Assumes that the stock located in a more structurally breached the paleo-surface, higher tonnage orebodies may be environments, and that for stocks with associated breccias that of fluid and volatiles from an otherwise fertile magmatic- discovered first due to the outcropping breccia, its two Mo volcanism whereas these were lacking at the Mount Emmons stock. magma recharge events into the bottom of the two stocks are not paleo-depth differences of the top of the stocks and the number of geologic settings or exposed at different erosional levels. Intrusive magmatic parent event, we can investigate local causes of mineralization. Phreatomagmatic and phreatic eruptions are interaction of subsurface groundwater with magma

**Observed**

**Climatic-zone porphyry Mo**

**Scenario 1** Assumes that the shallower stock will preferentially undergo a magmatic-hydrothermal-volcanic eruption due to a higher chance of decompression and groundwater interaction with melt.

**Scenario 2** Assumes that the stock with a higher rate and/or larger melt recharge rate will preferentially undergo a magmatic-hydrothermal-volcanic eruption due to a higher chance of cataclysmically breaching porphyry confining pressure.

**Discussion & Conclusion**

Scenario 3 is most likely based on observed geology. The stock associated with the intersection of larger faults likely had a higher chance of rapid decompression, resulting in an eruption. The overprinting rubbly breccia pipe, which cuts the Upper Redwell deposit, may have been a result of increased groundwater flow within the fault intersection and previous eruption zone, resulting in a second phreatomagmatic eruption.

Scenario 3b is also viable if the number of chilled margins is an indicator of melt injection rate into the base of the stocks (higher rate of melt injection preventing full cooling of previous melt). A higher rate is more likely to produce a phase separation and, with wallrock, increasing the likelihood of a catastrophic rupture, rapid decompression, and subsequent eruption.

Scenario 3a is somewhat viable because the rubbly of the volcanic pipe is more competent than the surrounding sediments. If true, this scenario was likely not the main reason for localization of volcanism over one stock.

From an exploration perspective, the breccia pipe is larger and easier to identify on the surface, but the loss of volatiles during at least two eruptions and the overprinting of one of the ore zones resulted in a lower resource for that stock. A larger resource might be near-