trace of the Denali fault (Flanigan and others, 2000). This deformational event is manifest by isoclinal and recumbent folds, overturned to the north (F1 folding) and warped into a broader NW-SE trending open fold system (F2 folding). Low angle thrust ramps likely formed in some areas where foreshortening was extreme. Evidence for reversion of these thrust ramps into gravity structures is possible but lacking in the Peak Gold Project area.

North-directed thrusting associated with subduction of the Farallon plate is thought to have ceased by 85 Ma after which transformation to a dominantly dextral strike-slip structural regime occurred, continuing to become simultaneous with post-Paleocene movement along the Tintina fault. Strike-slip motion on the Denali fault continues to the present. The shear couple set up between the Tintina and Denali faults created a number of sympathetic, northeast and northwest-trending faults within the YYT. Some of these structures controlled and/or hosted mineralization and have been identified on the Peak Gold Project.

The Shaw Creek, Mount Harper and Tok River faults (Figure 7-2) are prominent, regional-scale northeast- trending faults that are conjugate to these large-scale strike-slip structures. The structures have significant dip slip and variable left lateral strike-slip offset and dissect the YTT subterranes into horsts and grabens exposing significantly different basement rocks across Interior Alaska. The northeast trending Tok River Fault passes through the Peak Gold Project immediately northwest of the Main Peak – North Peak resource deposits along the trace of the Tok River. Geological interpretation of airborne magnetics from the Peak Gold Project (Fugro, 2011; Fugro, 2013) and from the State Division of Geological and Geophysical Surveys (Emond and others, 2015) suggests that approximately 5 km of left lateral offset occurs along the Tok River fault (Cook, 2016, written communication). The extent of vertical offset on the fault is unknown however the presence of more numerous and larger footprint intrusive rocks mapped on the northwest side of the Tok River fault suggest significant northwest side up motion (Sicard and others, 2017; Foster, 1970).

Sympathetic faults paralleling the Denali and Tintina faults (NW-SE in the Peak Gold Project area) also are common and include faults that control the valleys of Tuck Creek, the Tanana River and several drainages in the Tetlin Hills (Nokleberg and others, 1992). The magnitude of right lateral offset along these structures is unknown. Extensive thrusting is present in some areas of the YTT (Foster and Keith, 1974, Weber and others, 1978, Day and others, 2000). Low angle gravity structures have been documented at the Pogo deposit in the adjacent Lake George subterrane where it is spatially and genetically associated with Northern Star Resources' 8 Moz Pogo gold deposit (Smith and others, 2000; Ebert and others, 2003). Such structures may be present on the Peak Gold Project but have not been identified in the field due to extensive periglacial and vegetative cover and lack of detailed district scale geologic mapping.

7.1.3 Regional Mineralization

From a regional perspective, the northern part of Peak Gold Project is located in rocks that are highly prospective for mid-Cretaceous intrusive related gold deposits as well as two intersecting belts of mid-Cretaceous to mid-Tertiary porphyry copper-molybdenum-gold deposits such as the Peak Gold-controlled Triple Z prospect (Newberry and others, 1998, Van Treeck and Wolf, 2013) and porphyry-related deposits such as the Main Peak and North Peak distal gold skarn deposits discussed in this report. These prospective mineral belts overlap on the Peak Gold Project (Newberry and others, 1998). These genetically different types of mineralization occur extensively in eastern Interior Alaska and the western Yukon Territory and are host to dozens of known gold and copper prospects, deposits and active mines outside of the Peak Gold Project boundaries (Ebert, 2003; Lang and others, 1999; Lang and others, 2001; Hart and others, 2002; Hart and others, 2004; Flanigan and others, 2000; Mortensen and others, 2000; McCoy, 1999; McCoy and others, 1997; McCoy and others, 2002; Bundtzen and Miller, 1997; Eremin, 1995; Baker, 2002; Baker and others 2006; Klipfel and Giroux, 2009; Young and others, 1997; Newberry and others, 1997; Newberry, 2000, Doerksen and others, 2016). A more complete discussion of these geologic models relative to the Peak Gold Project is presented in Brown and others, (2010), Van Treeck and others (2013) and Van Treeck and others, (2014).

The southern half of the Leased Land is virtually unprospected except for reconnaissance pan concentrate and stream sediment sampling conducted by Juneau / Contango in 2009 and 2010 (Brown and others, 2010) and limited geophysics and core drilling conducted in 2018. Limited airborne magnetic and electromagnetic surveys and Titan 24 DCIP/MT ground geophysics has been conducted on the southern half of the property and initial core drilling (six holes, 1,402m) at Copper Hill was conducted as this report was being compiled. Excluding that portion of the Peak Gold Project south of the Denali fault, extrapolation of mineralization from outside of the Peak Gold Project suggests the southern portion of the Peak Gold Project is prospective for:

- Paleozoic volcanogenic massive sulfides such as those defined in the Delta District to the west (Dashevsky and others, 2003);
- Structurally controlled orogenic gold systems such as Rhyolite Resources' Shalosky prospect in the southern Delta District (www.rhyoliteresources.com);
- Structurally controlled gold and antimony mineralization in the Stibnite Creek area (Wypych and others, 2015); and
- Porphyry copper-gold systems such as the previously discussed Hona prospect (Sicard and others, 2017, Twelker and others, 2016).

The Peak Gold Project also has limited prospectivity for Triassic age nickel-copper-platinum group element deposits hosted in regionally extensive mafic and ultramafic rocks south of the Denali fault (Ellis and others, 2004) however Wrangellia terrane rocks are largely covered by Cretaceous on-lap flysch units of the Gravina-Nutzotin terrane.