

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



Prepared by DSD 28/07/2017

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 <a href="http://www.bhpbilliton.com">www.bhpbilliton.com</a>	Cu-U-Au-Ag	Operating	10 400 Mt at 0.77% Cu, 0.25 kg/t U <sub>3</sub> O <sub>8</sub> , 0.32 g/t Au, 1.0 g/t Ag <i>Annual Report 2016</i>	505 Mt at 1.96% Cu, 0.58 kg/t U <sub>3</sub> O <sub>8</sub> , 0.71 g/t Au, 4.0 g/t Ag <i>Annual Rpt 2016</i>	(total resource, sulphide only) 80 080 000 t Cu 2 525 000 t U <sub>3</sub> O <sub>8</sub> 97 416 763 oz Au 324 722 544 oz Ag (reserve) 9 898 000 t Cu 285 560 t U <sub>3</sub> O <sub>8</sub> 11 515 111 oz Au 62 243 845 oz Ag	2016: 168 600 t Cu (cathode), 3813 t UOC, 103 055 oz Au, 757 000 oz Ag <i>Annual Report 2016</i>
Prominent Hill – OZ Minerals Prominent Hill Operations Pty Ltd <a href="http://www.ozminerals.com">www.ozminerals.com</a>	Cu-Au-Ag	Operating	148 Mt (copper resource) at 1.2% Cu, 0.6 g/t Au and 2.9 g/t Ag  25 Mt (gold resource) at 0.1% Cu, 1.3 g/t Au and 1.6 g/t Ag <i>ASX Release 15/11/16</i>	75 Mt at 1.0% Cu, 0.6 g/t Au and 3.0 g/t Ag <i>ASX Release 15/11/16</i>	copper resource 1 750 000 t Cu, 2.64 Moz Au and 13.6 Moz Ag gold resource 19 000 t Cu, 1.02 Moz Au, 1.3 Moz Ag <i>ASX Release 15/11/16</i> Reserve 740 000 t Cu, 1.4 Moz Au, 7.1 Moz Ag <i>ASX Release 15/11/16</i>	2016: 116 882 t Cu, 118 333 oz Au and 842 672 oz Ag (in conc.) <i>qtr rpt Dec 2016</i>
Kanmantoo – Hillgrove Resources Limited <a href="http://www.hillgroveresources.com.au">www.hillgroveresources.com.au</a>	Cu-Au-Ag	Operating	35.2 Mt at 0.6% Cu, 0.10 g/t Au, 1.2 g/t Ag <i>ASX release 26/5/16</i>	9.5 Mt at 0.71% Cu, 0.18 g/t Au, 1.9 g/t Ag <i>ASX release 18/10/16</i>	Resource: 211 kt Cu, 111 koz Au and 1335 koz Ag <i>ASX release 18/10/16</i> Reserve: 57 000 t Cu, 21 000 oz Au and 306 koz Ag <i>ASX release 18/10/16</i>	2016: 13 624 t Cu, 11 518 oz Au, 104 042 oz Ag (in conc) <i>qtr rpt Dec 2016</i>
Hillside – Rex Minerals Ltd <a href="http://www.rexminerals.com.au">www.rexminerals.com.au</a>	Cu-Au	ML granted	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 (reserve) 509 262 t Cu 431 504 oz Au	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 – One Steel Manufacturing <a href="http://www.arrium.com">www.arrium.com</a>	Fe <sub>2</sub> O <sub>3</sub> , Fe <sub>3</sub> O <sub>4</sub>	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 <sub>2</sub> , 2.8% Al <sub>2</sub> O <sub>3</sub> , 0.05% P Magnetite reserves 61.9 Mt at 39.6% DTR and 38.3% Fe, 19.9% SiO <sub>2</sub> 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>(DSD estimate)</i> Reserve: 13 300 000 t Fe (hematite) 23 700 000 t Fe (magnetite) <i>(DSD estimate)</i>	2016: ~10 Mt iron ore
Cairn Hill – Cu-River Mining Australia Pty Limited	Fe <sub>3</sub> O <sub>4</sub> , Cu, Au	Operating	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 (DSD estimate)	2016: ~1 Mt magnetite concentrate
Peculiar Knob – Southern Iron Pty Ltd (Subject to Deed of Company Arrangement) <a href="http://www.arrium.com">www.arrium.com</a>	Fe <sub>2</sub> O <sub>3</sub>	Care and Maint.	Southern Iron (Peculiar Knob and Hawks Nest) Hematite resources 34.2 Mt at 61.0% Fe, 9.75% SiO <sub>2</sub> , 1.1% Al <sub>2</sub> O <sub>3</sub> , 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>(DSD estimate)</i> no reserve declared June 2015	2016: Nil 2015: 1 235 000 t ore mined (Southern Iron) <i>qtrly prod rpt 30 June &amp; 31 Dec 2015</i>
Central Eyre Iron Project – Iron Road Limited <a href="http://www.ironroadlimited.com.au">www.ironroadlimited.com.au</a>	Fe <sub>3</sub> O <sub>4</sub>	ML granted	4 510 Mt (meas. ind. & inf.) at 16.0% Fe, 53.0% SiO <sub>2</sub> , 13.0% Al <sub>2</sub> O <sub>3</sub> , 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 <sub>2</sub> , 12.06% Al <sub>2</sub> O <sub>3</sub>	~721 600 000 t Fe (resource) <i>(DSD estimate)</i> ~554 700 000 t Fe (reserve)	~21.5 Mtpa, 67% Fe conc. +25 year mine life
Wilgerup – Centrex Metals Limited <a href="http://www.centrexmetals.com.au">www.centrexmetals.com.au</a>	Fe <sub>2</sub> O <sub>3</sub>	PEPR Approved	13.3 Mt (ind.) at 57.7% Fe, 4.9% SiO <sub>2</sub> , 2.8% Al <sub>2</sub> O <sub>3</sub> , 5.1% LOI, 0.5% P <i>Annual Report 2015</i>		7 616 400 t Fe (DSD estimate)	proposed: 1–1.5 Mtpa
Four Mile – Quasar Resources P/L	U	Operating	Four Mile 9.8 Mt at 0.33% U <sub>3</sub> O <sub>8</sub>  Four Mile Northeast 7.5 Mt (inf.) at 0.30% U <sub>3</sub> O <sub>8</sub>		Four Mile 32 000 t U <sub>3</sub> O <sub>8</sub> Four Mile Northeast 22 680 t U <sub>3</sub> O <sub>8</sub>	2016: 1690 t UOC

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Beverley North – Heathgate Resources P/L <a href="http://www.heathgate.com.au">www.heathgate.com.au</a>	U	Care and Maint.	2.2 Mt at 0.18% U <sub>3</sub> O <sub>8</sub>		4000 t U <sub>3</sub> O <sub>8</sub> (0.15m% GT cut-off)	2016: nil
Beverley – Heathgate Resources P/L <a href="http://www.heathgate.com.au">www.heathgate.com.au</a>	U	Care and Maint.	7.7 Mt at 0.27% U <sub>3</sub> O <sub>8</sub>		21 000 t U <sub>3</sub> O <sub>8</sub>	2016: nil
Honeymoon – Boss Resources Ltd <a href="http://www.bossresources.com.au">www.bossresources.com.au</a>	U	Care and Maint.	43.5 Mt at 660 ppm eU <sub>3</sub> O <sub>8</sub> (includes Gould's Dam & Jason's) <i>ASX Release 15/03/17</i>	3.64 Mt (prob) at 0.063% U <i>Annual Info. Sheet 31/12/12</i>	28 800 t U <sub>3</sub> O <sub>8</sub> (resource) (includes Gould's Dam & Jason's) <i>ASX Release 16/09/16</i> 2 688 t U (reserve) <i>Annual Inf. Sheet 31/12/12 (Uranium One)</i>	proposed restart–400tpa for 12mths, stage2 –900tpa, stage3 –1450 tpa <i>ASX 31 May 2017</i>
Jacinth–Ambrosia – Iluka Resources Limited <a href="http://www.iluka.com">www.iluka.com</a>	HM	Care and Maint.	386 Mt material at 4.9% HM for 18.9 Mt in situ HM, 29% zircon, 59% ilmenite, 3% rutile	103 Mt at 3.8% HM, for 3.97 Mt HM, 50% zircon, 27% ilmenite, 4% rutile <i>Annual resources, reserves 2016</i>	2 766 200 t zircon, 1 502 400 t ilmenite, 257 272 t rutile, (of total resource) (reserve) 1 961 778 t zircon, 739 715 t ilmenite, 177 262 t rutile	2016: 247 000 t zircon, 37 600 t rutile, 113 000 t ilmenite (saleable and upgradeable) <i>Qtrly Prod Report 31 Dec 2015</i>
Mindarie – Murray Zircon Pty Ltd <a href="http://www.murrayzircon.com.au">www.murrayzircon.com.au</a>	HM	Rehab.		51.6 Mt material at 3.7% HM for 1.9 Mt in situ HM, 20.0% zircon, 49.2% ilmenite, 4.9% rutile & 6.5% leucoxene <i>Website 01/07/14</i>	(reserve) 380 000 t zircon, 934 800 t ilmenite, 93 100 t rutile, 123 500 t leucoxene	Nil
Challenger – WPG Resources Ltd <a href="http://www.wpgresources.com.au">www.wpgresources.com.au</a>	Au	Operating	838 000 Mt at 9.76 g/t Au <i>ASX release 01/06/17</i>	557 800 t at 4.98 g/t Au	343 299 oz Au (resource) <i>ASX release 01/06/17</i> 89 000 oz (reserve) <i>ASX release 25/10/16</i>	2016: 24 567 oz Au
White Dam – Exco Resources Ltd <a href="http://www.whsp.com.au">www.whsp.com.au</a> Washington H. Soul Pattinson–owner (through subsidiary Exco)	Au	Operating	5.17 Mt at 0.97 g/t Au		160 900 oz Au (resource)	2016: ~2500 oz Au
Portia – Benagerie Gold Pty Ltd (100%subsidiary of Havilah Resources) <a href="http://www.havilah-resources.com.au">www.havilah-resources.com.au</a>	Au	Operating	720 000 t at 2.9 g/t Au (inf.)		67 000 oz Au	2016: 20,034 oz Au
Tarcoola – WPG Resources Ltd <a href="http://www.wpgresources.com.au">www.wpgresources.com.au</a>	Gold	Operating	973 000 t at 3.12 g/t Au <i>ASX Release 03/04/14</i>	710 000t at 3.1 g/t Au <i>ASX Release 1/9/2016</i>	97 540 oz Au 71 000 oz Au	
Beltana – Perilya Limited <a href="http://www.perilya.com.au">www.perilya.com.au</a>	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 t at 28% Zn	Stockpile depleted by 2011/12		Nil
Angas – Terramin Australia Limited	Pb, Zn, Cu, Au, Ag	Care and Maint.	Total Resource (excluding reserve) 0.91 Mt at 4.2% Zn, 1.7% Pb, 0.1% Cu, 19 g/t Ag, 0.3 g/t Au	0.19 Mt at 8.27% Zn, 3.29% Pb, 0.22% Cu, 40 g/t Ag, 0.55 g/t Au		Nil <i>sept qtr rpt 2013</i>
Leigh Creek – Alinta Energy Group <a href="http://www.alintaenergy.com">www.alintaenergy.com</a>	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 <a href="http://www.valenceindustries.com">www.valenceindustries.com</a>	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>	Stage 1 up to 14 000tpa 2015 Stage 2 up to 64 000 tpa 2018/19
Kookaburra Gully – Lincoln Minerals Limited <a href="http://www.lincolnminerals.com.au">www.lincolnminerals.com.au</a>	graphite	ML granted	2.03 Mt at 15.2% TGC (5% cutoff grade) <i>ASX release 17/5/17</i>		331 778 t TGC	

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

#### Further information and contacts:

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