## **Stellar Resources**

# Quarterly Report



Stellar Resources (SRZ) is an exploration and development company with assets in Tasmania and South Australia. The company is rapidly advancing its high-grade Heemskirk Tin Project, located near Zeehan in Tasmania, and plans to become Australia's second largest producer of tin.

#### As at 30 September 2013

Market cap: A\$11.6m (5.2c)
Cash (30 Sep.): \$1.4 million
Shares: 223,447,547

#### **Main Shareholders**

JP Morgan Nominees 29.8% Resource Capital Fund 16.2% HSBC Nominees 2.9%

#### **Board & Management**

Phillip Harman

Non-Executive Chairman **Thomas Burrowes** 

Non-Executive Director

David Isles

Non-Executive Director

Thomas Whiting

Non-Executive Director

Markus Elsasser

Non-Executive Director

**Peter Blight** Chief Executive Officer

Christina Kemp

Company Secretary

ASX Code: SRZ

ABN 96 108 758 961 Level 17, 530 Collins Street Melbourne Victoria 3000 Australia

Telephone +61 3 9618 2540 Facsimile +61 3 9649 7200

www.stellarresources.com.au

## For the period ended 30 September 2013

### **Highlights**

- Preliminary feasibility Study (PFS) findings were reviewed with the aim of optimising the Heemskirk Tin Project to enhance its valuation. The main actions identified were:
  - Targeted drilling to identify further high grade mineralisation at Severn
  - Further metallurgical testing to upgrade recovery and lower costs
  - Resource expansion drilling below Severn and Queen Hill and drilling of the zone of potential convergence between the Severn and Montana deposits
  - Exploration of the nearby St Dizier tin prospect aimed at defining a open pit resource that would provide early cash flow to an expanded Heemskirk project
- Diamond drilling at Montana during the quarter extended the mineralised zone down plunge by 120 metres and increased the probability of a linkage between the Montana and Severn tin deposits.

#### **Corporate**

- Stellar held cash of \$1.4 million as at 30 September 2013.
- Cost reduction became a focus on completion of the PFS with staffing numbers reviewed.

#### **Targets for December Quarter**

- Report on geological modelling of the St Dizier tin prospect.
- Commence the next round of diamond drilling at Heemskirk and St Dizier.
- Return to metallurgical testing program.





#### **HEEMSKIRK TIN PROJECT (100% OWNED)**

#### Overview

Preliminary feasibility study findings were reported last quarter and showed the technical and economic viability of developing an underground 600,000 tonne a year mine at Heemskirk to produce 4,327 tonnes of tin in concentrate annually. At a capital cost of US\$114 million and a cash operating cost of US\$14,389/t the mine would be competitively positioned on the international tin mine cost curve. Under base case assumptions, Heemskirk could generate a net present value of AU\$61 million or 27 cents per share for an internal rate of return of 19% over an initial life of 7 years.

During the September quarter, the PFS findings were reviewed. A number of opportunities to enhance the project valuation were identified. These enhancements can be summarised as follows:

- 1) Improve resource grade, particularly for the Severn deposit which at 4.17 million tonnes at 0.98% tin represents 60% of the total Mineral Resource. Each 1% increase in head grade (i.e. from 1.06% to 1.07%) adds \$4.4 million or 7% to the NPV.
- 2) Modify the process flow sheet if additional test work shows improvement in metallurgical recovery beyond the 70% base case. Each 1% increase in recovery (i.e. from 70.0% to 70.7%) adds \$4.9 million or 8% to NPV.
- 3) Extend the known resource to significantly increase mine life. Each additional year of life adds 22% or \$13 million to NPV.
- 4) Identify an open-pit resource to add low cost tonnes and provide early cash flow during underground mine development.

Drilling during the quarter was focused on the Montana deposit with two deep drill holes, ZM126 and ZM126W showing continuity of mineralisation 120 metres below the current resource envelope to a vertical depth of 450 metres from surface. This outcome demonstrates that Montana remains open at depth, as do the other two deposits, and that convergence of the three deposits into a single source is probable, potentially adding significant resource tonnage.

Cautionary Statement – Preliminary Feasibility Study Production Targets

The company advises that the PFS results and production targets referred to in this announcement are preliminary in nature as they are based on Indicated and Inferred Mineral Resources. The PFS technical and economic assessment was insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage or to provide certainty that the conclusions of the PFS will be realised. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.





#### **Resource Grade**

Optimisation drilling will focus initially on the high grade zone along the upper edge of the Severn deposit. In Figure 1, this zone is defined by diamond drill holes G65, G72, G74, G84 and ZS113, ZS123 which all have intersections of 10 metre percent or greater. ZS113 provided the best result so far with an intersection of 46 metre percent. The upper three white circles shown on the section are planned drill intersections aimed at increased grade.

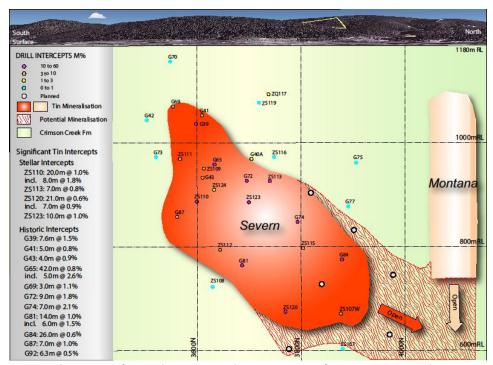


Figure 1: Schematic Long-Section, Severn and Montana Deposits

#### **Metallurgical Recovery**

During the course of the PFS, bench-scale metallurgical test-work on selected samples from Severn and Queen Hill showed that the target recovery of 70% should be achievable. During the later stages of the program, additional low cost processes demonstrated improvements in fine tin recovery with a resultant increase in overall recovery. These results are yet to be tested on the broader suite of samples but show potential to deliver further process improvements and possibly reduce plant capital and operating costs.

Once these optimisation tests are complete, a more comprehensive program of metallurgical testing, including pilot scale work will be required to support a definitive feasibility study.

#### **Mine Life**

Scenario analysis during the PFS showed that 1.0 million tonnes of Mineral Resource from the Severn deposit could be upgraded to Mining Inventory if the average grade of mineralisation below the 750 metre RL could be increased from 0.70% to 0.85% tin. The two deeper white circles in Figure 1, along the 3800N section line, are planned diamond drill holes designed to achieve this outcome. If successful, this program could increase mine life by 20% to 8.5 years



Recent diamond drilling below the Montana deposit demonstrated the continuity of this mineralisation at depth and the potential for it to converge with the Severn deposit below the 750 metre RL. This is illustrated by the schematic section in Figure 2. Defining a connection between these deposits has the potential to significantly increase mine life to 10 years and possibly beyond. Figure 2, also shows a 500 metre area below the known deposits and above the interpreted mineralising granite that remains untested by drilling and represents an excellent exploration target.

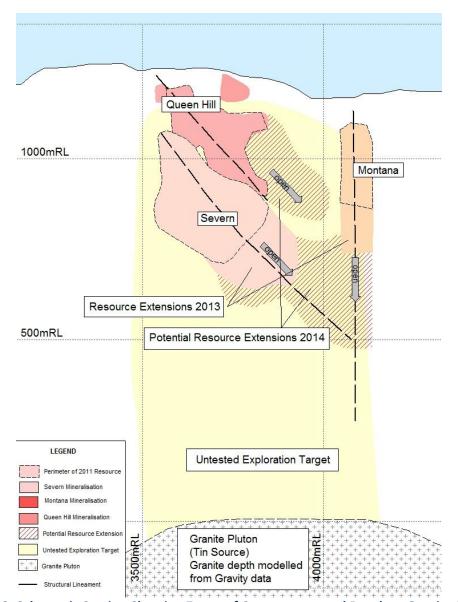


Figure 2: Schematic Section Showing Zones of Convergence and Depth to Granite Source





#### **Open Pit Target**

The St Dizier prospect is located 20 kilometres by sealed road from the Heemskirk project, and is the main target for open pit mineralisation. Historical exploration has identified tin mineralisation over 100 metres at the western end of a 2.5 kilometre skarn horizon. Stellar's exploration plans are described in more detail in the following section of this report.

#### **Montana Drilling Results**

Two successful diamond drill holes were completed below the Montana deposit during the quarter. ZM126 extended mineralisation 120 metres down plunge from the previous limit of drilling. ZM126W, a wedge hole that intersected the mineralised zone 50 metres above ZM126 demonstrated continuity of the Montana deposit between the deepest of the historical drill holes and ZM126 (see Figure 3).

#### The best intersections were:

ZM126 – 8 metres at 0.7% tin and minor base metals from 455 metres ZM126W – 6 metres at 0.6% tin from 422 metres.

In the case of both Montana and Severn, tin mineralisation lies close to the geological contact between Crimson Creek carbonates and Oonah Formation shales. This spatial relationship emphasises the importance of the contact as an exploration target. Given the close proximity of the two deposits it also provides a location for their convergence at depth.

This convergence zone is an important target for future drilling programs.

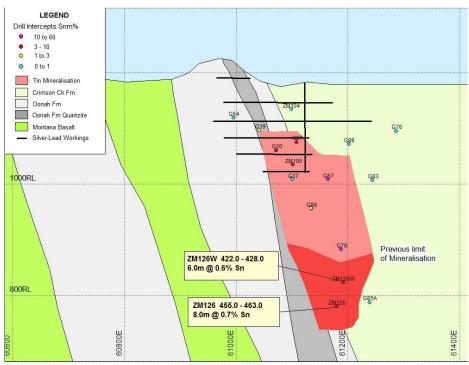


Figure 3: Montana Schematic Long-Section Showing Drill Hole Pierce Points





#### **EXPLORATION**

#### Tin

#### EL46/2003 Heemskirk (TAS) (Stellar 100%)

Exploration has focused on historical drilling at the St Dizier tin prospect, a potential target for open cut mining located 20 kilometres by sealed road from the Heemskirk Tin Project. St Dizier also has the potential for early stage production that would bring cash-flow forward and boost the net present value of Heemskirk.

St Dizier lies at the western end of a 2.5 kilometre section of Precambrian sediments that lie on the northern edge and within the tin-bearing Heemskirk Granite. Until Stellar's tenure, no single operator held the entire strike length of sediments resulting in disjointed exploration.

Historical work identified a number of zones of skarn development within the sediments to the east of the St Dizier skarn, with coincident magnetic, electo-magnetic and geochemical targets (see Central and Big H areas in Figure 4). Alluvial tin production has also occurred in the drainage basins adjacent to the skarn mineralisation.

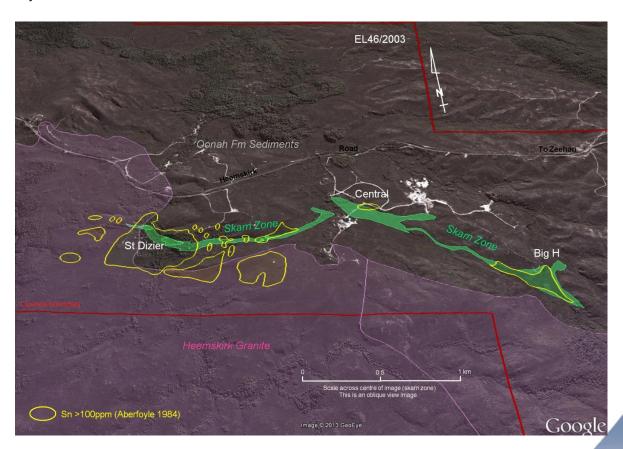


Figure 4: St Dizier Tin Skarn over 2.5 Km Strike Length





Stellar is in the process of compiling a 3 dimensional model of the St Dizier tin mineralisation using historical drilling data. The model also serves as a basis for assessing and ranking other tin targets to the east of St Dizier along the 2.5 kilometre strike of the skarn. In the December quarter, extensional soil geochemistry is planned ahead of defining drilling targets.

#### EL1/2004 Ramsay (TAS) (Stellar 100%)

Elevated tin in soil geochemistry was defined over a 400 metre strike length along the northern edge of the tin-bearing Meredith Granite during an exploration program over the course of the last field season. Closer spaced sampling over the tin in soil zone is required in order to define drill targets.

This particular exploration licence lies between the historic Mt Bischoff and Cleveland tin mines and there is no previous drilling within the vicinity of the tin in soil occurrence (see Figure 3).

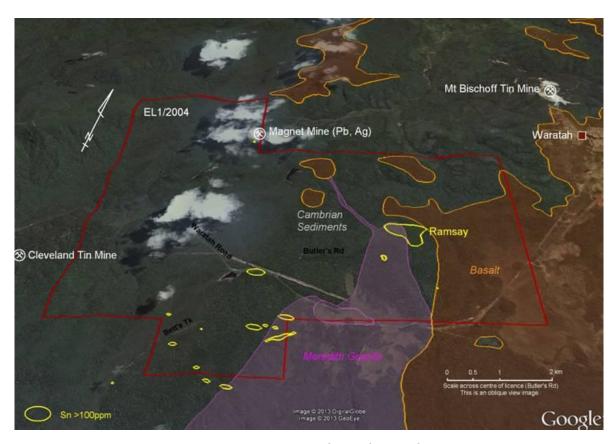


Figure 3: Ramsay Tin in Soil Geochemical Target

## Copper/Gold

#### EL40/2010 Heazlewood Hill (TAS) (Stellar 100%)

This licence contains a number of low order electromagnetic and magnetic targets that will be considered for follow-up ground checking during the summer field season. There was no work conducted on the licence during September quarter.



#### ELs 4573, 4882, 5125 and 5126 (SA) (Stellar 100%)

EL's 4573 and 4882 are located to the south and west of Kingoonya and contain magnetic and gravity targets that are prospective for iron ore copper gold mineralisation. EL's 5125 and 5126 lie just to the south of Coober Pedy and cover the western end of the Coober Pedy basement ridge an area considered prospective for near-surface base-metal mineralisation.

Stellar's subsidiary Hiltaba Gold Pty Ltd is currently reviewing opportunities to bring a joint venture partner into these properties.

#### **Uranium**

#### EL 4242 Midgee (SA) (Stellar 100%)

UraniumSA Limited (USA) has the right to earn a 73% interest in 40% of the tenement by identifying a JORC compliant resource.

Activity focused on the western block of EL 4242 where magnetic features interpreted as possible exo-skarn developments on the margin of the Charleston Granite were explored with 14 rock chip samples and 59 soils collected and analysed by hand held XRF. Minor alteration and rock chip and soil geochemical anomalism associated with structural dislocation and magnetic anomalism was found and further work will be scheduled.

Discussions continued with the landowners and in the Wardens Court aimed at a resolution of access issues covering the eastern portion of EL 4242 immediately south the Plumbush sedimentary uranium deposit. Once access is achieved, follow up exploration and drilling can occur.

#### **EL 3978 Cowell (SA) (Stellar 100%)**

Renaissance Uranium Limited (RNU) has the right to earn a 75% interest in the tenement by sole funding exploration.

A review of geophysical data and drilling results was under-taken to determine the potential for granite hosted uranium mineralisation. The review was prompted by the discovery of this style of mineralisation to the north of EL 3978 below UraniumSA's Blackbush sedimentary uranium deposit.

#### **Nickel**

#### **EL49/2004 Rayne (TAS) (Stellar 100%)**

Access to the tenement is restricted until the summer field season. Accordingly, no field work was conducted during the September quarter.





#### **Iron Ore**

#### Tarcoola Iron Ore (SA) (Stellar 100%)

Limited investor interest in magnetite iron ore projects has reduced the potential to identify a potential partner in the short-term.

#### CORPORATE

At 30 September 2013, Stellar held cash and term deposits of \$1.4 million. In addition, wholly owned subsidiary Hiltaba Gold Pty Ltd held 3.88 million shares in UraniumSA Limited fair valued at \$97,206 and 1.5 million shares and 1.5 million options in Renaissance Uranium Limited fair valued at \$60,015.

On completion of the PFS and drilling programs, contract numbers were reduced to key personnel. In addition, a 20% reduction in payments to all staff and board members was applied. While the cutbacks are regrettable, all concerned have acknowledged the necessity of this action and continue to work diligently towards the company's goal of bringing the Heemskirk Tin project into production.

#### **TIN MARKET**

During the September quarter, the LME tin price rose by 18% to US\$23,395/t while at the same time LME stocks declined 6% to 13,415 tonnes. This is the best performance of any LME metal during the period. The main driver of the price turnaround is restricted supply from Indonesia as smelters adjust to new regulations that require all tin-ingot to be traded through an Indonesian commodity exchange. Exports from Indonesia declined by 92% in September from year ago levels in response to the new regulations. September is likely to be the low point for Indonesian tin exports. However, because of the disruption to supply, the full year estimate is now closer to 90,000 tonnes compared with a potential outcome of 110,000 tonnes if first half shipments were repeated in the second half.

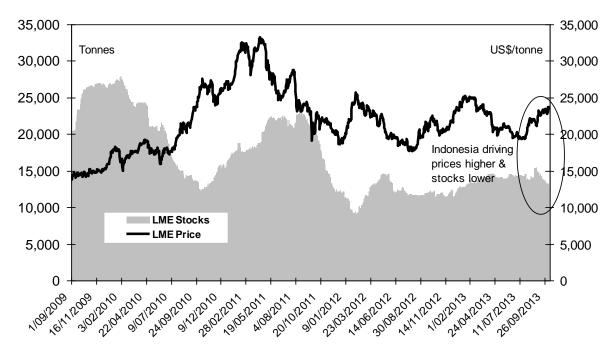
Tin demand is also showing encouraging signs with electronic equipment production, responsible for 50% of tin consumption, expected to increase by 5.6% in 2014 on a flat base in 2013. Automotive, industrial and instrument electronics are expected to underpin the recovery along with positive growth in military electronics after declines in recent years.

If current supply-demand trends continue, a widening shortage of refined tin should emerge in 2014 resulting in stronger prices.





#### **LME Tin Price versus Stocks**







#### **Competent Person Statement**

The information in this report that relates to Exploration Results is compiled by Mr R K Hazeldene who is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists and a Consultant of the Company. Mr Hazeldene has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 Edition). Mr Hazeldene consents to the inclusion in the report of the matters based on his information in the form and context in which it appears in this report.

The information in this report that relates to Mineral Resources was prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Tim Callaghan of Resource and Exploration geology, who is a Member of The Australasian Institute of Mining and Metallurgy ("AusIMM"), has a minimum of five years experience in the estimation and assessment and evaluation of Mineral Resources of this style and is the Competent Person as defined in the JORC Code. This report accurately summarises and fairly reports his estimations and he has consented to the resource report in the form and context in which it appears.

The information in this report that relates to Mining Inventory is based on information reviewed by Phil Bremner, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Bremner is an employee of Mining One Consultants Pty Ltd. Mr Bremner has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC code). This report accurately summarises and fairly reports his estimations and he consents to their use in the form and context in which they appear.

#### **Forward Looking Statements**

This report contains a number of forward looking statements with respect to the company's plans for mineral development. Known and unknown risks and uncertainties and factors outside of the company's control may cause the actual results, performance and achievements of the company to differ materially from those expressed or implied in this report. To the maximum extent permitted by law and stock exchange rules, the company does not warrant the accuracy, currency or completeness of the information in this report, nor the future performance of the company and will not be responsible for any loss or damage arising from use of the information.

For further details please contact:

Peter Blight CEO

Tel: 03 9618 2540

Email: peter.blight@stellarresources.com.au

or visit our Website at: <a href="http://www.stellarresources.com.au">http://www.stellarresources.com.au</a>



Rule 5.5

## **Appendix 5B**

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/2013

Name of entity

## STELLAR RESOURCES LIMITED

ABN

96 108 758 961

Quarter ended ("current quarter")

30 September 2013

#### Consolidated statement of cash flows

		Current quarter	Year to date	
Cash f	lows related to operating activities		(3 months)	
		\$A'000	\$A'000	
1.1	Receipts from product sales and related debtors	_	_	
1.2	Payments for (a) exploration & evaluation	(782)	(782)	
	(b) development	_	_	
	(c) production	_	_	
	(d) administration	(83)	(83)	
	(e) goods & services tax	66	66	
1.3	Dividends received	_	_	
1.4	Interest and other items of a similar nature received	20	20	
	Interest and other costs of finance paid			
1.5 1.6	Income taxes paid	_	_	
	Other – R & D concessional tax refund	_	_	
1.7	Other – R & D concessional tax retuild	_	_	
	Net Operating Cash Flows	(779)	(779)	
	The operating Cash Flows	(117)	(113)	
	Cash flows related to investing activities			
1.8	Payment for purchases of: (a) prospects	_	_	
	(b) equity investments	_	_	
	(c) other fixed assets	_	_	
1.9	Proceeds from sale of: (a) prospects	_	_	
	(b) equity investments	_	_	
	(c) other fixed assets	_	_	
1.10	Loans to other entities	_	_	
1.11	Loans repaid by other entities	_	_	
1.12	Other (provide details if material)	_	_	
	Net investing cash flows	_	_	
1.13	Total operating and investing cash flows			
	(carried forward)	(779)	(779)	

<sup>+</sup> See chapter 19 for defined terms.

### Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

1.13	Total operating and investing cash flows		
	(brought forward)	(779)	(779)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	_	_
1.15	Proceeds from sale of forfeited shares	_	_
1.16	Proceeds from borrowings	_	_
1.17	Repayment of borrowings	_	_
1.18	Dividends paid	_	_
1.19	Other (provide details if material)	_	_
	Net financing cash flows	_	_
	Net increase (decrease) in cash held	(779)	(779)
1.20 1.21	Cash at beginning of quarter/year to date Exchange rate adjustments to item 1.20	2,185 —	2,185 -
1.22	Cash at end of quarter	1,406	1,406

# Payments to directors of the entity, associates of the directors, related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	59
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Directors fees and remuneration \$44k; rent/office support, Melbourne, paid to Mineral Deposits Limited \$15k

## Non-cash financing and investing activities

Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows
Details of outlays made by other entities to establish or increase their share in projects in which the
reporting entity has an interest

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<sup>+</sup> See chapter 19 for defined terms.

**Financing facilities available** *Add notes as necessary for an understanding of the position.* 

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities	1	_
3.2	Credit standby arrangements		_

## Estimated cash outflows for next quarter

		\$A'000
4.1	Exploration and evaluation	276
4.2	Development	-
4.3	Production	-
4.4	Administration	135
	Total	411

## Reconciliation of cash

in the	nciliation of cash at the end of the quarter (as shown consolidated statement of cash flows) to the related in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1	Cash on hand and at bank	118	70
5.2	Deposits at call	1,288	2,115
5.3	Bank overdraft	_	-
5.4	Other (provide details)	_	-
	Total: cash at end of quarter (item 1.22)	1,406	2,185

<sup>+</sup> See chapter 19 for defined terms.

## Changes in interests in mining tenements and petroleum tenements

		Tenement reference and location	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements and petroleum tenements relinquished, reduced or lapsed	_	_	_	_
6.2	Interests in mining tenements and petroleum tenements acquired or increased	EL5307 (formerly EL3978)	Exploration Licence Cowell, SA subsequent licence renewal granted.	100%	100%

## Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

		Total number	Number quoted	Issue price per	Amount paid up per
				security (see note	security (see note 3)
				3) (cents)	(cents)
7.1	Preference +securities (description)				
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buybacks, redemptions				
7.3	<sup>+</sup> Ordinary securities	223,447,547	223,447,547		
7.4	Changes during				
	quarter (a) Increases through issues (b) Decreases through returns of capital, buy- backs				
7.5	+Convertible debt securities (description)				
7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				

<sup>+</sup> See chapter 19 for defined terms.

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# Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

7.7	Options Directors Exec & employees	3,000,000 3,125,000	Nil Nil	Exercise Price 20 cents 20 cents	Expiry Date SRZAK 30/11/2013 SRZAI 26/11/2013
7.8	Issued during quarter				
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	<b>Debentures</b> (totals only)				
7.12	Unsecured notes (totals only)				

## **Compliance statement**

- This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 5).
- 2 This statement does give a true and fair view of the matters disclosed.

Sign here: Date: 25 October 2013

(Company secretary)

Print name: Christina R Kemp

#### **Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements and petroleum tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement or petroleum tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- Issued and quoted securities The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.

<sup>+</sup> See chapter 19 for defined terms.

## Appendix 5B

## Mining exploration entity and oil and gas exploration entity quarterly report

- The definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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<sup>+</sup> See chapter 19 for defined terms.