

## Appendix A – Occurrences of cockade breccias

**Table A1** – Well documented occurrences

Type	Locality	Reference(s)
Epithermal Au- (Ag,Cu) veins	Calera, Oropampa district, Peru	Gibson et al., 1990
	Baia Mare, Romania	Grancea et al., 2002
	Exploits subzone and Gander zone, Newfoundland	Squires, 2005
	Cirotan mine, Indonesia	Genna et al., 1996; Leroy et al., 2000
	Lebong Tandai mine, Indonesia	Jobson et al., 1994
Epithermal Pb-Zn- (Cu,Ag,Au,Sn) veins	Saint-Salvy/Noailhac deposit, France	Munoz et al., 1994; Bélistont et al., 2013
	Peyrebrunne, France	Munoz et al., 1997
	Chocaya, Bolivia	Buerger and Maury, 1927
	Shawangunk Mts., New York State, USA	Ingham, 1940; Sims and Hotz, 1951; Wilbur et al., 1990; Friedman et al., 1994
	Pribram, Czech Republic	Kutina and Sedlackova, 1961
	Bad Grund, Harz Mts., Germany	Lang, 1973
	Akshiiryak, Khirgizia	Laznicka, 1988
	Bianska Stavnica, Slovakia	Rieder, 1969
	Alacran mines, Mexico	Spurr, 1926
	Port au Port Peninsula, Newfoundland, Canada	Watson, 1943
Erzgebirge Mts., Germany	Weissenbach, 1836	
Fluorite-Baryte veins	St. Lawrence, Newfoundland, Canada	Van Alstine, 1944
Low-T calcite veins	Gower Peninsula, Wales	Wright et al., 2009

**Table A2** – Reported occurrences

Type	Locality	Reference(s)
Epithermal Au- (Ag,Cu) veins	Efemcukuru, Izmir, Turkey	Baba and Güngör, 2002; Oyman et al., 2003
	Golden Cross, New Zealand	Bebgie et al., 2007
	Pajingo, Queensland, Australia	Bobis et al., 1995
	Waihi, New Zealand	Braithwaite and Fauré, 2002
	Shila Cordillera, Peru	Cassard et al., 2000; Chauvet et al., 2006
	South Korea	Choi et al., 2005a,b
	Hauraki goldfield, New Zealand	Christie and Robinson, 1992
	Acupan, Baguio District, Philippines	Cooke and Bloom, 1990
	Cracow vein system, Queensland, Australia	Dong and Morrison, 1995; Dong and Zhou, 1996
	Eastern Dunnage zone, Newfoundland, Canada	Evans, 1993
	Qaleh-Zari deposit, Iran	Hassan-Nezhad and Moore, 2006
	Yatani deposit, Japan	Hattori, 1975
	Tonopah mine, Nevada, USA	Henley and Berger, 2000

<b>Type</b>	<b>Locality</b>	<b>Reference(s)</b>
	Comstock district, Nevada, USA	Hudson, 2003
	Ikuno mine, Japan	Jensen, 1957
	Lalab, Sibutad, Zamboanga del Norte, Philippines	Jimenez et al., 2002a,b, 2007
	Sunshin, South Korea	Kim et al., 2012
	Haenam-Jindo area, South Korea	Kim and Choi, 2009
	Ducat and Lunny orefields, Russia	Konstantinov et al., 1993
	Chah Zar deposit, Iran	Kouhestani et al., 2012, 2013
	Ozernovskoe and Praslovskoe deposits, Kuril, Kamchatka, Russia	Kovalenker and Plotinskaya, 2005
	Jinxi-Yelmand, Tianshan, Xinjiang, China	Long et al., 2005
	Guanajuato, Mexico	Mango et al., 2013
	Steep Nap prospect, Newfoundland, Canada	Mills et al., 1999
	Kiena Mine, Val D'Or, Quebec, Canada	Morasse et al., 1995
	Don Sixto deposit, Mendoza, Argentina	Mugas Lobos and Marques Zavalía, 2013
	Ohio and Mt. Baldy districts, Piute Cty., Utah, USA	Nuelle et al., 1985
	Holyrood Horst, Newfoundland, Canada	O'Brien, 2002
	Bahia Laura, Deseado Massif, Argentina	Paez et al., 2010
	Taebaeksan district, Korea	Pak et al., 2004
	El Dorado district, El Salvador	Richer et al., 2009
	Victoria deposit, Mankayan district, Luzon, Philippines	Sajona et al., 2002
	Tuvatu deposit, Fiji	Scherbarth and Spry, 2006
	Tongyoung deposits, Korea	Shelton et al., 1990
	Seigoshi district, Izu Peninsula, Japan	Shikazono, 1985
	Koryu mine, Hokkaido, Japan	Shimizu et al., 1998
	Mt. Muro Prospect, Borneo, Indonesia	Simmons and Browne, 1990
	Sierras Pampeanas, Argentina	Skirrow et al., 2000
	Esquel deposit, Argentina	Soechting et al., 2008
	Major's Creek, New South Wales, Australia	Wake and Taylor, 1988
	Hurd Peninsula, South Shetlands	Willan, 1992, 1994; Willan and Spiro, 1996
	Wadi Abu Khuhsayba, Jordan	Al-Hwaiti et al., 2010
	Gunung Pongkor deposit, West Java, Indonesia	Basuki et al., 1994
	Chahnali prospect, Baman volcano, Iran	Daliran et al., 2005
	Caylloma district, Peru	Echavarría et al., 2006
	Tombulilato district, North Sulawesi, Indonesia	Perello, 1994

<b>Type</b>	<b>Locality</b>	<b>Reference(s)</b>
	Promezhutochnoe deposit, Central Chukchi, Russia	Volkov and Prokofev, 2011
Epithermal Pb-Zn-(Cu,Ag,Au,Sn) veins	Milos Island, Greece	Alfieris et al., 2013
	Santo Nino Vein, Fresnillo Distr., Zacatecas, Mexico	Simmons et al., 1988; Gemmell et al., 1989
	Yatanideposit, Japan	Hattori, 1975
	Pingüino vein system, Deseado Massif, Patagonia, Argentina	Jovic et al., 2011a,b,c
	Nigadoo vein deposit, New Brunswick, Canada	Kalliokoski, 1961
	Dunbrack deposit, Musquodoboit batholith, southern Nova Scotia	Kontak et al., 1999
	Hiendelencina district, Guadalajara, Spain	Martinez Frias, 1992
	Alcudia valley, Eastern Sierra Morena, Spain	Palero-Fernandez et al., 2003; Palero Fernandez and Martin Izard, 2005
	San Vicente, Peru	Schütfort, 2001
	Sambo deposit, Korea	So et al., 1984
	Plaka Ore-System, Lavrion, Greece	Voudouris et al., 2008
	Castrovirreyana District, Central Peru	Wise, 2005
	Minas Capillitas	Marquez Zavalía, 2002; Putz et al., 2006; Paar et al., 2008; Putz et al., 2009
	Kolyma-Verkhoyansk fold belt, Russia	Anikina et al., 2003
	Assif El Mal, High Atlas, Morocco	Bouabdellah et al., 2009
Fluorite-Baryte veins	Cerro Aspero, Cordoba prov. , Argentina	Coniglio et al., 2000
	Nabburg-Wölsendorf district, SE Germany	Dill and Weber, 2010; Dill et al., 2011
	Regensburg, SE Germany	Dill et al., 2012
	Speewah, Kimberley, Australia	Gwalani et al., 2010
	Southeastern Alps, Europe	Hein et al., 1990
	Southwestern Massif Central, Albigeois, France	Munoz et al., 1999
	Valle de Tena, Pyrenees, Spain	Subias et al., 1998
	La Azul deposit, Taxco district, Mexico	Tritlla and Levresse, 2006
	Santa Catarina State, Brazil	Jelinek et al., 1999
Low-T calcite veins	Southern Arizona	Davis et al., 1979
Mesothermal veins (various)	Salsigne deposit, France	Demange et al., 2006
	Bilimoia, Kainantu region, Papua New Guinea	Espi et al., 2007
Orogenic/Epizonal gold deposits	Red-Lake/Campbell mine, Canada	Penczak and Mason, 1997; Tarnocai et al., 1998; Penczak and Mason, 1999; Dubé et al., 2004; Chi et al., 2009
	Donlin Creek, Alaska, USA	Goldfarb et al., 2004

Type	Locality	Reference(s)
	Yilgarn Craton, Western Australia	Groves, 1993; Groves et al., 1998; Bateman and Hagemann, 2004
	Wiluna, Western Australia	Hagemann and Lüders, 2003
	Kalgoorlie district, Western Australia	Mueller et al., 1988, 2013
<i>MVT</i>	<i>Zawar, India</i>	<i>Mookherjee, 1964</i>
	<i>County Tipperary, Ireland</i>	<i>Wilkinson and Lee, 2003</i>
	<i>Southwestern Sardinia, Italy</i>	<i>Boni and Malafronte, 1983; Boni, 1986; Boni et al., 1988</i>
	<i>Howell, Jefferson County, USA</i>	<i>Ludlum, 1955</i>
	<i>Bleiberg</i>	<i>Schroll et al., 1983</i>
IOCG	Oak Dam East, Galwer Craton, Australia	Davidson et al., 2007
	Contact Lake Belt, Northwestern Territories, Canada	Mumin et al., 2007
Calcite cemented calamine breccia	High Atlas, Morocco	Choulet et al., 2014
U-Ni-Co-As-Ag/Bi veins	Zalesi deposit, Czech Republic	Dolnicek et al., 2009
Low-T quartz-fluorite-pyrite-chlorite-siderite veins	South Crofty mine, Cornwall, UK	Dominy et al., 1994
Cassiterite veins	Rosevale Mine, Zennor, West Cornwall	Dominy et al., 1995
<i>Karst collapse breccias</i>	<i>Egypt</i>	<i>El-Aref et al., 1986; El-Sharkawi et al., 1990</i>
Hydrothermal Mn/Fe-Mn deposits	Baft, Kerman, Iran	Heshmatbehzadi and Shahabpour, 2010
Quartz veins in granite	Southwest Avalon zone, Newfoundland, Canada	O'Driscoll and Strong, 1979
<i>Phreatic breccias</i>	<i>Southern Alps, Italy</i>	<i>Servida et al., 2010</i>
	-	<i>Tamas and Milesi, 2003</i>
Au-Sb veins	Loddiswell, Devon, UK	Stanley et al., 1990
Unmineralised epithermal veins	Ixtacamaxtitlan, Puebla State, Mexico	Tritlla et al., 2004

Note: Occurrences in italics were not included with the counts in Table 1, since it was thought that they did likely not represent proper cockade breccias.

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