Mafic Extrusive VAMS Cu-Pb-Zn-Ag-Au (Besshi style)

Province:

Potential: **Certainty:**

Index (out of 10):

Critical Elements (Assessment Criteria)	**Identified**	**Not Identified, but likely**	**Unlikely**	**Weighting**
Setting • Sediment-covered oceanic ridges proximal to continental land masses • Rifted continental margins; intracontinental rifts • Back-arc basins				
Source (fluid, metal, energy) • Fluid: seawater; mafic (tholeiitic basalt) ± ultramafic (rare) • Metal: seawater; footwall volcanics and clastic rocks (mafic for copper); • Energy: mafic ± ultramafic magmatic chamber; subvolcanic intrusives (plagio-granites, sometimes rhyolite)				
Fluid pathway • Large faults (often growth faults), parallel to axis of the fossil ridge, controlling the rift system				
Trap (any of the following) (predominantly structural) • Structural: Small scale normal faults and second order rift systems • Chemical: interaction with seawater				
Signs of mineralising process (any of the following, but if occurrences have been identified the level of certainty				

increases)
• Wall rock alteration (often overprinted by metamorphism) (any of the following):
  • Chloritic, silicic, tourmaline alteration, albitisation
• Geochemical
  • Jasper-quartz-magnetite rich and/or Mn rich pelagic/hydrothermal sediments.
• Geophysical (not quite important): Electrical (E.M.; I.P.; Resistivity).
• Known occurrences				

Preservation • Age: Not important but younger systems have higher chances of being preserved.				