

Appendix 4. Known resources and significant historical production in the Thomson Orogen (modified after Denaro, 2011)

Name	Location	Status	Total historical production (years)	Known resources (source)	Host formation/ Province	Comments
Anthony	67km NNW of Clermont	Active prospect, scoping study in progress	Not mined	315Mt at 0.039% Mo for 121 940t Mo (Maiden, 2012)	Anakie Metamorphic Group/ Anakie Province	Porphyry Mo-Cu deposit in hornfelsed metasediments and schist. Held under Exploration Permit by Zamia Metals Ltd
Belyando	68km NW of Clermont	Abandoned mine, active prospect	2.283kg Au (1990–1995)	1.8Mt at 0.32g/t Au for 576kg Au (Ashburton Minerals Ltd, 2005)	Anakie Metamorphic Group/ Anakie Province	Low sulphidation epithermal quartz veins and breccia in schist and siltstone. Held under Mining Lease by Wirralie Mines Pty Ltd
Cape River Goldfield	210km SW of Townsville (including Pentland, Lolworth and Mount Emu)	Abandoned mines, active prospects	>2462kg Au (1867–1994)	See below	Cape River Metamorphics/ Cape River Province; Fat Hen Complex/ Macrossan Province; Amarra Granite, Big Bore Granite, Bommarri Granodiorite, Mount Elvan Granite, Upland Granodiorite, Weaner Vale Granite/ Pama Province; Elimeek Volcanics, unnamed quartz-feldspar porphyries/ Kennedy Province; Campaspe beds/ Cainozoic Sedimentary Cover; alluvium/ Cainozoic Alluvial and Coluvial Deposits	Shear-hosted, intrusive-related quartz veins and stockworks in metamorphics, granite, diorite; subvolcanic breccia pipes; alluvial and deep lead placer Au. Held under Exploration Permits by Activex Ltd, Circle Resources Pty Ltd, Mantle Mining Corporation Ltd, Maritime Academy Australasia Pty Ltd and Zulu Gold Mining Pty Ltd.
	Granite Castle	88km NW of Pentland	Abandoned mine, active prospect	Included with production figures for Cape River Goldfield	847078t at 2.91g/t Au and 56.18g/t Ag for 2465kg Au and 56 18kg Ag (Mantle Mining Corporation Limited, 2011)	Upland Granodiorite/ Pama Province
Charters Towers Goldfield (includes the current CitiGold Corporation Ltd operations)	Centred on city of Charters Towers	Operating mine, abandoned mines, active and inactive prospects	>250t Au bullion (1872–1991). Significant producers included the Brilliant lode (51.48 t), Day Dawn lode (38.67 t), New Queen Cross lode (5.75 t), Queen lode (5.26 t), Victory lode (3.45 t), Rainbow-Wyndham lode (2.18 t), St Patrick lode (2.4 t), Stockhold (2.36 t), Lady Maria lode (1.82 t), Caledonia reef (1.73 t), Identity lode (1.67 t), North Australian lode (1.65 t), Wellington lode (1.43 t), Old Queen Cross lode (1.28 t), Victoria and Queen lode (1.05 t), Golden Alexandra (0.98 t), Mexican (0.9 t), Ruby lode (0.75 t), Sunburst Joint Venture (0.72 t), Sunburst lode (0.63 t), Moonstone lode (0.61t)	See below	Charters Towers Metamorphics/ Cape River Province; Towers Hill Granite, Hogsflesh Granodiorite/ Macrossan Province; Millichester Creek Tonalite/ Pama Province	Intrusive-related mesothermal quartz veins in metamorphics, granodiorite, granite and tonalite. Held under Exploration Permits, Mineral Development Licences and Mining Leases by Citigold Corporation Ltd, Kagara Copper Pty Ltd, Mantle Mining Corporation Ltd.
Black Jack Lode	8.9km SSW of Charters Towers	Abandoned mine, inactive prospect	49.4kg Au (1951–1959), 323.3kg Au, 122.3kg Ag (1987–1991)	0.972Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2005a)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mining Lease by Citigold Corporation Ltd.
Brilliant Lode	1.1km ESE of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	1.44 Mt at 13.5g/t Au for 19 408kg Au (Citigold Corporation Limited, 2012)	Hogsflesh Granodiorite/Macrossan Igneous Association; Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite and tonalite. Held under Mining Lease by Citigold Corporation Ltd.
Caledonia Reef	1.9km ESE of Charters Towers	Abandoned mine, inactive prospect	Included in figures for Charters Towers Goldfield	14 969t at 15g/t Au for 224kg Au (Citigold Corporation Limited, 2005b)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in tonalite. Held under Mining Lease by Citigold Corporation Ltd.
Central Decline	0.9km ESE of Charters Towers	Care and maintenance, active prospect	559.8kg Au, 434.3kg Ag (1997–1998)	0.58Mt at 13.5g/t Au for 7873kg Au (Citigold Corporation Limited, 2005a)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in tonalite. Held under Mining Lease by Citigold Corporation Ltd.
Clark's Moonstone Lode	1.9km SW of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.583Mt at 13.5g/t Au for 7873kg Au (Citigold Corporation Limited, 2012)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Day Dawn Lode	0.7km W of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.386Mt at 13.5g/t Au for 5209kg Au (Citigold Corporation Limited, 2005b)	Towers Hill Granite, Hogsflesh Creek Granodiorite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mining Lease by Citigold Corporation Ltd.
Day Dawn West Prospect	3.7km W of Charters Towers	Abandoned mine, active prospect	Not recorded	47 000t at 11.4g/t Au for 536kg Au (Charters Towers Gold NL, 1995)	Hogsflesh Creek Granodiorite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Exploration Permit by Mantle Mining Corporation Ltd.
Hidden Secret	6.8km S of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	1.458Mt at 13.5g/t Au for 19 683kg Au (Citigold Corporation Limited, 2012)	Hogsflesh Creek Granodiorite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Identity Lode	3.8km ESE of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.973Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2005a)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in tonalite. Held under Mineral Development Licence by Citigold Corporation Ltd.
John Bull Lode	8.8km SSW of Charters Towers	Abandoned mine, inactive prospect	1281.2kg Au (1951)	75 600t at 8g/t Au for 604kg Au (Charters Towers Gold Mines NL, 2000)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite and granite. Held under Mining Lease by Citigold Corporation Ltd.
Lady Florence Lode	4.4km ESE of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.972Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2012)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in tonalite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Merrie Monarch	7km S of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.972Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2012)	Charters Towers Metamorphics/ Cape River Province; Hogsflesh Creek Granodiorite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in metamorphics and granodiorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Mount Ceniz	7km S of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.486Mt at 13.5g/t Au for 6561kg Au (Citigold Corporation Limited, 2012)	Charters Towers Metamorphics/ Cape River Province; Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in metamorphics and granodiorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Queen and Sunburst Lode	1.6km E of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	1.68Mt at 13.5g/t Au for 9842607kg Au (Citigold Corporation Limited, 2012)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mining Lease by Citigold Corporation Ltd.
Ruby	2.8km SSE of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.972Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2012)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Silent Friend	7km S of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	0.972Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2005a)	Hogsflesh Creek Granodiorite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite and diorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
St Patrick Lode and Columbia Cross Reef	1.2km N of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	3.6Mt at 13.5g/t Au for 48 628kg Au (Citigold Corporation Limited, 2012)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mining Lease by Citigold Corporation Ltd.
Stockholm	6.7km SW of Charters Towers	Abandoned mine, active prospect	Pre 1991 included in figures for Charters Towers Goldfield, 972.4kg Au (1996–1998)	14 968t at 12.3g/t Au for 184kg Au (Citigold Corporation Limited, 2005b)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granite. Held under Mining Lease by Citigold Corporation Ltd.
No 1 Cross Reef				583 200 t at 13.5g/t Au for 3417kg Au (Citigold Corporation Limited, 2012)		
Towers Hill Cross Reefs	1.5km SSW of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	2.33Mt at 13.5g/t Au for 31 492kg Au (Citigold Corporation Limited, 2012)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite and diorite. Held under Mineral Development Licence by Citigold Corporation Ltd.
Warrior	5.7km SSE of Charters Towers	Operating mine	Pre 1915 included in figures for Charters Towers Goldfield, 973.4kg Au, 381.4kg Ag (2006–2010)	1.94Mt at 13.5g/t Au for 26 244kg Au (Citigold Corporation Limited, 2005a)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granite. Held under Mining Lease by Citigold Corporation Ltd.
Washington and Sons of Freedom Imperial	5.4km SE of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	1.46Mt at 13.5g/t Au for 19 683kg Au (Citigold Corporation Limited, 2005a)	Millichester Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granite. Held under Mining Lease by Citigold Corporation Ltd.
Wellington Lode	2.6km SSW of Charters Towers	Abandoned mine, active prospect	Included in figures for Charters Towers Goldfield	1.94 Mt Au at 13.5 g/t for 11390kg Au (Citigold Corporation Limited, 2012)		
				0.97Mt at 13.5g/t Au for 13 122kg Au (Citigold Corporation Limited, 2012)	Towers Hill Granite/ Macrossan Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite. Held under Mineral Development Licence by Citigold Corporation Ltd.

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Clermont Goldfield	Centred on town of Clermont	Operating mines, abandoned mines, active prospects	~14 000kg Au (1861–1993)	Miclere – 1.1Mt at 7.7g/t Au for 8470kg Au (Sedimentary Holdings Limited, 1997)	Anakie Metamorphic Group/ Anakie Orogen; Blair Athol Coal Measures/ Bowen Basin; alluvium and eluvium/ Cainozoic Alluvial and Colluvial Deposits	Structurally-controlled quartz-sulphide veins, deep lead placer Au (quartz-pebble conglomerate Au), alluvial and eluvial Au. Held under Exploration Permits and Mining Leases by Central Minerals Pty Ltd, Chalcophile Resources Pty Ltd, CNW Pty Ltd, Echo Resources Ltd, Tasman Goldfields Miclere Pty Ltd, and a number of individuals.	
Disraeli	36.6km W of Ravenswood	Abandoned mine	1832.7kg Au (1881–1942, 1987–1994)	Mined out	Boatswain Granodiorite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite.	
Hadleigh Castle	36km E of Charters Towers	Abandoned mine	10 639kg Au (1874–1915, 1988–2005)	0.472Mt at 6.62g/t Au for 3123kg Au (SMC Gold Limited, 2004a, 2004b)	Boatswain Granodiorite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in granodiorite and granite.	
Joe's Delight	35.2km W of Ravenswood	Abandoned mine	525kg Au (1881–1936, 1987–1993, 2003–2004)	Mined out	Boatswain Granodiorite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins in quartz monzonite.	
Lucky Creek Goldfield	21km WSW of Greenvale	Abandoned mines, active prospect	54kg Au (1903–1940)	Steam Engine – 0.28Mt at 2.5g/t Au for 700kg Au (Rea, 1990)	Lucky Creek Metamorphic Group/ Thalanga Province	Intrusive-related mesothermal quartz veins in schist. Held under Mineral Development Licence and Exploration Permit by Traditional Securities Group Pty Ltd.	
Mount Leyshon	23.8km S of Charters Towers	Abandoned mine	107 670kg Au, 68 900kg Ag (1986–2002)	Mined out	Mount Leyshon Complex/ Kennedy Igneous Association	Porphyry-related subvolcanic breccia in rhyolite and trachyte. Held under Mining Lease by Leyshon Resources Ltd.	
Handcuff	32km S of Charters Towers	Active prospect	Not mined	1Mt at 0.4% Cu, 7.4% Zn, 0.2% Pb, 0.2g/t Au and 8.8g/t Ag for 4000t Cu, 74 000t Zn, 2000t Pb, 200kg Au and 8800kg Ag (Dronseika, 1995)	Trooper Creek Formation/ Thalanga Province	Volcanogenic massive sulphide deposit in chert and rhyolite. Held under Mining Lease by Thalanga Copper Mines Pty Ltd and BML Holdings Pty Ltd.	
Highway-Reward	33km SSW of Charters Towers	Care and maintenance, active prospect	173 092t Cu, 7395.5kg Ag, 3302.3kg Au, 1137t Pb, 2866t Zn, 29.3kg Au bullion (1953–1989, 1998–2006)	Resources mined out	Trooper Creek Formation/ Thalanga Province	Volcanogenic massive sulphide deposit in rhyolite, volcanoclastics and dacite. Held under Mining Lease by Thalanga Copper Mines Pty Ltd and BML Holdings Pty Ltd.	
Liontown	41.9km SSW of Charters Towers	Abandoned mine, active prospect	93kg Au, 1678kg Ag, 528t Pb (1951–1961)	1.845Mt at 0.57% Cu, 7.5% Zn, 2.5% Pb, 0.4g/t Au and 28.3g/t Ag for 10 455t Cu, 137 620t Zn, 45 535t Pb, 736kg Au and 52 275kg Ag (Kagara Ltd, 2010)	Trooper Creek Formation/ Thalanga Province	Volcanogenic massive sulphide deposit in greywacke, meta-volcanics and volcanoclastics. Held under Mining Lease by Kagara Ltd.	
Lucky Break	95km W of Townsville	Active prospect, definitive feasibility study completed	Not mined	1.49Mt at 0.76% Ni and 0.05% Co for 11 373t Ni and 724t Co (Metallica Minerals Limited, 2009b)	Argentine Metamorphics/ Cape River Province	Ni-Co laterite. Held under Mining Leases by Nornico Pty Ltd (Metallica Minerals NL). Mine development by Metals Finance Ltd.	
Sconi Project	Bell Creek North Lease	32km S of Mount Garnet	Active prospect, scoping study	Not mined	5.64Mt at 0.65% Ni and 0.02% Co for 36 660t Ni and 1128t Co (Metallica Minerals Limited, 2008b)	Sandalwood Serpentine/ Cape River (now Greenvale) Province	Ni-Co laterite. Held under Mining Lease by Nornico Pty Ltd (Metallica Minerals NL).
	Bell Creek North West	29km S of Mount Garnet	Active prospect, scoping study	Not mined	5.18Mt at 0.67% Ni and 0.04% Co for 34 706t Ni and 2072t Co (Metallica Minerals Limited, 2008b)	Sandalwood Serpentine/ Cape River (now Greenvale) Province	Ni-Co laterite. Held under Exploration Permit and Mining Lease Application by Nornico Pty Ltd (Metallica Minerals NL).
	Bell Creek South Lease (includes the Neck and the Pod)	34km S of Mount Garnet	Active prospect, scoping study	Not mined	Bell Creek South – 11.41Mt at 0.88% Ni and 0.06% Co for 100 580t Ni and 6693t Co. The Neck – 1.39Mt at 0.73% Ni and 0.02% Co for 10 147t Ni and 278t Co (Metallica Minerals Limited, 2008a). The Pod – 0.28Mt at 0.73% Ni and 0.05% Co for 2044t Ni and 140t Co (Metallica Minerals Limited, 2008b)	Sandalwood Serpentine/ Cape River (now Greenvale) Province	Ni-Co laterite. Held under Mining Lease by Nornico Pty Ltd (Metallica Minerals NL).
	Greenvale Nickel	190km WNW of Townsville	Abandoned mine, active prospect, scoping study	436 430t Ni, 36 456t Co (1974–1995)	8.0Mt at 0.93% Ni, 0.08% Co and 21.8g/t Sc for 83 355t Ni, 6573t Co and 261.3t Sc (Metallica Minerals Limited, 2011)	Sandalwood Serpentine/ Cape River (now Greenvale) Province	Ni-Co laterite. Held under Exploration Permit by Greenvale Operations Pty Ltd (Metallica Minerals NL).
	Kokomo	98km S of Mount Garnet	Active prospect, scoping study	Not mined	12.2Mt at 0.67% Ni and 0.12% Co for 82 080t Ni and 14 460t Co (Metallica Minerals Limited, 2009a)	Sandalwood Serpentine/ Cape River (now Greenvale) Province	Ni-Co laterite. Held under Exploration Permit and Mining Lease Application by Nornico Pty Ltd (Metallica Minerals NL).
	Lucknow	190km WNW of Townsville	Active prospect, scoping study	Reported that 50 000t of ore may have been mined in past	8.0Mt at 0.29% Ni, –0.7% Co and 141g/t Sc for 23 139t Ni, 4829t Co and 1129t Sc (Metallica Minerals Limited, 2011)	Gray Creek Complex/Greenvale Province enclosed in Graveyard Creek Subprovince	Ni-Co laterite. Held under Exploration Permit by Greenvale Operations Pty Ltd (Metallica Minerals NL).
Minnamoolka	54km S of Mount Garnet	Active prospect, scoping study	Not mined	14.73Mt at 0.66% Ni and 0.03% Co for 97 821t Ni and 4276t Co (Metallica Minerals Limited, 2008b)	Sandalwood Serpentine/ Cape River (now Greenvale) Province	Ni-Co laterite. Held under Mineral Development Licence by Nornico Pty Ltd (Metallica Minerals NL).	
Peak Downs	6km SW of Clermont	Abandoned mine, active prospect	17 000t Cu (1863–1877)	6.8Mt at 0.42% Cu for 28 840t Cu (Jerkovic, 1999)	Bathampton Metamorphics/ Anakie Orogen	Volcanogenic massive sulphide deposit in metasediments and metavolcanics. Held under Exploration Permit by Chalcophile Resources Pty Ltd (Diatreme Resources Ltd).	
Ravenswood Goldfield	Ravenswood Goldfield	Centred on town of Ravenswood	Operating mine, abandoned mines, active prospects	>28t Au (1868–1962). Significant producing mines included: Sunset (6.5 t), General Grant (1.49 t), Donnbrook (0.74 t), Black Jack (0.53 t), Buck Reef West (0.45 t)	See below	Millaroo Granite/ Macrossan Igneous Association; Ravenswood Granodiorite Complex, Jessop Creek Tonalite/ Pama Igneous Association; unnamed rhyolitic intrusives/ Kennedy Igneous Association; alluvium/ Cainozoic Alluvial and Colluvial Deposits	Intrusive-related mesothermal and porphyry-related quartz veins and stockworks in tonalite, granodiorite and diorite; auriferous subvolcanic breccias in granite and rhyolite; alluvial placer gold. Held under Exploration Permits and Mining Leases by Carpentaria Gold Pty Ltd, Conquest Mining Ltd, Kitchener Mining NL.
	Area 2	0.8km SSW of Ravenswood	Abandoned mine, active prospect	1757.4kg Au (1992–1993)	Mined out	Jessop Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins and stockworks in tonalite. Held under Mining Leases by Carpentaria Gold Pty Ltd.
	Area 5	1.0km SE of Ravenswood	Abandoned mine	624kg Au (1988–1991)	Mined out	Jessop Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins and stockworks in tonalite. Held under Mining Leases by Carpentaria Gold Pty Ltd.
	Copper Knob	1.3km N of Ravenswood	Abandoned mine, active prospect	Included in figures for Ravenswood Goldfield	2.16Mt at 0.11% Cu, 0.82g/t Au, 0.2% Zn and 4.3g/t Ag for 2468t Cu, 1783kg Au, 4340t Zn and 9312kg Ag (Haoma Mining NL, 1999)	Jessop Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins and stockworks in tonalite. Held under Mining Lease by Kitchener Mining NL.
	Mount Wright	9.0km NW of Ravenswood	Operating mine	8900kg Au, 662.4kg Ag (1992–1993, 2009–2012)	5.84 Mt at 2.58g/t Au for 15 076kg Au (Resolute Mining Limited, 2012)	Millaroo Granite/ Macrossan Igneous Association; unnamed rhyolitic intrusives/ Kennedy Igneous Association	Auriferous subvolcanic breccia in granite and rhyolite. Held under Mining Lease by Carpentaria Gold Pty Ltd.
	Nolans	1.6km SE of Ravenswood	Abandoned mine	11 308.9kg Au bullion, 7205.9kg fine Au, 1816.1kg Ag (1996–2002)	Mined out	Jessop Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins and stockworks in tonalite. Held under Mining Leases by Carpentaria Gold Pty Ltd.
	OCA	0.9km E of Ravenswood	Abandoned mine	1596.9kg Au (1987–1991)	Mined out	Jessop Creek Tonalite/ Pama Igneous Association	Porphyry-related quartz veins and stockworks in tonalite. Held under Mining Leases by Carpentaria Gold Pty Ltd.
	Sarsfield	0.9km ESE of Ravenswood	Operating mine	3898kg Au bullion, 33 959.6kg fine Au, 9058.9kg Ag (2000–2012)	66.37Mt at 0.78g/t Au for 52 158kg Au (Resolute Mining Limited, 2012)	Jessop Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal quartz veins and stockworks in tonalite and diorite. Held under Mining Leases by Carpentaria Gold Pty Ltd.
	Slaughteryard Creek	0.5km ESE of Ravenswood	Abandoned mine	1420.6kg Au (1987–1997)	Mined out	Jessop Creek Tonalite/ Pama Igneous Association	Intrusive-related mesothermal and porphyry-related quartz veins and stockworks in tonalite and diorite. Held under Mining Leases by Carpentaria Gold Pty Ltd.
Surveyor	34km NW of Greenvale	Care and maintenance	2720t Cu, 63 289t Zn, 22 291t Pb, 239kg Au, 42 071kg Ag (2003–2005)	119 000t at 11.4% Pb, 2.41g/t Au and 158g/t Ag for 13 566t Pb, 286kg Au and 18 802kg Ag (Kagara Ltd, 2010)	Balcooma Metavolcanic Group/ Thalanga Province	Volcanogenic massive sulphide deposit in rhyolitic tuff. Held under Mining Lease by Kagara Ltd.	

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Thalanga	11.9km ENE of Homestead	Operating mine	194 900t Cu conc., 158 100t Pb conc., 624 000t Zn conc., 20 277t Cu, 878t Pb, 1998t Zn, 66.8kg Au bullion, 1195.8kg Ag (1991-2000)	Vomacka - 885 823t at 1.7% Cu, 4.6% Zn, 1.35% Pb, 0.46g/t Au and 44.3g/t Ag for 15 134t Cu, 40 847t Zn, 12 034t Pb, 404kg Au and 39 282kg Ag. Orient - 266 000t at 0.95% Cu, 10.5% Zn, 3% Pb, 0.25g/t Au and 58.5g/t Ag for 2516t Cu, 27 893t Zn, 8002t Pb, 67kg Au and 15 566kg Ag. West 45 - 532 000t at 0.5% Cu, 7.2% Zn, 3% Pb, 0.26g/t Au and 48g/t Ag for 2660t Cu, 38 304t Zn, 15 960t Pb, 138kg Au and 25 536kg Ag (Kagara Ltd, 2010)	Mount Windsor Volcanics, Trooper Creek Formation/ Thalanga Province	Volcanogenic massive sulphide deposit in rhyolite and volcanoclastics. Held under Mining Lease by Kagara Copper Pty Ltd.
TPM	5.4km SSW of Mount Coolon	Active prospect	Not mined	0.319Mt at 1.17% Cu and 0.28g/t Au for 3732t Cu and 89kg Au (Weeks, 1992)	Anakie Metamorphic Group/ Anakie Orogen	Skarn in schist, quartzite and hornfels. Held under Exploration Permit by Mt Coolon Gold Mines Pty Ltd (Drummond Gold Ltd)
Waterloo	36.9km SSW of Charters Towers	Active prospect	Not mined	476 000t at 2.5% Cu, 13.5% Zn, 2% Pb, 1.42g/t Au and 67.3g/t Ag for 11 844t Cu, 64 104t Zn, 9324t Pb, 677kg Au and 32 036kg Ag (Kagara Ltd, 2010)	Trooper Creek Formation/ Thalanga Province	Volcanogenic massive sulphide deposit in rhyolite, andesite and volcanoclastics. Held under Exploration Permit by Kagara Copper Pty Ltd.
Welcome Breccia	4.3 km WSW of Mingela Post Office	Active Prospect	Not Mined	2 040 000t at 3.2 g/t Au for 7 344kg Au.(Resolute Mining, 2012)	Mingela granodiorite/ Macrossan Province	Porphyry related stock work vein deposit hosted within the Mingela granodiorite related to carboniferous igneous activity. Held under exploration permit by Resolute Mining Ltd
Gray Creek	26 km S of Greenvale, 190km WNW of Townsville	Inactive Prospect	Not Mined	5000t chromite ERMS 17688	Gray Creek Complex/Greenvale Province enclosed in Graveyard Creek Subprovince	Podiform Chromite Deposit
Johnsons	9.6km NNW of Lockhart River Township, 490km NW of Cairns	Abandoned mine	Not Mined	250 000t at 2.03 g/t Au for 507 kg of Au. (Switzer, 1995)	Sefton Metamorphics/Iron Range Province	Located within the Iron Range National Park
Gordons	946km NNW of Lockhart River Township, 490km NW of Cairns	Abandoned mine	11503t at 18.9 g/t for 217kg Au.(Bruvel and Morwood, 1992)	36 000t at 28g/t Au for 1008 kg Au. (Switzer, 1995)	Sefton Metamorphics/Iron Range Province	Located within the Iron Range National Park
Christian Kruck	8.5 km WSW of Mingela Post Office	Abandoned mine	31519t at 2.75 g/t Au for 86.689.(1893-1896,2004-2005)	Mined out	Mingela Granodiorite/ Macrossan Igneous Association	Porphyry related stock work vein deposit hosted within the Mingela granodiorite related to carboniferous igneous activity. Held under exploration permit by Resolute Mining Ltd
Balcooma	33 km NW of Greenvale, 120km SSW of Mount Garnet, 215km NW of Townsville	Operating Mine	Accurate Data unavailable	1 424 200t at 1.3% Cu, 2 % Pb, 5.9% Zn, 0.26 g/t Au, 28g/t Ag for 17995t Cu, 28735t Pb, 84804t Zn, 374kg Au, 40279kg Ag. (Kagara Annual Report, 2011)	Balcooma Metavolcanics/ Thalanga Province	Volcanogenic massive sulphide deposit in rhyolitic tuff. Held under Mining Lease by Kagara Ltd
Dry River South	13.5 km SSW of Conjuboy Homestead, 215km SW of Cairns	Operating Mine	Accurate Data unavailable	730 300t at 0.9% Cu, 2.5% Pb, 6.9% Zn, 0.64 g/t Au, 62.1 g/t Ag for 6572t Cu, 18257t Pb, 50390t Zn, 467kg Au, 45351kg Ag. (Kagara Annual Report, 2011)	Balcooma Metavolcanics/ Thalanga Province	Volcanogenic massive sulphide deposit in rhyolitic tuff. Held under Mining Lease by Kagara Ltd

## References

ASHBURTON MINERALS Ltd., 2005: Quarterly report for the period ended 31 March 2012. Report to the Australian Stock Exchange.

CHARTERS TOWERS GOLD NL., 1995: Quarterly activities report to 30<sup>th</sup> June 1995. Report to the Australian Stock Exchange, Charters Towers Gold NL, Brisbane.

CHARTERS TOWERS GOLD NL., 2000, Charters Towers Gold Mines NL annual report 2000, Charters Towers Gold NL, Brisbane.

CITIGOLD CORPORATION LIMITED, 2005a: Report on the inferred mineral resources for the Charters Towers Gold Project. Report to the Australian Securities Exchange, May 2005. Citigold Corporation Limited, Brisbane.

CITIGOLD CORPORATION LIMITED, 2005b: Report on the indicated mineral resources and probable ore reserves for the Charters Towers Gold Project. Report to the Australian Securities Exchange, August 2005. Citigold Corporation Limited, Brisbane.

CITIGOLD CORPORATION LIMITED, 2012: Mineral Resources and Reserves 2012 Charters Towers Gold Project. Report to the Australian Securities Exchange, May 2012. Citigold Corporation Limited, Brisbane.

DRONSEIKA, E.V., 1995: Mount Windsor Joint Venture summary. Unpublished report, Aberfoyle Resources Ltd.

JERKOVIC, I., 1999: EPM 9531, Peak downs, combined annual & final report for the period ending 15/6/99. Held by the Queensland Department of Natural Resources and Mines as Report 30988.

HAOMA MINING NL, 1999: 1999 Annual Report. Haoma Mining NL, Melbourne.

KAGARA MINING LTD., 2010: Kagara Ltd Annual Report 2010. Kagara Ltd, Perth.

KAGARA MINING LTD., 2012: Opportunity to acquire Kagara Limited's North Queensland Assets. Report to the Australian Securities Exchange. 14-September-2012. Kagara Mining Perth.

MAIDEN, K., 2012: Zamia Metals Limited quarterly activities report for the quarter ended 31 March 2012. Report to the Australasian Stock Exchange 30-April-2012.

MANTLE MINING PTY LTD, 2011: Granite Castle Gold project update. Report to the Australian Stock Exchange 31–October-2011.

METALLICA MINERALS LIMITED, 2008: Minnamoolka resource upgrade boost for Nornico Nickel Project. Announcement to the Australian Securities Exchange, 14 April 2008. Metallica Minerals Limited, Brisbane.

METALLICA MINERALS LIMITED, 2009: Major resource boost to Queensland nickel project. Announcement to the Australian Securities Exchange, 19 January 2009. Metallica Minerals Limited, Brisbane.

METALLICA MINERALS LIMITED, 2011: Major resource upgrade as Queensland tri–metal project celebrates milestone. Announcement to the Australian Securities Exchange, 19 January 2011. Metallica Minerals Limited, Brisbane.

REA, P., 1990: Authority to Prospect 5944M (Dido), Report for the six months ended 30<sup>th</sup> June, 1990. Held by the Queensland Department of Natural Resources and Mines as Report 21951.

RESOLUTE MINING LIMITED, 2012: Annual Report 2012. Resolute Mining Limited, Perth.

SEDIMENTARY HOLDINGS LIMITED, 1997: Annual Report 1997. Sedimentary Holdings Limited, Melbourne.

SMC GOLD LIMITED, 2004: Annual Report 2004. SMC Gold Limited, Brisbane.

SWITZER, C.K., 1995: A case history of exploration activities in the Iron Range district, Cape York Australia. James Cook University of North Queensland, unpublished papers submitted in partial fulfilment of the requirements for the degree of Master of Science.

WEEKS, G., 1992: Final and relinquishment report on EPM 8199, Mount Coolon magnetite report. Held by the Queensland Department of Natural Resources and Mines as Report 24173.