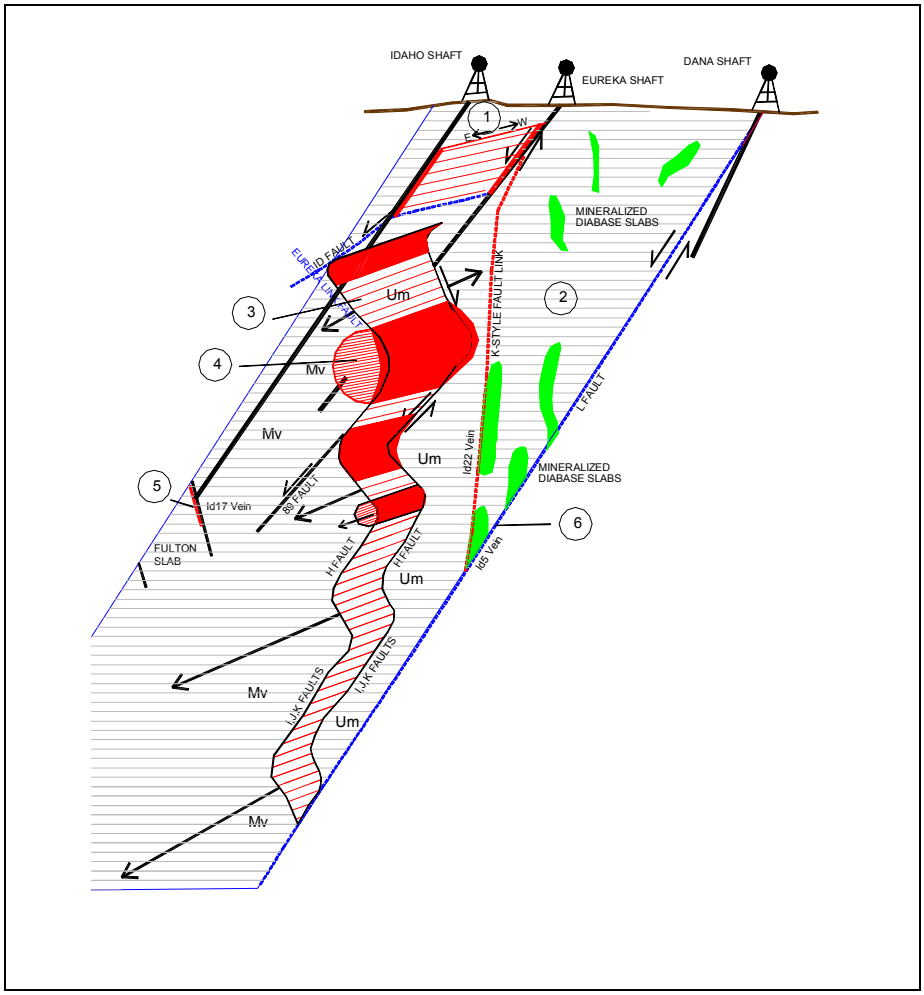
8.0 DEPOSIT TYPES

The Idaho-Maryland Mine is a structurally controlled, mesothermal lode gold deposit for which Emgold has developed a revised, comprehensive deposit model. This model identifies structural features that act as potential hosts to auriferous vein sets and account for the varied deposit types and vein arrays that can occur within any individual vein set. This model is schematically shown in Figure 8-1.

Figure 8-1: Idaho-Maryland Mineralization Types



The development of mineralized vein sets is controlled by four structural features. These are:

- mine-scale boudinage neck features developed within the serpentinite matrix of the Spring Hill Mélange unit
- contact areas of the tectonic slabs within the serpentinite matrix of the Mélange unit
- local flexures and irregularities in the plane of the Weimar Fault Zone can create quartz stockwork zones
- high-grade vein arrays localized in association with bench-like dislocations along the Brunswick Slab contact.

The mineralization is further controlled in veins of a particular vein set by any one of six structural settings. They are:

- Rock competency contrast areas: development of an oreshoot along the contact between soft, ductile serpentinite and hard, brittle tectonic slabs at bends along the contact, at dilational jogs, or at offsets/benches in contact associated with incipient attenuation and boudinage
- Wedge-shaped areas between intersecting faults: stacked arrays of shallowly dipping veins can comprise large bulk mineable deposits containing free gold
- Simple concave or convex bends along fault planes
- Vein splits, which are usually manifested at bends along fault planes
- Drag folding of vein structures associated with cross faulting, resulting in vein horsetails and/or mirror-image oreshoots localized in the vein on both sides of a cross fault
- Intersection of steep and shallowly dipping vein members of any vein sets.

Lithology of the vein-hosting units can also be important in localizing mineralization within vein sets. Three lithologic controls are identified:

- Highly graphitic fault planes or partings within interflow sedimentary units. These are found within tectonic slabs composed of intermediate volcanic/volcaniclastic rocks.
- Competent/incompetent rock unit contacts.
- Iron-enriched mafic lithologies. These would include pyritized, chloritized diabasic slabs.