Minerals ScoreCard 2009–10

P. Abbot

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Government of South Australia
Primary Industries and Resources SA

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Minerals Information and Promotions

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INTRODUCTION

The Mineral value-chain ScoreCard, initiated in 2001, provides information regarding the performance of South Australia's mineral industry across the exploration, investment, production, processing and export stages of wealth creation. In doing so, the ScoreCard measures give critical information on the three minerals strategic development targets (South Australia's Strategic Plan, 2007), as well as assisting in the development of programs designed to aid expansion of the mineral industry.

- **T1.17 Minerals exploration:**
  Exploration expenditure in South Australia to be maintained in excess of $100 million per annum until 2010.

- **T1.18 Minerals production:**
  Increase the value of minerals production to $3 billion by 2014.

- **T1.19 Minerals processing:**
  Increase the value of minerals processing to $1 billion by 2014.

FACTORS INFLUENCING THE 2009–10 MINERALS SCORECARD MEASURES

Scorecard measures in 2009–10 indicate a return to the favourable conditions for the minerals industry that existed before the Global Financial Crisis (GFC).

Table 1. Summary of the key measures of the South Australian minerals industry for 2009–10

Key measure	Data source	2009–10 ($m)	2008–09 ($m)	Change direction	Change ($m)	% change
Mineral tenement rent expenditure	PIRSA–TMS data	$6.44	$6.42	↑	$0.02	0.3%
Public targeted geo-information expenditure	PIRSA	$3.14	$3.84	↓	$0.70	-18.3%
Private exploration expenditure (T1.17)	ABS Cat. 8412	$167.9	$220.7	↓	-$52.8	-24%
New capital expenditure	ABS Cat. 5625	$457	$746	↓	-$289	-38.7%
Mine gate production value (T1.18)	PIRSA MER Report Book 2009/21	$3283	$2873	↑	$409.7	14.3%
Royalties payable	PIRSA	$84.3[a]	$75.2[a]	↓	-$9.1	-10.8%
Commodity import value	PIRSA	$357	$445	↓	-$88.1	-19.8%
Net off-site refining value (T1.19)	PIRSA estimate	$869	$973	↓	-$103	-10.6%
Commodity export value	ABS Cat. 5368 and PIRSA	$2825	$2744	↑	$80	2.9%
Net mineral industry value (T1.18 + T1.19)	PIRSA	$4152	$3846	↑	$306.3	8.0%

a Gross royalty figure, includes funds hypothecated for the Extractive Areas Rehabilitation Fund.

South Australia achieved record levels of Mineral Production (achieving T1.18 for the first time) despite the significant impact of major shaft failure at the State's largest producing mine, Olympic Dam. Moderate increases were achieved in Mine Gate Production and Exports, while decreases were recorded for the second successive years in the areas of Mineral Exploration and Off-site mineral refining.

The Minerals industry economic recovery continued to rebound throughout 2009–10 driven by high commodity prices. Those significantly positively impacting on South Australia were copper, iron ore and gold and evident in increased mineral production and exports.

MINERAL TENEMENT RENT EXPENDITURE

Increased marginally by $0.02 m (0.3%) to $6.44 m.

PUBLIC TARGETED GEO-INFORMATION EXPENDITURE

Government funded expenditure through the PACE initiative. In line with PACE budget allocations, the level of PACE expenditure in 2009–10 was $3.136 m.

PRIVATE EXPLORATION EXPENDITURE

Decreased by $52.8 m (24%) to $167.9 m, but has still exceeded the SASP target: T1.17 of $100 m for the fifth successive year (Fig. 1).

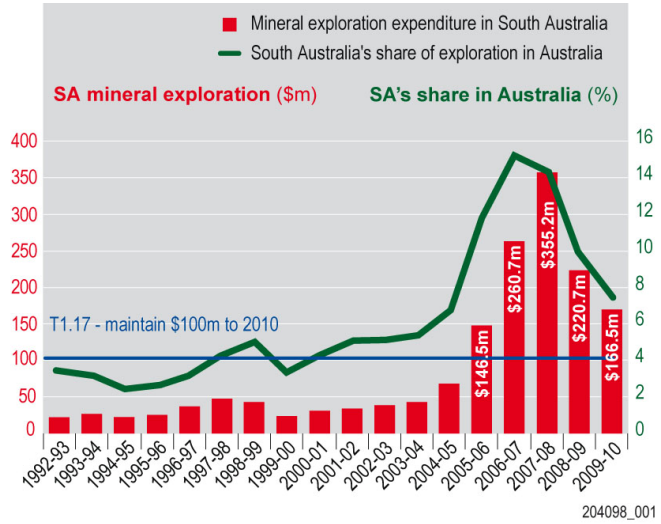

Figure 1. South Australian mineral exploration expenditure1992–93 to 2009–10 and South Australia's share of Australian mineral exploration expenditure

Exploration was dominated by the search for copper, uranium, gold and iron ore (Fig. 2). Other major commodities explored for throughout the State included heavy mineral sands, zinc, lead, silver, nickel, coal and diamonds.

In addition, in 2009–10, South Australia attracted:

- Over one quarter, $62 m, (26%) of national Copper Exploration
- Over one third, $51 m (38%) of national Uranium Exploration

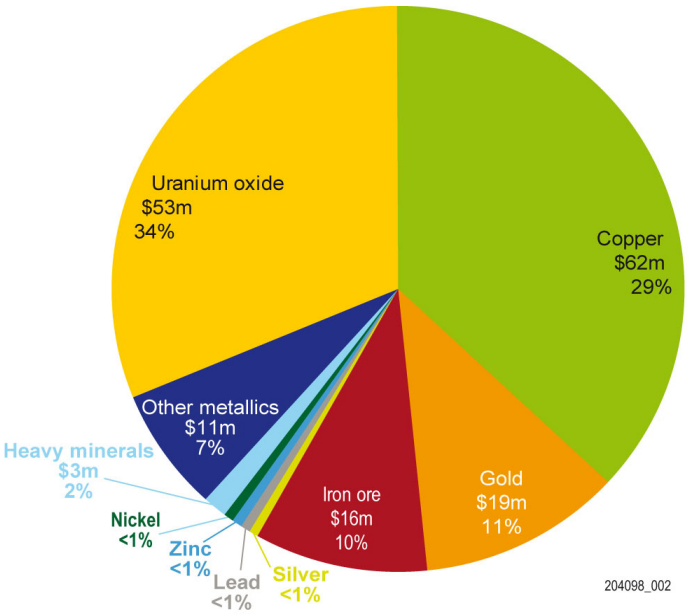

Figure 2. Mineral exploration expenditure ($220.7 m 2009–10) by commodity

NEW CAPITAL EXPENDITURE (NCE)

NCE decreased by $289 m (38.7%) to $457 m. This was expected as the significant spending at Prominent Hill ($1175 m) was completed in the previous year (2008–09). New capital expenditure for the 2009–10 financial year has primarily been associated with construction of:

- Jacinth-Ambrosia (Iluka Resources) — $390 m heavy mineral sands mine.
- Cairn Hill (IMX Resources) — $15 m iron ore (magnetite) and copper-gold mine.
- Kanmantoo (Hillgrove Resources) — $99.5 m copper-gold mine.
- White Dam (Polymetals/Exco Resources) — $23.5 m gold mine.

MINE GATE PRODUCTION

Mine gate production values rose significantly by $409.7 m (14.3%) to reach $3.283 b in 2009–10 (Fig. 3). This resulted in the inaugural achievement of the SASP Mineral Production target of $3 billion by 2014. This growth is largely due to:

- higher sales values achieved for gold due to record high prices ($92 m year on year increase)
- increased value of copper, iron ore and gold due to the first full years production at Prominent Hill and increased production of haematite from the Middleback Ranges.

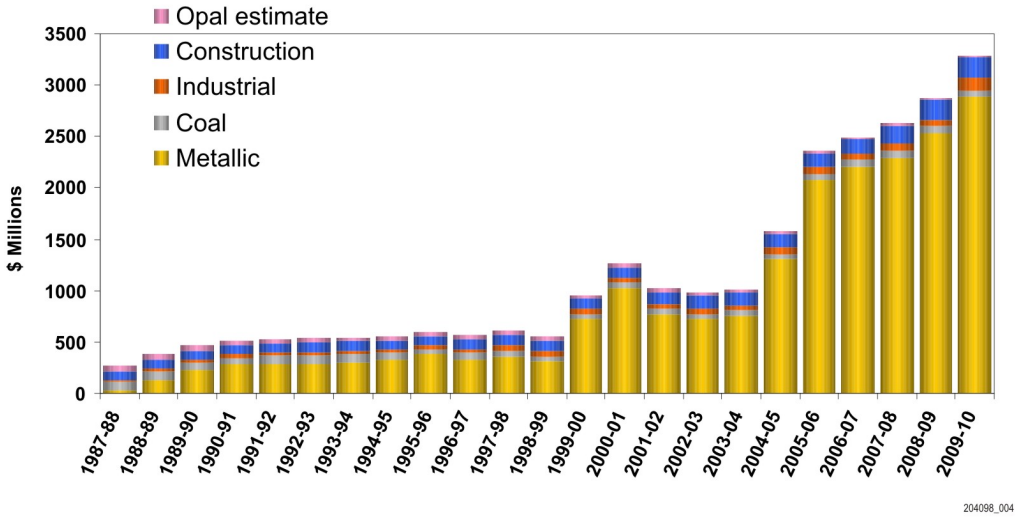

Figure 3. South Australian mineral production 1987–88 to 2009–10

This overall increase in mineral production has occurred despite the significant decrease in production (Cu, Au, U, Ag) at Olympic Dam (BHP Billiton) as a result of shaft failure that led to around half the anticipated production for the year. Olympic Dam reported production in 2009–10 of 103 300 t Cu (cathode), 2 279 t U_3O_8, 65 494 oz Au (bullion), 500 000 oz Ag (bullion).

- Sustained high copper prices and an increase in the volume of copper produced in 2009–10 ensured that **copper** remained the State's major mineral commodity with a production value of $1.583 billion (a significant increase of $226 m) (Fig.4). The significant reduction in copper production at Olympic Dam was buoyed by the outstanding production of copper from South Australia's new major copper mine – Prominent Hill.

- **Iron ore** production from OneSteel's Middleback Ranges totalled $537 m (year on year increase of $137 m). This increase is due to record high prices for iron ore together with increased volumes of hematite iron ore exports (OneSteel has achieved one of the objectives of Project Magnet – Phase 2, to increase haematite iron ore exports to 6 Mt by next year).

- **Gold** production totalled $345 m (an increase of $84 m compared with the 2008–09 total of $261 m). This significant increase occurred despite significantly lower production levels at Olympic Dam and was offset by high gold prices.

- **Uranium** production remains of significant value to this State however decreased production values were achieved totalling $191 m (decrease of $165 m, almost half the previous year total of $357 m). This decrease is due to the significant decrease in uranium produced at Olympic Dam as a result of the main shaft failure previously discussed.

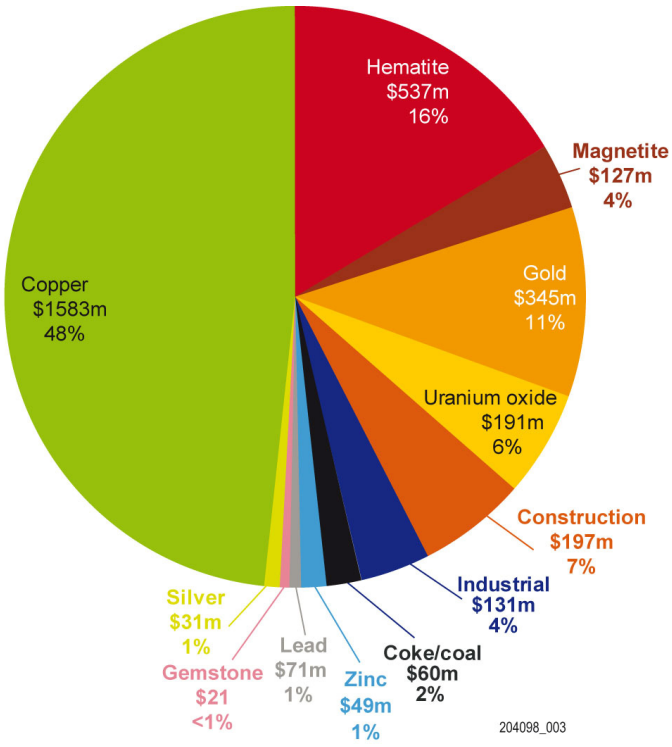

Figure 4. Mineral production value ($2.873 b 2009–10) by commodity

ROYALTIES PAYABLE*

Mineral royalties payable decreased by $9.1 m (10.8%) to $75.2 m. The decrease is primarily due to the shaft failure at Olympic Dam resulting in lower royalties payable on reduced production. (Fig. 5).

* *This figure is for royalties payable on mine gate sales during the period 2009–10 but not received during this period. In addition gross royalties are quoted and include funds hypothecated for EARF.*

Royalty receipts received during the period 2009–10 as reported to treasury totalled $68.3 m.

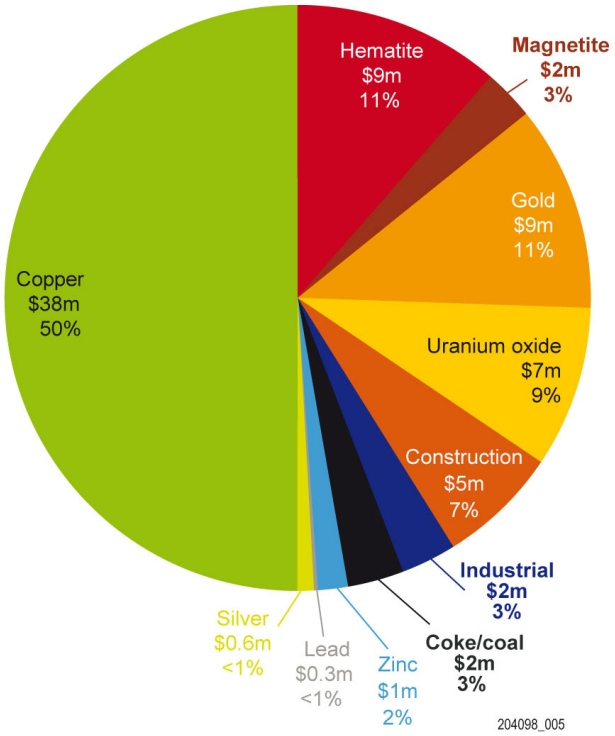

Figure 5. Royalties payable ($84.3 m 2009–10) by commodity

COMMODITY IMPORTS

The estimated value of ore imported by *Nyrstar* for refinement at its Port Pirie smelter. The decrease of $88.1 m (19.8%) to $357.6 m is related to the decrease in the estimated cost of the ore. *This measure is calculated and subtracted from off-site refining in order to obtain a net off-site refining measure.*

NET OFF-SITE REFINING VALUE

The estimated net off-site refining value decreased by $103 m (10.6%) to $869.8 million. This was the result of a reduction in the amount of steel produced at OneSteel's Whyalla Steelworks and lower volumes of lead and zinc produced at Nyrstar's Port Pirie Smelter (Fig. 6).
Net off-site refining records the value of mineral refinement from the following sources: Nyrstar's Port Pirie Smelter (Zn-Pb, Ag and Au), OneSteel's Whyalla iron-ore smelting (does not include steel manufacturing), industrial minerals and construction materials.

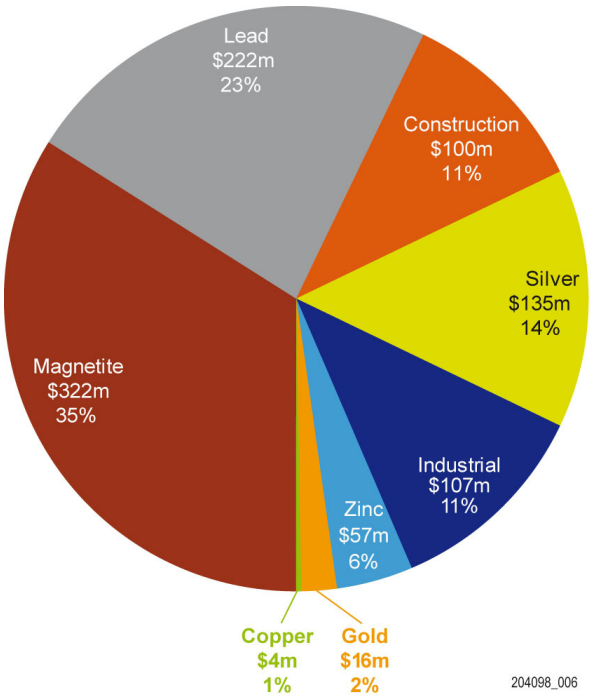

Figure 6. Net off-site refining value ($973 m 2009–10) by commodity

MINERAL EXPORTS

Mineral Exports rose by $80 m (2.9%) to reach $2.825 billion in 2009–10. Minerals continue to comprise the single largest export category for the State, accounting for 35% of SA's total merchandise export value (Fig. 7). As such, mineral exports represent the single major contributor to achieving the SASP Target T1.14 of $25 billion in State exports by 2014. The majority of minerals exported are from minerals produced at the State's mines but a significant portion of exports also come from refined minerals produced at Port Pirie.

Major commodities exported (Fig. 8):
$1224 m copper
$680 m haematite iron ore
$361 m lead
$208 m silver
$191 m uranium

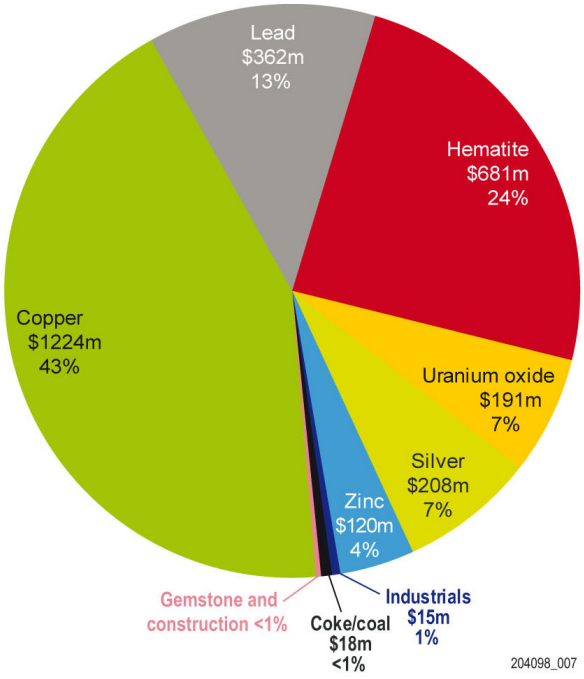

Figure 7. Mineral export value ($2.744 b 2009–10) by commodity

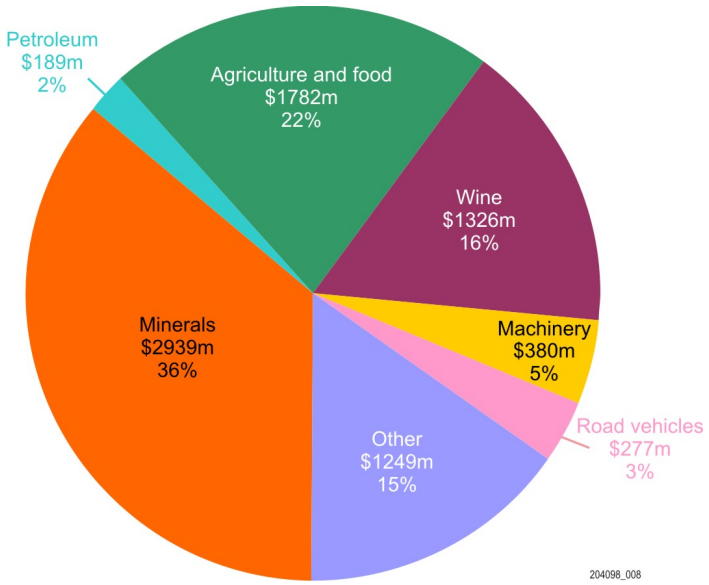

Figure 8. South Australian exports ($9.5 b) by sector; minerals is the largest sector ($2.744 b 29%)

NET MINERAL INDUSTRY VALUE (NMIV)

Net Mineral Industry Value (NMIV) increased by $386.1 m (increase of 10%) to $4.232 billion despite the substantial decrease in production at Olympic Dam and the decrease in net off-site refining (Fig. 9).

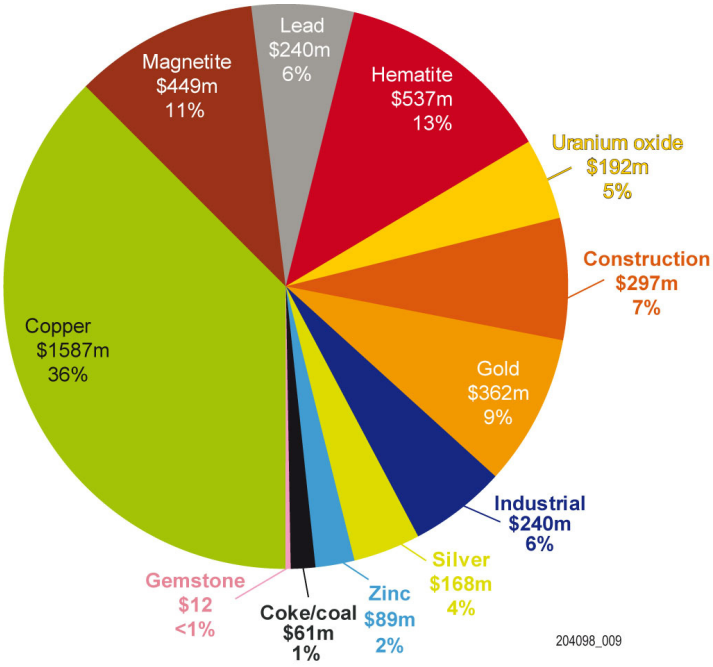

Figure 9. Net mineral industry value (Mineral production and off-site refining combined) ($3.846 b 2009–10) by commodity

The increase was led by the increased value of mineral production (higher values for gold and copper) and the increased volume and value for iron ore. In addition the first full year production of copper and gold from Prominent Hill significantly increased the State's NMIV.

NMIV is the sum of 'Mine gate production' and 'Net off-site refining' values and provides a summary measure of the minerals industry performance.

OUTLOOK 2010–11

In 2010–11 'lag' value-chain areas of production and export will be positively influenced by increased volumes from existing mines and inaugural production from new mines, and sustained high commodity prices for copper, gold, iron ore, uranium and heavy mineral sands:

- OneSteel – increased haematite iron ore exports to be sustained (6 Mtpa)
- Prominent Hill – full years production of copper, gold and silver
- Jacinth–Ambrosia – first full years production
- Olympic Dam – return to near capacity production of copper, uranium, gold and silver as a result of haulage shaft repair completion in mid-2010.

Increased mineral exports are anticipated to follow the expected increases in production resulting in increased iron ore, copper, gold, uranium and silver exports.

Limited growth is expected in the 'lead' value-chain measure – capital expenditure

- Large projects such as Prominent Hill ($1175 m) and Jacinth–Ambrosia ($390 m) have completed their capital spending.
- Large capital projects (>$200 m) don't occur every year, however there are 20–30 smaller capital projects that PIRSA is working with developers on to ensure they progress within timeframes.
- The upside is that as these large mineral projects have completed their capital spending and have gone into production that the 'lag' value chain measures mineral production/exports, royalties, will translate into long term benefits for the state including an expanded service industry and jobs.

SASP TARGETS

The industry remains on-track to achieving and maintaining the current SASP targets, with continued steady results expected in exploration, production, processing and exports.

CURRENT SASP TARGETS

SASP target T1.17 — Exploration to 2010, >$100 M (2009–10 $167.9 m)
SASP target T1.19 — Processing by 2014, $1B (2009–10 $869.8 m)
SASP target T1.18 — Production by 2014, $3B (2009–10 $3.283 b)
SASP target T1.14 — Exports by 2014, contribute to $25 b SA total
(2008–09 $2.824 b minerals /$8.9 b State)

Table 2. Minerals ScoreCard summary 2001–10 (all figures quoted are $million)

	Mineral tenement rent expenditure	Public targeted geo-information expenditure	Private exploration expenditure	New capital expenditure	Mine gate production value	*Royalties payable	Commodity import value	Net off-site refining value	Commodity export value	Net mineral industry value
Data source	*PIRSA – TMS data*	*PIRSA*	*ABS Cat. 8412*	*ABS Cat. 5625*	*PIRSA MER Report Book 2009/21*	*PIRSA*	*PIRSA*	*PIRSA est.*	*ABS Cat. 5368 and PIRSA*	*PIRSA*
SASP targets			**T1.17 $100 m by 2010**		**T1.18 $3 billion by 2014**			**T1.19 $1 billion by 2014**	**T1.14 contribute to $25 b by 2014**	**T1.18 + T1.19 $4 billion by 2014**
Status			***Achieved in 2005–06***		***Achieved in 2009–10***			***Not achieved in 2009–10***	***Minerals States largest export***	
2009–10	**6.4**	**3.14**	**167.9**	**457**	**3283**	**75.2**	**357**	**869**	**2825**	**4153**
2008–09	6.4	3.84	220.7	746	2873	84.3	445	973	2744	3846
2007–08	5.0	3.1	355.2	855	2626	78	539	1181	2730	3806
2006–07	3.2	5.6	260.7	760	2497	81.2	365	1176	2354	3673
2005–06	2.3	5.75	146.5	424	2365	73.9	310	997	1972	3365
2004–05	3.0	5.6	66.8	201	1585	47.7	248	1118	1448	2702
2003–04	**2.2**	**5.4**	**41.7**	**332**	**1014**	**28.4**	**188**	**1002**	**896**	**2017**
2002–03	2.2	5.9	36.7	389	985	29.6	178	999	991	1984
2001–02	2.2	6.4	32.1	270	1023	33.6	202	966	1003	1989
2000–01	2.0	6.1	29.6	245	1262	41.0	216	820	1159	2081

*Note this is **NOT** royalty receipts as reported to treasury. This is the gross royalty figure payable relating to minerals produced during the period, includes funds for EARF (Extractive Areas Rehabilitation Fund).