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Teeshin Resources Ltd.  
DOME MOUNTAIN PROJECT

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## 2.2.2 Local geology

The Dome Mountain gold property consists of several known gold-bearing quartz vein structures. These occurrences are widespread, trending northwest over a distance of 4000 metres from the Forks- 9800 Zone to the Ptarmigan Vein. The distance across from the Free Gold to the Jane-Chisholm Vein is almost 3000 metres. Recent exploration work has been successful in joining several independent showings into longer continuous structures such as: the Boulder-Fedral Shear Zone, the Forks-9800 Zone, the Chisholm-Jane Vein and the Hawk-Gem Vein. There are some similarities common to all of the known veins.

### 2.2.2.1 Boulder-Fedral shear zone

The Boulder-Fedral Shear Zone lies central to the property, striking east-west for a known distance of 1000 metres. From east to west it includes four mineralized zones: the Argillite Zone, Boulder Zone, Cabin Vein and Fedral Vein. At the eastern end, the structure turns in a southeastern direction and veins appear to splay out into several smaller quartz stringers marking the eastern extent. On the western end, the full extent has not yet been determined. To date, this structure is the largest and most explored; it has the best economic potential disclosed on the property. Although the structure occurs for more than 1000 metres, economic reserves have only been established in the eastern end, at the Argillite and Boulder Zones.

Although base metal and precious metals have only low values along much of the structure, pyrite and alteration minerals are present for its entire length. The widest portion of the shear zone occurs just west of the Cabin Vein, while the area falling between the Cabin and the western end of the Boulder Zone is quite narrow (50 cm). The structure dips from 45 to 60 degrees south on the east and is sub-vertical dipping north on the west. Although the quartz veins hosted within the shear zone are characteristically erratic in orientation and continuity, the Boulder-Federal Shear Zone maintains uniformity in strike direction. To date, no other structure having a similar east-west orientation has been located on the property. The various zones in the structure differ somewhat in character, grade and economic potential.

#### 2.2.2.2 Argillite zone

The Argillite Zone was discovered in late 1986. During March 1987, a diamond drill program was completed on this area totalling 1238.97 metres. This demonstrated ore reserves contiguous with the Boulder Zone.

The Argillite Zone is distinguished from the Boulder Zone because the veining occurs within and along a contact between an argillite-dark siltstone unit and the underlying volcanic andesite and lapilli tuff units. The name "Argillite Zone" is used because quartz and quartz carbonate veining occur within an argillite unit along its lower and eastern contact. The zone is in the shape of an elongated bowl. To the north, the argillite unit is interfingered with dacite or volcanic

tuff units. The argillite unit shows horizontal bedding structures and varies in composition from a black argillite to a grey siltstone. In areas adjacent to veining, abundant folding and deformation of the bedding is evident. The southern extent of this unit has not yet been determined. The argillite unit and the depositional features of the mineralized quartz veins have a striking resemblance to the Forks-9800 Zone, except in strike and dip orientation. Because the argillite offered a less competent host, it is evident that the mineralizing solutions flooded out into the host rock, which is not common elsewhere. This migration of gold-bearing quartz solutions followed the bedding planes spreading outward from the main vein.

The gold-bearing quartz veins are similar in mineral assemblage and grade to the Boulder Zone, except that the alteration is not as noticeable. The ore shoot structures are more complex. The veining appears as a series of en-echelon lenses that run from the outcrop surface to a limited depth. Grades have ranged up to several ounces for gold and silver. Apparent ore widths are quite variable and range from several centimetres to several metres. One of the more difficult aspects of this zone is that it has an average of 18 metres of overburden, making it costly to drill from surface.

#### 2.2.2.3 Boulder zone

The Boulder Zone was discovered by Noranda Exploration in late 1985 through trenching. It occurs along the eastern end of the Boulder-Fedral Shear Zone with an east-west strike and dips from 45 to 65 degrees south.

The Boulder Zone appears to plunge south-east, with the main zone having a south-westerly rake. The gold-bearing quartz and quartz carbonate vein is segmented as quartz veins, lenticular pods and areas of brecciation. The main shear generally marks the contact between the altered quartz-chlorite hanging wall and the unaltered maroon volcanic andesite and lapilli tuff footwall. Above the shear occur one or more quartz veins enveloped within a bleached zone of intense alteration, averaging seven metres in width. The erratic nature of the quartz veining is clearly exposed in the underground drifting. The width and orientation of a particular vein can change very abruptly by one or more of the following structural controls: folding of the vein; offset or truncation of a vein by post-ore faulting or shearing; thickening of the vein by a series of smaller thrust shears within the vein; or, areas of brecciation where the vein has been fragmented and then re-cemented with quartz.

The Boulder Zone is in fact a bleached zone within which one or more highly variable ore-bearing quartz veins or lenses are hosted. Within the boundaries of the bleached zone, the quartz vein may split into two or more shoots or occur as overlapping pods or lenses divided by a section of barren, but highly altered, bleached rock. Associated with the vein in the hanging wall only are smaller quartz vein stringers. Some of these stringers contain economic mineralization and others contain only pyrite mineralization. In areas where thickening or stacking has taken place within the vein, widths up to 5 metres can be achieved with no dilution of grade. In areas where veins widened through

folding, brecciation or flooding, grades are often diluted. In the delineation of the Boulder Zone, it is better to outline the bleached zone rather than to attempt to correlate each vein structure.

Alteration features surrounding the Boulder Zone are relatively clear. From surface to the bleached zone on the hanging wall, rock alteration ranges from weak to moderate. The andesite, lapilli tuff and agglomerate units vary in colour from maroon to dark green to light green depending on the degree of alteration. Alteration is a product of extraction and replacement, where the iron content has been leached out and replaced by chlorite, sericite and silica. The bleached zone is characterized by a buff to lime green to white colour and often appears foliated. All evidence of volcanic fragments has been obscured. Disseminated cubic pyrite crystals are commonly present in this unit. On the footwall side of the vein, the andesite, lapilli tuff and agglomerate units are relatively unaltered. Only small quartz-carbonate and carbonate stringers related to the mineralizing hydrothermal activity occur in the maroon to brick red footwall rock. Small 10 to 30 centimetre envelopes of chlorite-silica alteration flooding are visible along some of the stringers.

The Boulder Vein hosts a base and precious metal assemblage which generally occurs in the following order of abundance: pyrite, sphalerite, galena, chalcopyrite, silver and gold. Base metal sulphide minerals often occur as segregated bands of pyrite, sphalerite and galena. Chalcopyrite is most frequently intermixed with the pyrite mineralization. Pyrite can

occur from thin banding to massive pods and has a granular to massive texture. If a vein hosts pyrite in cubic or sub-cubic crystal form, other sulfide minerals and precious metals are not associated. Cubic pyrite is also the only sulfide which has flooded out into the wall rock. It is felt that the cubic pyrite was deposited during a separate mineralizing phase.

Gold grades vary from as high as several ounces to lesser amounts, but cannot be seen as visible gold. Microscopically, gold occurs as tiny granules which are loosely bonded along the outer boundaries of the pyrite grains and within minute fractures within the pyrite sulfides. For this reason, liberation of gold in metallurgical testing has resulted in an anticipated high rate of mill recovery. Little is known about the accompanying silver, which grades several ounces. Silver is felt to be directly associated with the presence of galena and/or sphalerite and probably occurs as tetrahedrite. Due to low anticipated recoveries of the silver, it will have limited economic contribution.

### 2.3 Mining

The proposed mine site layout is shown in Figure 2.3-1. Mining of the Boulder and Argillite Zones is planned primarily as an underground mining operation, however ore close to the surface will be mined as a small open pit operation. Initially, mining will be at 360 metric tonnes per day and after five months will increase to 450 metric tonnes per day.