Comparison of Meguma Gold to other Mesothermal Deposits

Geology Matters 2014

Experts on the ground



Opportunities on the ground

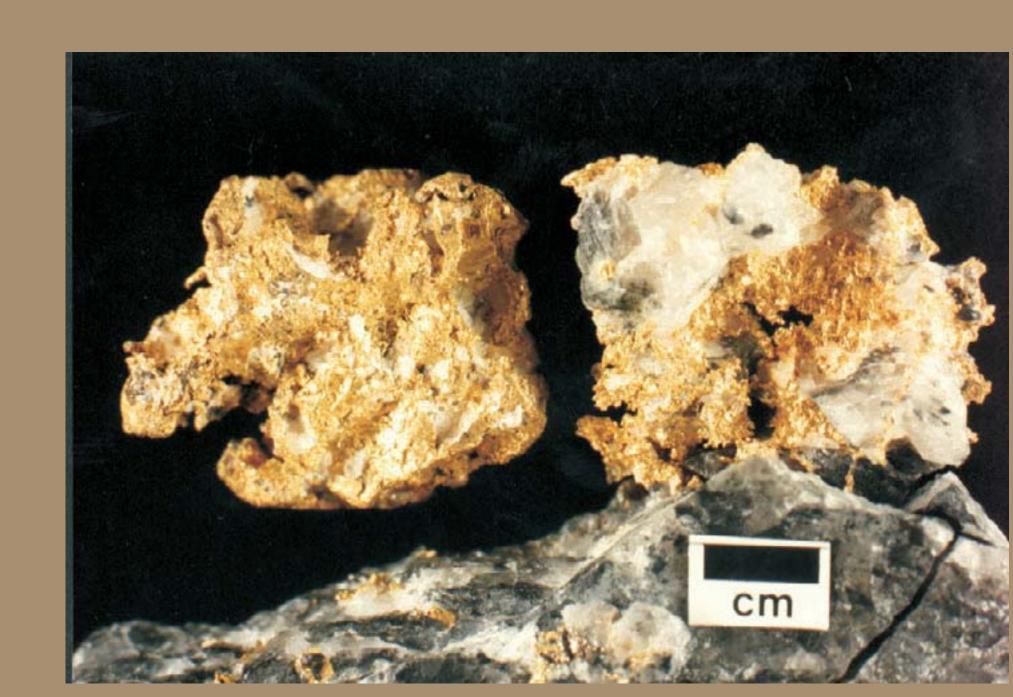
Geoscience and Mines Branch



Abstract:

Mesothermal gold deposits share common characteristics throughout the world. An examination of the goldfields of Victoria, Australia, and the Reefton area of New Zealand, where gold production has had an extensive history, allows for comparison to the Meguma Terrane of Nova Scotia, Canada. The deposits of the three areas are all hosted by Cambrian to Ordovician turbidite sequences that have undergone greenschist facies metamorphism. All three regions were later intruded by Devonian or younger granitoids that do not have any apparent relationship to the mineralization. The primary high-grade gold deposits are hosted by a variety of narrow quartz veins associated with minor chlorite, iron-carbonate, and sulphides. Alteration of the host rock is prevalent in all three regions and low-grade disseminated gold deposits have been found in the alteration zones. Veins are associated with tight folds, faults and dilation structures. The vein thickness and the ore grades are similar in all three regions. Although the depth of mining is much greater in Australia there is good evidence that the mineralization in the Meguma Terrane also extends to 600 m or more. The "Ribbon Model" proposed for the Bendigo

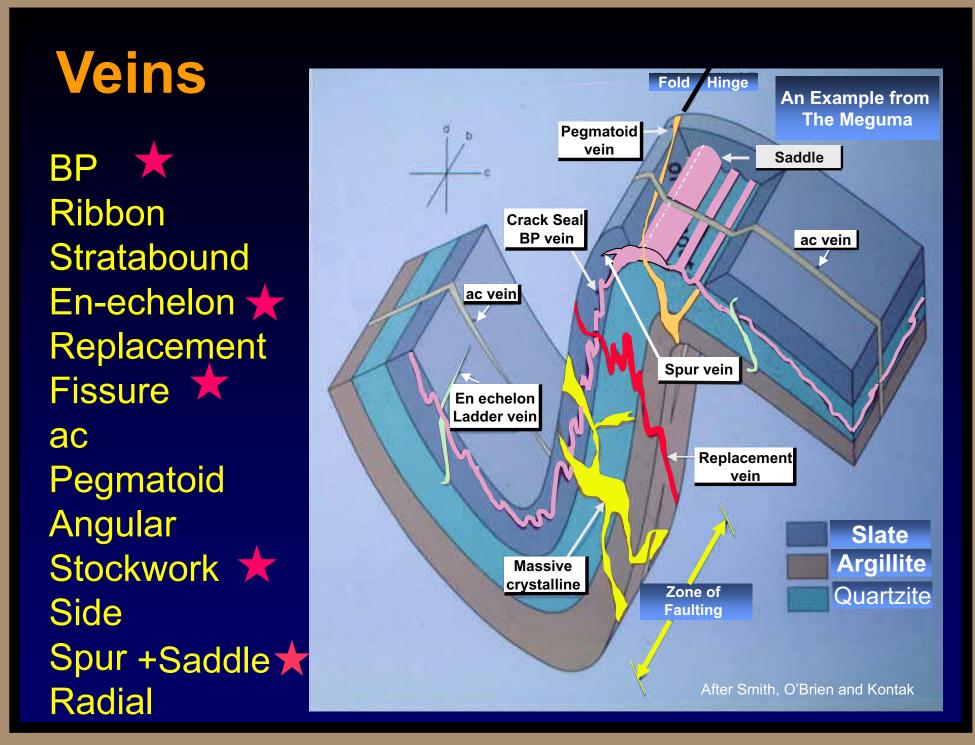
deposits of Victoria can also be applied to the gold deposits in Nova Scotia. The model suggests that there are multiple sub-parallel ore shoots that occur at depth within the gold deposits. It is clear that comparisons made between the three mesothermal gold regions provide opportunities to modify exploration models based on observations from the other districts.



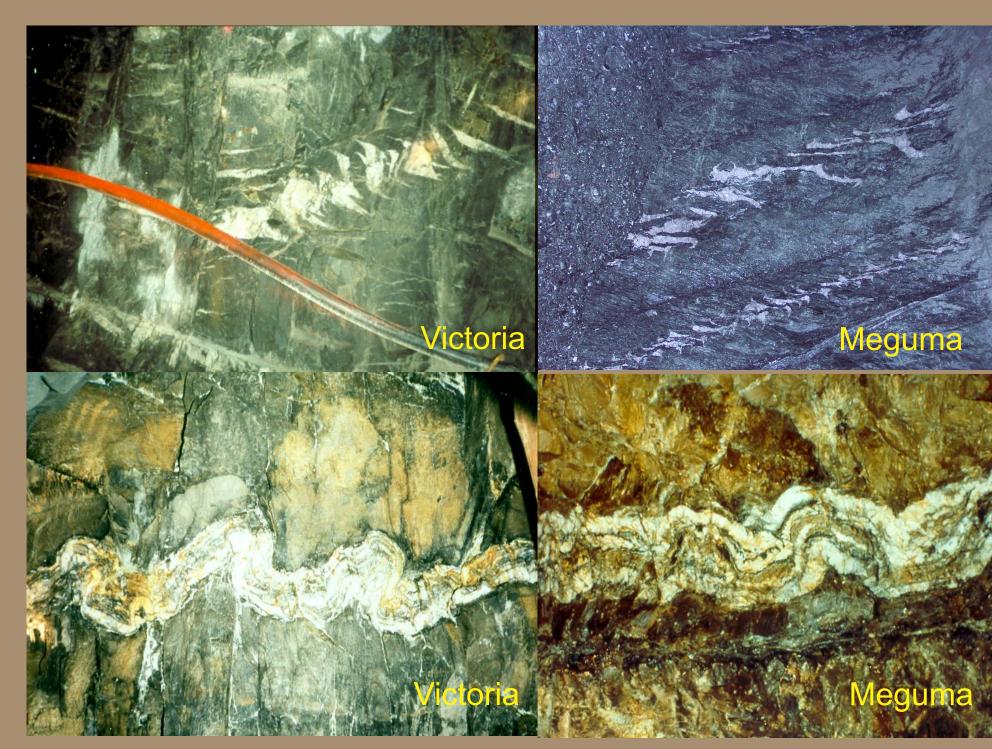
Nova Scotia Gold Deposits

Distribution of Meguma Gold Occurrences

★ =>20,000 oz. historical production



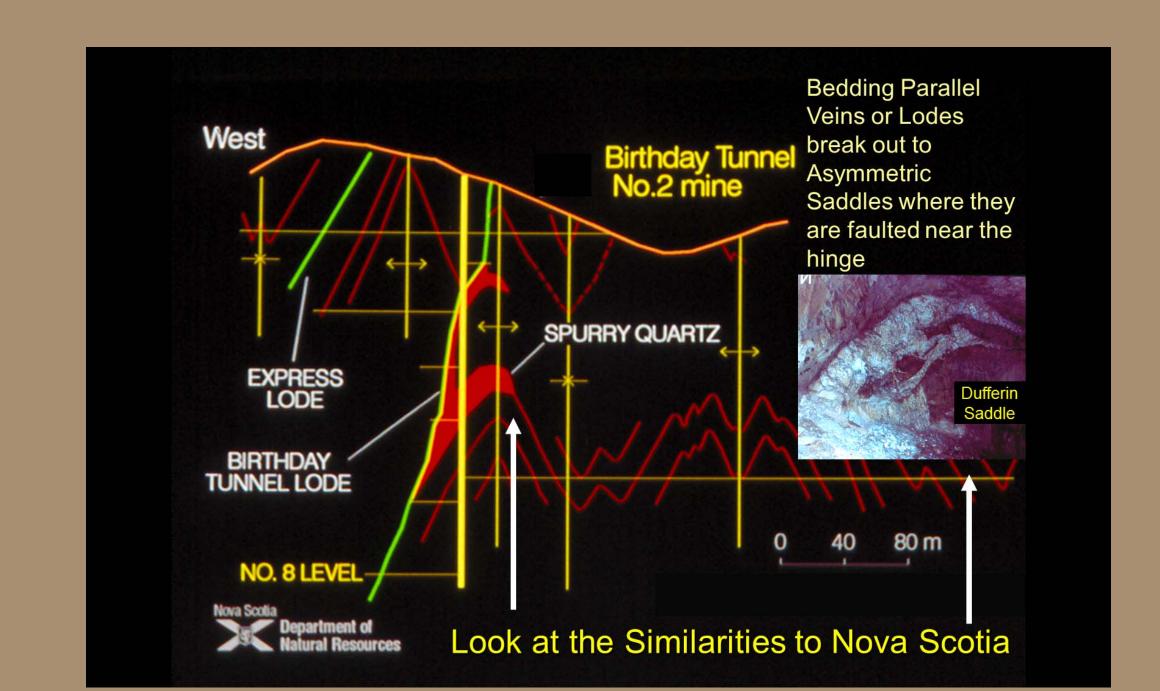
Vein Types in the Meguma Terrane



Comparison of Veins from Victoria to Meguma

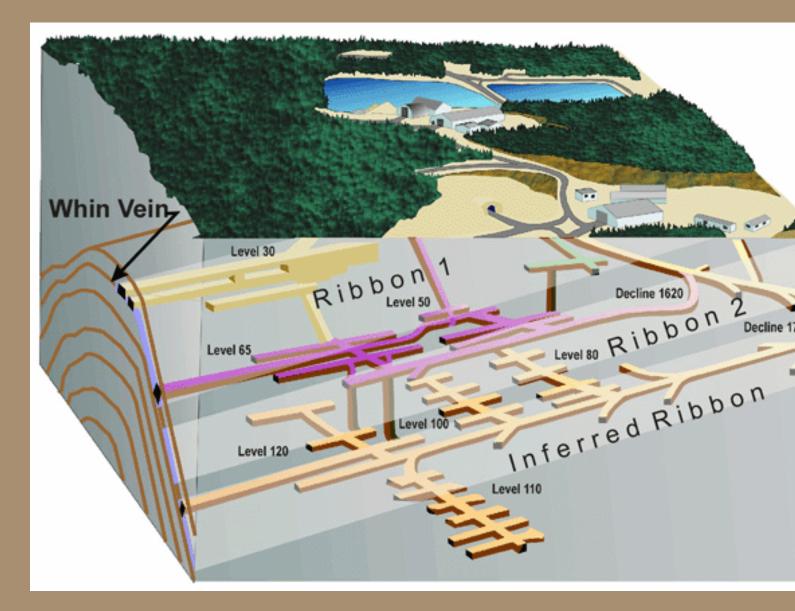


Comparison of Veins from Victoria to Meguma





Nugget Effect: An example from Victoria

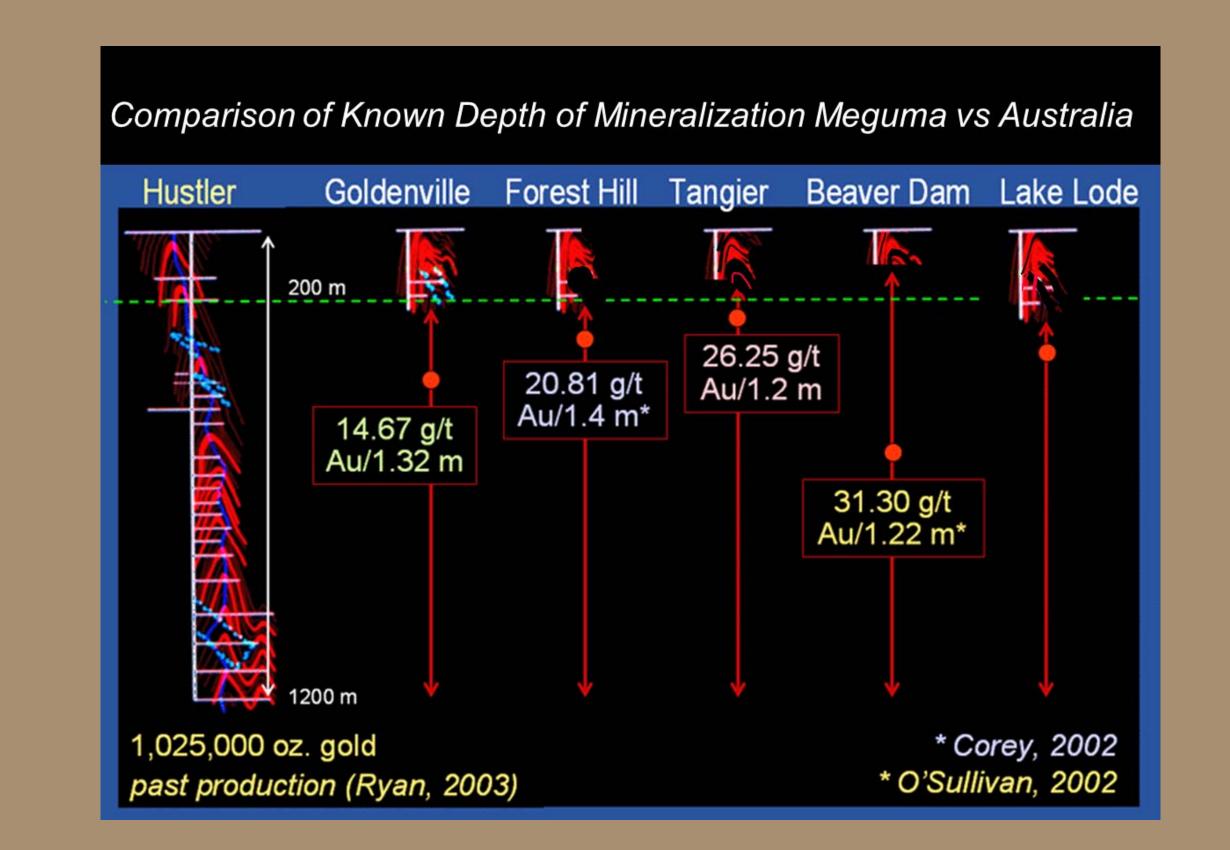


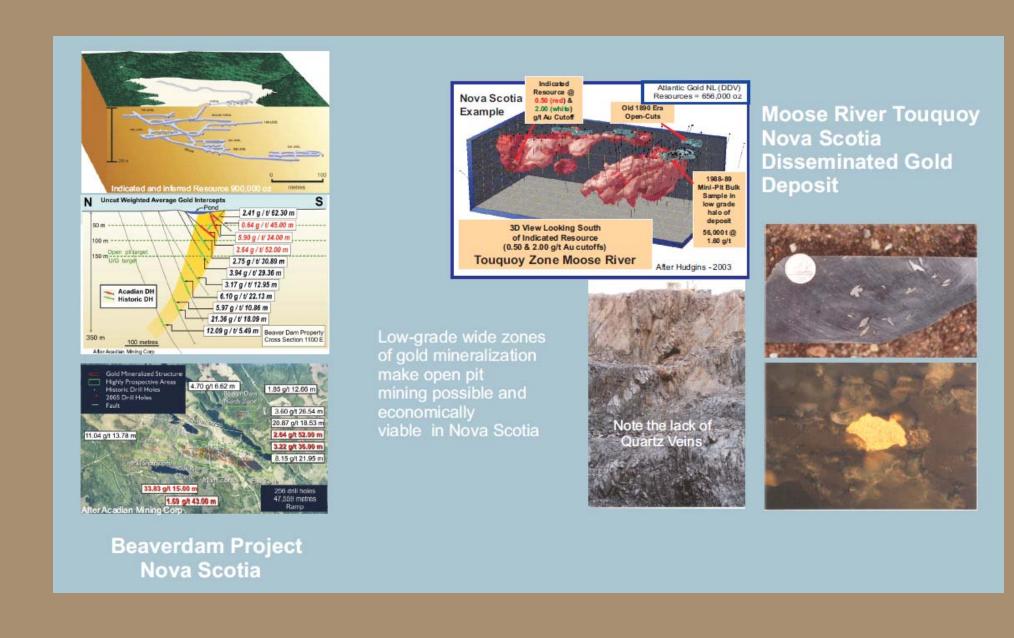
Bendigo Ribbon Model Applied to the Tangier Mine, N.S.





	BENDIGO (Hustler's)	GOLDENVILLE (Nova Scotia)
Discovery	1851	1861
Structure	tight anticline	tight anticline
Mining Depth	1200+m	300m
Average Grade	15g/t	15g/t
Vein Thickness	0.1 to 2.0 up to 6.0m	0.1 to 1.5 up to 5.5m
Total Gold	32 million grams	6.7 million grams
Est. Au to 300m	6.5 million grams	6.7 million grams





Disseminated Deposits, Nova Scotia