

South Australia's Major Operating/Approved Mines
Resource Estimates and Production Statistics



Prepared by DSD 19/02/2019

Major Operating/Approved Mines	Commodity	Status	Total Resource (unless otherwise stated)	Ore Reserve	Contained Commodity (from Resource)	Annual Production
Olympic Dam – BHP Billiton Olympic Dam Operations Pty Ltd www.bhpbilliton.com	Cu-U-Au-Ag	Operating	9730 Mt(OC sulfide) at 0.62% Cu, 0.2 kg/t U ₃ O ₈ , 0.27 g/t Au, 1.0 g/t Ag 997 Mt (UG sulfide) at 1.68% Cu, 0.49 kg/t U ₃ O ₈ , 0.64 g/t Au, 4 g/t Ag <i>Annual Report 2018</i>	500 Mt (UG sulfide) at 1.98% Cu, 0.58 kg/t U ₃ O ₈ , 0.72 g/t Au, 4.0 g/t Ag 35 Mt (low grade) at 1.15% Cu, 0.37 kg/t U ₃ O ₈ , 0.51 g/t Au, 3 g/t Ag <i>Annual Report 2018</i>	(Total Resource, OC sulfide) 60,326,000 t Cu 1,946,000 t U ₃ O ₈ 84,463,000 oz Au 312,826,000 oz Ag Total Resource (UG sulfide) 16,749,600 t Cu 488,530 t U ₃ O ₈ 20,514,748 oz Au 128,217,177 oz Ag <i>(MRD estimate from published resource)</i> (reserve, UG sulfide) 9,900,000 t Cu 290,000 t U ₃ O ₈ 11,574,000 oz Au 64,300,000 oz Ag <i>(MRD estimate)</i>	2018: 147,400 t Cu (cathode), 3736 t UOC, 103,813 oz Au, 951,000 oz Ag <i>Annual Report 2018</i>
Prominent Hill – OZ Minerals Prominent Hill Operations Pty Ltd www.ozminerals.com	Cu-Au-Ag	Operating	130 Mt (copper resource) at 1.4% CuEq, 1.1% Cu, 0.6 g/t Au and 3 g/t Ag 20 Mt (gold resource) at 0.7% CuEq, 0.1% Cu, 1.2 g/t Au and 2 g/t Ag <i>ASX release 12/11/18</i>	69 Mt at 1.3% CuEq, 1.0% Cu, 0.6 g/t Au and 3.0 g/t Ag <i>ASX Release 12/11/18</i>	copper resource 1,500,000 t Cu, 2,400,000 oz Au and 12,000,000 oz Ag gold resource 19,000 t Cu, 790,000 oz Au, 1,000,000 oz Ag <i>ASX Release 12/11/18</i> 660,000 t Cu, 1,300,000 oz Au, 6,000,000 oz Ag <i>ASX Release 12/11/18</i>	2018: 110,111 t Cu, 130,856 oz Au and 702,703 oz Ag (in conc.) <i>qtr rpt Dec 2018</i>
Carrapateena – OZ Minerals Carrapateena Pty Ltd www.ozminerals.com	Cu-Au-Ag	Under construction	134 Mt at 1.5% Cu, 0.6 g/t Au, 6.5 g/t Ag <i>ASX Release 24/08/2017</i>	79 Mt (probable) at 1.8% Cu, 0.7 g/t Au, 8.5 g/t Ag <i>ASX Release 24/08/2017</i>	1,970,000 t Cu, 2,570,000 oz Au, 27,900,000 oz Ag <i>ASX Release 24/08/2017</i> (reserve) 1,400,000 t Cu, 1,800,000 oz Au, 22,000,000 oz Ag <i>ASX Release 24/08/2017</i>	4.25 Mtpa 20 year life:65,000 tpa Cu, 67,000 tpa Au first ore q4 2019 <i>qtr rpt Sept 2018</i>
Kanmantoo – Hillgrove Resources Limited www.hillgroveresources.com.au	Cu-Au-Ag	Operating	31.8 Mt at 0.6% Cu, 0.1 g/t Au, 1.2 g/t Ag	6.1 Mt at 0.6% Cu, 0.1 g/t Au, 1.1 g/t Ag <i>june qtr rpt 2018</i>	Resource: 188 000 t Cu, 102 239 oz Au and 1 124 633 oz Ag <i>june qtr rpt 2018</i> Reserve: 37 000 t Cu, 19 611 oz Au and 215 731 oz Ag <i>june qtr rpt 2018</i>	2017-18: 17 704 t Cu, 6 812 oz Au, 129 569 oz Ag (in conc) <i>qtr rpt June 2017</i>
Hillside – Rex Minerals Ltd www.rexminerals.com.au	Cu-Au	ML granted (PEPR pending)	337 Mt at 0.6% Cu, 0.14 g/t Au <i>ASX release 25/5/15</i>	82 Mt at 0.62% Cu, 0.16 g/t Au <i>ASX release 25/5/15</i>	(resource) 1 967 600 t Cu 1 416 240 oz Au <i>ASX release 25/5/15</i> (reserve) 509 262 t Cu 431 504 oz Au <i>ASX release 25/5/15</i>	proposed: 6 Mtpa for 35 000 t Cu, 24 000 oz Au as Cu-Au conc, first 12 years <i>Ext Feas Study May 2015</i>
Middleback Range – SIMEC Mining www.simec.com/mining	Fe ₂ O ₃ , Fe ₃ O ₄	Operating	Hematite 183.3 Mt at 56.7% Fe Magnetite 179.0 Mt at 36.6% DTR and 34.8% Fe beneficiated hematite stockpile 57.4 Mt at 45.9% Fe <i>ASX release 19/08/15</i>	Hematite reserves 23.1 Mt at 57.9% Fe, 5.8% SiO ₂ , 2.8% Al ₂ O ₃ , 0.05% P Magnetite reserves 61.9 Mt at 39.6% DTR and 38.3% Fe, 19.9% SiO ₂ Beneficiated hematite stockpile 15.9 Mt (52% recovery)61.0% Fe <i>ASX release 19/08/15</i>	Resource: 103 900 000 t Fe (hematite) 62 300 000 t Fe (magnetite) 26 300 000 t Fe (stockpile) <i>(MRD estimate)</i> Reserve: 13 300 000 t Fe (hematite) 23 700 000 t Fe (magnetite) <i>(MRD estimate)</i>	2018: ~8 Mt iron ore
Cairn Hill – Cu-River Mining Australia Pty Limited	Fe ₃ O ₄ , Cu, Au	Care and Maint.	11.4 Mt at 49.5% Fe (magnetite) 0.4% Cu and 0.1 g/t Au	6.9 Mt at 51.2% Fe, 0.43% Cu, 0.13 g/t Au (Phase 1 pit area 28/12/09)	5 643 000 t Fe <i>(MRD estimate)</i>	2016-17:~0.6 Mt magnetite concentrate, ramping up to 3 Mtpa by 2018

South Australia's Major Operating/Approved Mines Resource Estimates and Production Statistics



Government of South Australia
Department of State Development

Prepared by DSD 19/02/2019

Major Operating/Approved Mines	Commodity	Status	Total Resource (unless otherwise stated)	Ore Reserve	Contained Commodity (from Resource)	Annual Production
Peculiar Knob – Southern Iron Pty Ltd (Subject to Deed of Company Arrangement) <i>www.simec.com/mining</i>	Fe ₂ O ₃	Care and Maint.	Southern Iron (Peculiar Knob and Hawks Nest) Hematite resources 34.2 Mt at 61.0% Fe, 9.75% SiO ₂ , 1.1% Al ₂ O ₃ , 0.05% P <i>2014 ore statement</i>	Southern Iron (Peculiar Knob and Hawks Nest) Hematite reserves 19.7 Mt at 61.8% Fe, 0.03% P (as at June 2014, no reserve declared June 2015) <i>2014 ore statement</i>	Southern Iron Hematite contained resource 25,200,000 t Fe <i>(MRD estimate)</i> no reserve declared June 2015	2012–2015: 8.2 Mt iron ore <i>qtr rpt June & Dec 2015</i>
Central Eyre Iron Project – Iron Road Limited <i>www.ironroadlimited.com.au</i>	Fe ₃ O ₄	ML granted (PEPR pending)	4 510 Mt (meas. ind. & inf.) at 16.0% Fe, 53.0% SiO ₂ , 13.0% Al ₂ O ₃ , 0.08% P and 3.5% LOI <i>ASX release 27/02/15</i>	3 681 Mt (prov. and prob.) at 15.07% Fe, 53.7% SiO ₂ , 12.06% Al ₂ O ₃	~721 600 000 t Fe (resource) <i>(MRD estimate)</i> ~554 700 000 t Fe (reserve)	~21.5 Mtpa, 67% Fe conc. +25 year mine life
Wilgerup – Centrex Metals Limited <i>www.centremetals.com.au</i>	Fe ₂ O ₃	PEPR Approved	13.3 Mt (ind.) at 57.7% Fe, 4.9% SiO ₂ , 2.8% Al ₂ O ₃ , 5.1% LOI, 0.5% P <i>Annual Report 2015</i>		7 616 400 t Fe <i>(MRD estimate)</i>	proposed: 1–1.5 Mtpa
Four Mile – Quasar Resources P/L	U	Operating	Four Mile 9.8 Mt at 0.33% U ₃ O ₈ Four Mile Northeast 7.5 Mt (inf.) at 0.30% U ₃ O ₈		Four Mile 32 000 t U ₃ O ₈ Four Mile Northeast 22 680 t U ₃ O ₈	2016: 1690 t UOC
Beverley – Heathgate Resources P/L <i>www.heathgate.com.au</i>	U	Operating	Beverley: 7.7 Mt at 0.27% U ₃ O ₈ Beverley North: 2.2 Mt at 0.18% U ₃ O ₈		Beverley: 21 000 t U ₃ O ₈ Beverley North: 4000 t U ₃ O ₈ (0.15m% GT cut-off) <i>(MRD estimate)</i>	N/A
Honeymoon – Boss Resources Ltd <i>www.bossresources.com.au</i>	U	Care and Maint.	43.5 Mt at 660 ppm eU308 (includes Gould's Dam & Jason's) <i>ASX Release 15/03/17</i>	3.64 Mt (prob) at 0.063% U <i>ASX Release 31/12/12</i>	28 800 t U308 (resource) (includes Gould's Dam & Jason's) <i>ASX Release 16/09/16</i> 2 688 t U (reserve) <i>ASX Release 31/12/12</i>	proposed restart–400tpa for 12mths, stage2 –900tpa, stage3 –1450 tpa <i>ASX Release 31/05/17</i>
Jacinth–Ambrosia – Iluka Resources Limited <i>www.iluka.com</i>	HM	Operating	208.5 Mt material for 5.7 Mt in situ HM, 48.7% zircon, 26.4% ilmenite, 4.5% rutile <i>ASX release 20/02/2017</i>	Ambrosia 56.5 Mt at 3.5% HM, in situ HM – 2 Mt at 52.6% zircon, 23.6% ilmenite, 4.8% rutile. Jacinth 45.8 Mt at 4.3% HM, in situ HM – 2 Mt at 46.9% zircon, 31% ilmenite, 4.2% rutile <i>ASX release 20/02/2018</i>	2 766 200 t zircon, 1 502 400 t ilmenite, 257 272 t rutile, (of total resource) <i>ASX release 20/02/2017</i> (reserve) 1 961 778 t zircon, 739 715 t ilmenite, 177 262 t rutile <i>ASX release 20/02/2017</i>	2018: 289 100 t zircon, 38 000 t rutile, 121 700 t ilmenite <i>qtr rpt Dec 2018</i>
Mindarie – Murray Zircon Pty Ltd <i>www.murrayzircon.com.au</i>	HM	Rehab.		48.1 Mt material at 3.7% HM for 1.8 Mt in situ HM, 19.9% zircon, 48.9% ilmenite, 5.0% rutile & 6.5% leucosene <i>Website 01/01/16</i>	(reserve) 358 200 t zircon, 880 200 t ilmenite, 90 000 t rutile, 117 000 t leucosene	N/A
Challenger – WPG Resources Ltd (Administrators Appointed) <i>www.wpgresources.com.au</i>	Au	Care and Maint.	1 621 000 t at 6.99 g/t Au <i>ASX release 29/09/17</i>	537 200 t at 5.60 g/t Au <i>ASX release 29/09/17</i>	364 000 oz Au (resource) <i>ASX release 29/09/17</i> 96 700 oz Au (reserve) <i>ASX release 29/09/17</i>	2017–18: 35 000 oz Au <i>qtr rpt</i>
White Dam – Exco Resources Ltd <i>www.whsp.com.au</i> Washington H. Soul Pattinson–owner (through subsidiary Exco)	Au	Operating	5.42 Mt at 0.97 g/t Au <i>website 11/08/2017</i>	5.4 Mt at 1.04g/t gold	169 400 oz Au (resource) <i>website 11/08/2017</i> 181 000 oz Au (reserve) <i>(PEPR 01/01/2012)</i>	2018: ~8400 oz Au
Portia – Benagerie Gold Pty Ltd (100%subsidiary of Havilah Resources) <i>www.havilah-resources.com.au</i>	Au	Care and Maint.	720,000 t at 2.9 g/t Au (inf.)	53,200 oz Au <i>(PEPR 17/12/2014)</i>	67,000 oz Au	2018: 10,200 oz Au
Tarcoola – WPG Resources Ltd (Administrators Appointed) <i>www.wpgresources.com.au</i>	Gold	Care and Maint.	1 600 000 t at 1.7 g/t Au <i>ASX Release 21/09/2017</i>	567 200t at 3.0 g/t Au <i>ASX Release 21/09/2017</i>	87 600 oz Au <i>ASX Release 21/09/2017</i> 54 300 oz Au <i>ASX Release 21/09/2017</i>	2017–18: 17 000 oz Au

South Australia's Major Operating/Approved Mines Resource Estimates and Production Statistics



Government of South Australia
Department of State Development

Prepared by DSD 19/02/2019

Major Operating/Approved Mines	Commodity	Status	Total Resource (unless otherwise stated)	Ore Reserve	Contained Commodity (from Resource)	Annual Production
Beltana – Perilya Limited <i>www.perilya.com.au</i>	Zn	Care and Maint.	Total resource 972 000 t at 29.8% Zn, (ind.) 375 600 t at 32.6% Zn (2009 remaining) 308 000 at 28% Zn	Stockpile depleted by 2011/12		N/A
Angas – Terramin Australia Limited	Pb, Zn, Cu, Au, Ag	Care and Maint.	0.91 at 4.2% Zn and 1.7% Pb <i>Annual Report 2017</i>			N/A <i>sept qtr rpt 2013</i>
Leigh Creek – Alinta Energy Group <i>www.alintaenergy.com</i>	Coal	Rehab.	900 Mt coal (upper series, middle series and lower series)	40 Mt coal (reserves to 2009)		2016 (final): 0.6 Mt coal
Uley – Quantum Graphite Operations Pty Ltd (Subject to Deed of Company Arrangement)	graphite	Care and Maint.	4.54 Mt at 11.63% TGC (3.5% cutoff) <i>ASX release 14/5/15</i>	2.917 Mt at 12.1% TGC <i>ASX Release 14/5/15</i>	520 000 t TGC (resource) 353 618 t TGC (reserve) <i>ASX Release 14/5/15</i>	nil
Campoona – Archer Exploration Limited <i>www.archerexploration.com.au</i>	graphite	ML granted (PEPR pending)	8.55 Mt at 9.0% TGC <i>ASX release 06/08/14</i>		770 800 t (meas. ind. & inf.) TGC <i>ASX release 06/08/14</i>	campaign mine up to 10,000 tpa graphite concentrate over 16 year mine life
Kookaburra Gully – Lincoln Minerals Limited <i>www.lincolnminerals.com.au</i>	graphite	ML granted (PEPR pending)	2.03 Mt at 15.2% TGC (5% cutoff grade) <i>ASX release 27/11/17</i>	1.34 Mt(probable) at 14.6% TGC (8.5% cut-off) <i>ASX release 27/11/17</i>	308,560 t TGC 195,640 t TGC	proposed: Up to 40 000tpa TGC (up to 98%) <i>ASX Release 27/04/17</i>

Blank fields indicate parameters that have not been published by the company

*Expansion underway or in approvals stage

** Annual production published in company reports or reported to DSD if not published

Disclaimer. The contents of this report are for general information only and are not intended as professional advice, and the Department of State Development (and the Government of South Australia) make no representation, express or implied, as to the accuracy, reliability or completeness of the information contained in this report or as to the suitability of the information for any particular purpose. Use of or reliance upon the information contained in this report is at the sole risk of the user in all things and the Department of State Development (and the Government of South Australia) disclaim any

Further information and contacts:

Website www.minerals.statedevelopment.sa.gov.au

Email: dsd.minerals@sa.gov.au