Geological Similarities between Dawson-Green Mountain Property and Broken Hill Type Deposits

Source: Dr. Paul Spry, 2019

Deposit Characteristics	Dawson-El Plomo-Green Mountain	Broken Hill Type
Geological Setting	Proterozoic	Proterozoic
Metamorphism	Upper amphibolite facies	Upper amhibolite-granulite facies
Tectonic Setting	Rift related	Rift related
Spatially Associated Rock Types	Sillimanite gneiss	Sillimanite gneiss
	Garnet-plagioclase-sillimanite "Potosi" gneiss	Garnet-plagioclase-sillimanite "Potosi" gneiss
	Massive and banded iron formation	Massive and banded iron formation
	Quartz-gahnite rocks	Quartz-gahnite rocks
	Quartz-gahnite-garnet-sulfide rocks	Quartz-gahnite-garnet-sulfide rocks
	Quartz garnetite	Quartz garnetite
	Nodular sillimanite rocks (stratabound alteration)	Nodular sillimanite rocks (stratabound alteration)
	Garnet amphibolite (amphibolite facies)	Two pyroxene-garnet rock (granulite facies equivalent)
	Granite gneiss	Granite gneiss

Continued…

Geological Similarities between Dawson-Green Mountain Property and Broken Hill Type Deposits ...cont'd.

	DAWSON - EL PLOMO - GREEN MOUNTAIN	BROKEN HILL TYPE
Mineralization		
	Cu-enriched mineralization in footwall (Dawson, Green Mt.)	Cu-enriched mineralization in stratigraphic footwall
	Pb-enriched mineralization in hanging wall (El Plomo)	Pb-Zn mineralization dominant in hanging wall
	Strike length over 12 km in metapelitic rocks	Strike length over several km in metapelitic rocks
	Strong Zn-Pb-Cu zoning	Strong Zn-Pb-Cu zoning
	High Ag:Pb ratios	High Ag:Pb ratios
	Separation of gold zone from sulfide zone	Separation of gold zone from sulfide zone (garnetite – Broken Hill)
	Gahnite and högbomite composition	Gahnite and högbomite (Aggeneys, S. Africa)
	characteristic of sulfide zones	composition characteristic of sulfide zones
	Magnetic pyrrhotite and magnetite in mineralization	Magnetic pyrrhotite and magnetite in mineralization