



STRATEGIC ENERGY RESOURCES LIMITED
ACN 051 212 429

January 30, 2015

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Quarterly Report to December 31, 2014

HIGHLIGHTS FOR THE QUARTER:

- **Spencer renewed access approval agreement**
- **WorleyParsons engaged for scoping study for the production of graphene oxide and a marketing study on super sand**
- **Another patent application filed for graphene membranes**
- **Ionic Industries team being expanded in preparation for demerger**

Strategic Energy Resources Limited (ASX Code: SER) is a market leader in graphene research with via our collaboration with Monash University under our wholly owned subsidiary Ionic Industries Pty Ltd. SER holds numerous mineral exploration assets and holds equity interests in Valence Industries (which owns the Uley graphite mine near Port Lincoln, South Australia), Oil Basins Ltd and Magnum Gas & Power. Mineral exploration licences are held in South Australia, Western Australia and Victoria.

GRAPHENE RESEARCH WITH MONASH UNIVERSITY

Ionic Industries – our New Graphene Brand

As previously reported and presented at our 2014 AGM, SER's subsidiary Ionic Industries Pty Ltd ('Ionic') and Monash University are involved in a ground breaking collaboration on graphene research & commercialisation. Ionic will shortly have its company status changed to Ionic Industries Ltd in preparation for the expected demerger.



Ionic holds, under the Collaboration Agreement with Monash University, commercialisation agreements with patent/IP holder Monash University, who licences that commercialisation to Ionic in accordance with its patent/IP rights.

With a view to understanding the processes involved, graphite (as mined) can be reduced to a single atomic layer which is then termed graphene. With the oxidation of graphite, water soluble graphene oxide ('GO'), can be produced for coatings etc. The reduction of soluble graphene oxide to reduced graphene oxide ('RGO') will return it to an insoluble, high surface area state, with carbon layers still containing some oxygen/hydrogen atoms/molecules, but essentially behaving as graphene.

Scoping Study and Marketing Study Underway

WorleyParsons has been engaged to initiate a scoping study on the production of GO in a pilot plant. The report is expected to be completed in February. The marketing study report relates to the commercialisation of super sand.

The key deliverables of the scoping study include:

- Preliminary sizing of the pilot plant facility
- Scaling up the existing laboratory process to provide an overall description of the pilot plant facilities including CAPEX and OPEX estimates. The CAPEX and OPEX will be based on a single standalone R&D facility at an industrial site near Monash University in Clayton.

Pilot Plant Benefits All Our Technologies

The scoping study has allowed Ionic Industries to further refine its strategy. One of the key issues with GO has been its cost of production and the upscaling of production for commercial uses. The scoping study has focused more on the commercial production of GO with super sand as an optional process stream. The business model for Ionic Industries will be outlined further with the release of the scoping study results.

Our pilot plant will build further on work planned for our bench-scale production facility for the modular synthesis of graphene through our modular reactor

technology. It will produce tailored graphene oxide for application across all aspects of our research program (scheduled for commissioning in Q1 2015). Our pilot plant will be setup to stream our GO towards whatever product we choose, either to super sand or membranes, both of whose final application utilises RGO.

As previously reported, we have signed a jointly funded Research Agreement with Monash University to develop a bench-scale facility for the production of graphene oxide.

The facility, under the supervision of Dr Mainak Majumder, will move manufacturing out of the laboratory, allowing the supply of much larger quantities of graphene oxide for our specific commercial goals, namely:

- ***Super-capacitors***
We are developing planar super capacitors with massive energy and power density which could by-pass lithium ion batteries.
- ***Super sand***
Super sand has multiple uses and we are concentrating on developing the super sand specifically targeting contaminants that are larger in size and not easily removed by other absorption technologies.
- ***Membranes***
We will produce large area nano-filtration RGO membranes, for the mining and food processing industries and potentially for super capacitors.

Bench Scale Facility Engineering

The WorleyParsons team has also provided feedback on the development of the bench scale facility being set up by Ionic Industries. More specifically over the choice of the reactor and some of the other components and material used in the construction. When the bench scale facility is completed the next phase of testing will concentrate on optimising the process of making the GO and RGO. This will no doubt lead to improving the efficiency in production and reducing the cost in making commercial quantities of GO and RGO.

Dr Akshat Tanksale, co-investigator on this project said “large scale GO production from graphite is a significant challenge which we will overcome by using robust reaction engineering approaches. The scale of our reactor is several times what has been demonstrated to date and the reactor technology, we are developing is highly modular.”

ARC Linkage Grant and Membrane Casting Facility

As previously reported SER/Ionic and Dr Mainak Majumder’s team at Monash University for the second time have been awarded an ARC Linkage (Australian Research Council) grant on our graphene based research. The proposed research is titled – “Green Manufacturing of Graphene from Indigenous Natural Graphite and Graphene-based Nano-filtration Membranes”.

There are many potential uses for our graphene membrane technology, including purification of salt water, mine waste water and extraction of heavy metals to name just a few. Dr Majumder said "the graphene membrane technology we are currently investigating could also be used for generating energy from osmotic gradients or scavenging waste heat to run electric motors without batteries. Recent experiments in China and the US have shown the potential of such application".

The team involved is:

Dr. Mainak Majumder (Nanoscale Science and Engineering Laboratory (NSEL), Mechanical and Aerospace Engineering, Monash University, Clayton, Victoria), Prof. Huanting Wang (Chemical Engineering, Monash University, Clayton, Victoria), Dr. Zhe Liu (Mechanical and Aerospace Engineering, Monash University, Clayton, Victoria), Prof. Dibakar Bhattacharyya (Chemical Engineering, University of Kentucky, USA), Dr. Anita Hill (CSIRO, Clayton, Australia), and Mr Mark Muzzin from Ionic.

The contributions for the successful application are as follows:

ARC has approved \$255,000 over three years, while Ionic will contribute \$120,000 over three years giving a total budget of \$375k.

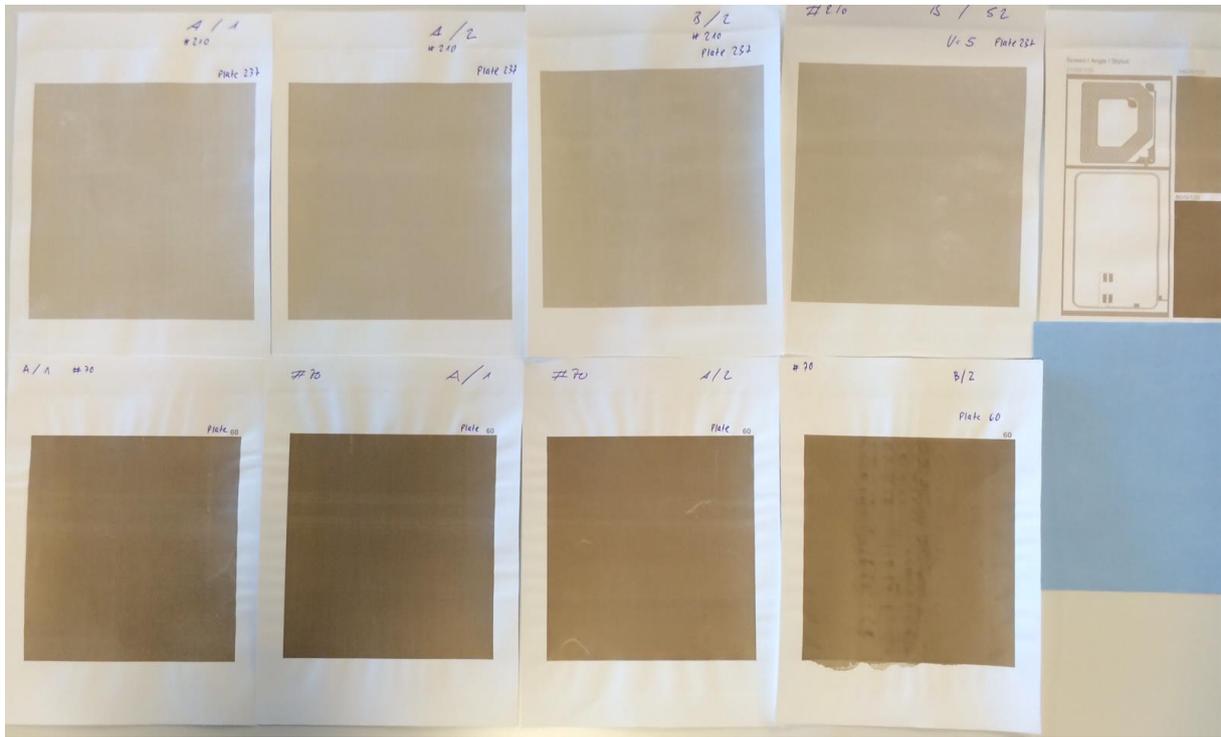
Utilizing fluid phase dispersed GO, we will develop scalable and industrially-adaptable methods to manufacture thin yet mechanically robust, inert, fouling-resistant, highly-permeable graphene-based asymmetric membranes. These advanced membranes will find wide application in reducing discharge of mining effluents and recovery of precious metals. This research is already underway by our team and has led to very encouraging results for water purification and an invention disclosure for making GO/RGO membranes has been filed.

Membrane Casting Facility

In preparation for the new program under the ARC Grant, a membrane casting facility has been ordered. This is a very important step in our development of a scalable RGO membrane, which will have multiple uses in the mining and food processing industries. RGO samples produced by our proprietary method were rigorously tested with the membrane casting equipment manufacturer and we are very pleased with the results obtained and thus have decided to purchase the equipment.

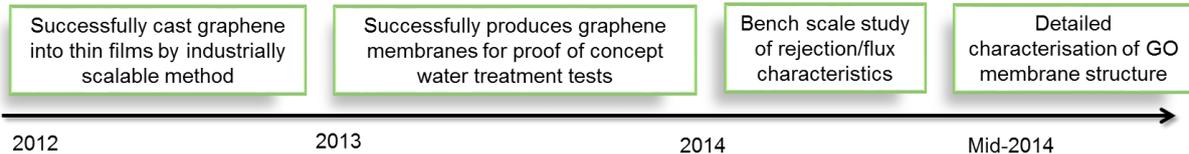
The new acquisition will enable our researchers to tailor the number of sheets of RGO that can be applied to the membrane substrate for specific purposes. The chemistry of the RGO can also be altered to target whatever impurity or precious metals we seek to filter.

The other key benefit is being able to maintain consistency between the batches of membranes produced. This will allow us to substantiate the results from the various tests.



Above are samples of our RGO thin film membranes. Darker shades indicate thicker number of layers of RGO.

Our research team has hit a series of milestones in the development of RGO membranes for use in water treatment and mining applications. The technology is now at Technology Readiness Level 4: *Component and/or breadboard validation in laboratory environment*



Our ARC Linkage grant will commence in early 2015 but as you can see above, the team has been working on this technology for some time and are well advanced.

Patent Filed

Another patent filed by Monash researchers Provisional patent application 2014904644, entitled Graphene oxide membranes and methods related thereto, has been filed.

Exclusive Worldwide Licence to Commercialise Graphene IP Signed

SER/Ionic has previously reported that we have entered into an exclusive worldwide licence to commercialise the Intellectual Property (IP) generated by the Monash University project titled 'Nanotechnology enabled electrochemical energy storage materials from indigenous natural graphite'. This project was the subject of our first Australian Research Council grant between SER/Ionic and Monash University, and relates to our super capacitor technology.

The licence has been granted on the following material terms:

- Ionic has full rights to exploit and commercialise the IP, including by direct sale or by sub-licensing, within the field of energy storage and capacitor materials, and devices from indigenous natural graphite

- The licence is transferable by Ionic, subject to the consent of Monash (which is not to be unreasonably withheld)
- If Ionic is successful in commercializing the IP and generates direct revenue or sub-licensing revenue, it will pay Monash a royalty of 3% of gross revenue (in the case of direct sales) and 15% of sub-licensing income.

The IP generated by this project has been the subject of a provisional patent application and is patent pending.

Ionic will have the first right to fund graphene research undertaken by Dr Mainak Majumder's team at Monash and then licence any IP generated by that research with a view to commercialisation.

The material terms of the licence described above will apply to any future IP licences generated under the Collaboration Agreement.

Further Information

What is graphene super sand?

Super sand is a core-shell arrangement of sand granules and GO. GO is a suspension of water-soluble oxidised graphene nano-sheets derived from graphite. Coating is obtained as a direct consequence of the water solubility of GO which allows for efficient mixing with sand. Using a low temperature solvent evaporation technique, GO adheres to the sand granule.

What does it do?

The GO coating, comprising a thin (micron scale) layer of graphene-like carbon, renders the sand surface more attractive to contaminants within water, thereby enabling removal or sequestering of contaminants by adsorption.

Why are we the only ones who make it?

One of the lead investigators of the original invention of "super sand" was Dr. Mainak Majumder. His expertise and the subsequent research efforts of his research group find us well placed as leaders in the field of graphene based materials for water purification.

Why is it important to Australia?

Australia relies heavily on water to support its agricultural and mining sectors which must operate amid highly variable and constantly evolving climate and regulatory conditions. Consequently, water management and efficiency is of fundamental importance for sustaining and growing Australia's economic future. Super sand offers a means to aid or otherwise compliment water efficiency directives by separating target components from a water stream.

Bench Scale Facility

The bench scale facility is jointly funded by Monash University and Ionic. Monash is contributing \$100,000 towards the project with the balance paid by Ionic. Ionic will retain ownership of the facility, with Monash responsible for the maintenance and upkeep of the facility.

The building of the bench scale facility is a vital step towards our goal of commercialising our technologies. Initial batches of GO production will be in the range of 1kg to 2kg per day. The GO bench scale facility is of major importance as our researchers will be able to manufacture and tailor GO products for use in our applications.

Ionic Industries Team Being Expanded

Pre demerger we will be announcing the key Director appointments to Ionic shortly.

Post demerger/seed capital raising we will begin interviewing research staff to be employed directly by Ionic who will be focused on fabrication and product development. This is a fundamental shift in our business and future growth. We will be utilising the facilities of Monash University when required under our Collaboration Agreement with Monash University under the leadership of Dr Mainak Majumder, but we will also establish our own facilities, where Ionic research staff will be undertaking product development, product evaluation and benchmarking, in particular on making our working super capacitor prototype and expanding and optimising our GO making process amongst other things.

Ionic Industries & Monash University

As previously announced, Ionic has formally entered into a Collaboration Agreement with Monash University (on their patent/IP rights) and has a clear pathway agreed for any future ventures.

We are aware that other Companies have announced that they are working with Monash University on graphene research. To clarify the situation we advise that our relationship is with Monash University and is under the research team and department led by Dr Mainak Majumder and our involvement is into its 5th year. All work on super capacitors by Dr Majumder's team should not be confused with any other research being undertaken at Monash on super capacitors. Ionic's super capacitor technology is well advanced and is scalable. We are very fortunate to have Dr Majumder working with Ionic, as he is focused on advancing his teams ideas and solving commerciality problems. This is our advantage being associated with the Nanoscale Science and Engineering Laboratory (NSEL), Department of Mechanical and Aerospace Engineering, Monash University.

Disclosure

The accuracy of technical and scientific content of this material in the above section of this quarterly report is verified by Dr Mainak Majumder, a full time employee of Monash University, pursuant to a competent persons consent form dated 28 January 2015, which contains his consent for release to the ASX.

MINERAL EXPLORATION

SPENCER JOINT VENTURE (SER 75%) EL 5010 SOUTH AUSTRALIA

The Spencer area comprises 321 km² and is located on the west coast of Spencer Gulf on the Olympic Dam trend. This same trend is the home to some exceptional discoveries including Olympic Dam, Carrapateena, Prominent Hill, Mount Gunson, Wallaroo, Moonta and Hillside.

SER as operator of EL 5010 is pleased to report that a new Deed of Access has been approved. Access is granted till 12 September 2016 and can be further extended in line with future permit extensions.

MYALL CREEK (SER 50%) EL 5011 SOUTH AUSTRALIA

The Myall Creek Copper Project (EL5011) covers an area of 381 km² and is located on the southern Stuart Shelf between Whyalla and Port Augusta, a highly prospective part of the eastern margin of the Gawler Craton. The Myall Creek Project includes a 15 kilometre zone with anomalous copper shown in historic drilling.

Previous work indicates that mineralization is controlled by a lithological/chemical redox contrast which exists between the base of the Tapley Hill formation and an underlying unconformable contact between the two sedimentary/volcanic units. This unconformity continues to have a strong potential for high grade prospects.

The licence area is immediately west of the Torrens Hinge Zone.

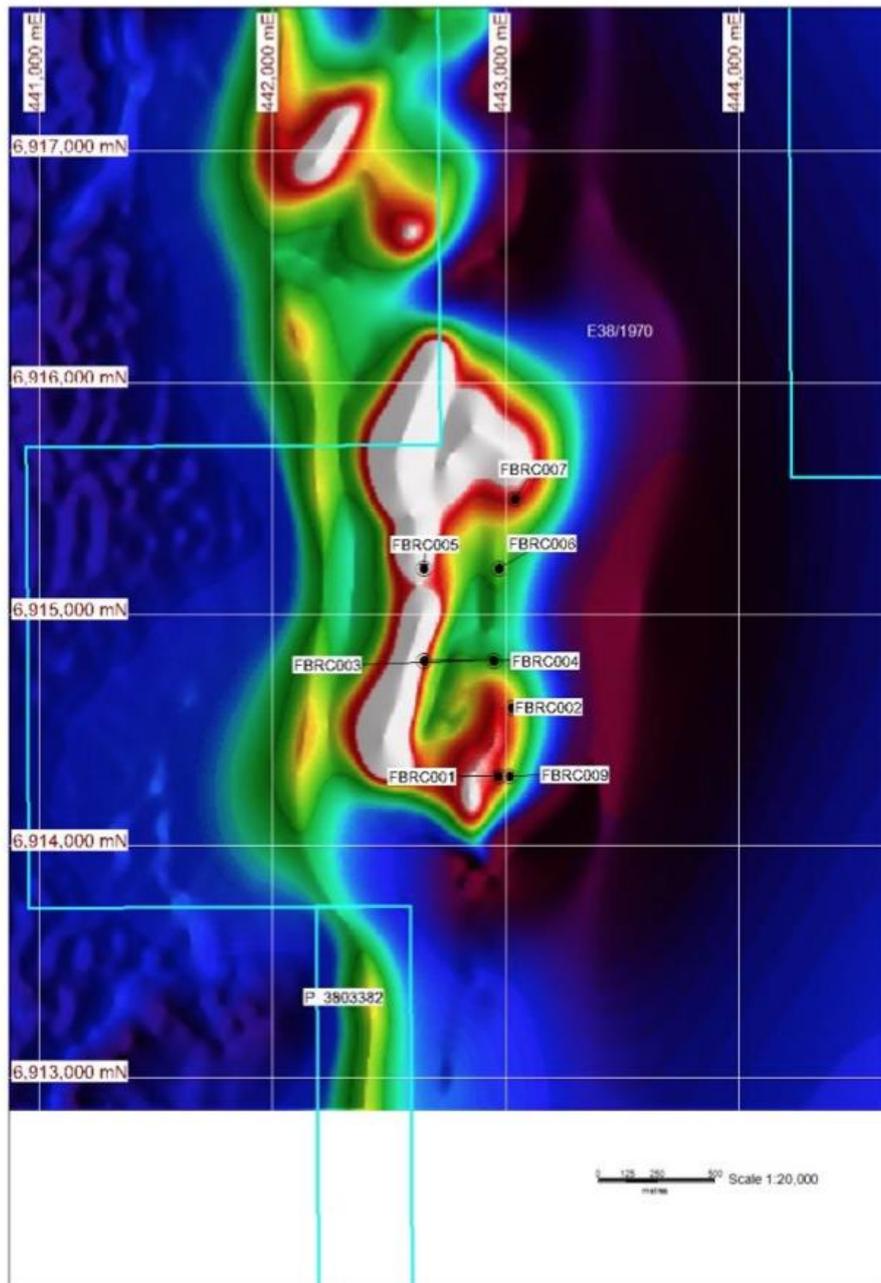
Technical assessment of the prospectively of the Myall Creek project for both Zambian style copper mineralization and the potential of Olympic Dam style IOCG mineralization at depth is ongoing.

With the recent \$2m target development to the north of Myall Creek by the Department of State Development for the Deep Targets Task Force, SER is awaiting the findings from this work and will be looking to gauge the impact the work has on regional exploration and targeting and specifically the Myall Creek project.

FALCON BRIDGE (SER 95%) E38/1970 WESTERN AUSTRALIA

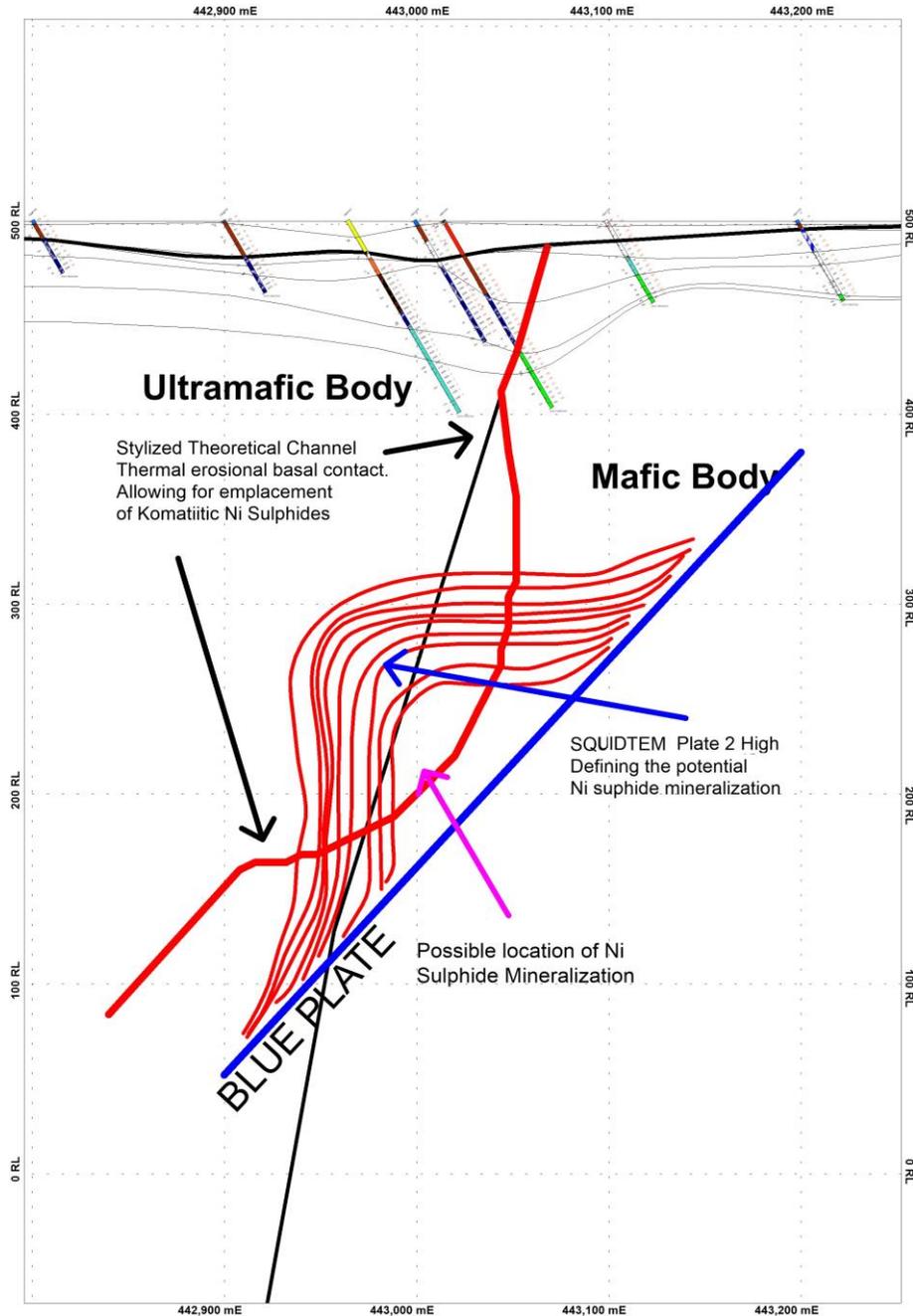
The Falcon Bridge tenement EL 38/1970 covers an area of 138.1 km² in the north eastern corner of Western Australia's Archaean Yilgarn Craton. The Falconbridge Ni sulphide project has undergone a significant review from geological, geochemical and geophysical perspective.

Located some 48km along/en echelon to an ultra-mafic bulge where recent drilling by others has encountered nickel sulphides. SER holds a 95% interest in E38-1970 on which is located a bulge in the ultramafic rock units (the TORO GRANDE anomaly) and shown on the below transient electromagnetic image (TEM).



Magnetics with RC Collar Map

As a result of data reviews by independent consulting geologists/geophysicists the following model of the Toro Grande mineralisation was published in SERs June 2014 quarterly (see map below) and shows, current drilling, the Squid TEM contours in red, the blue target plate defined by modelling the Squid contours and a stylized theoretical channel thermally eroded into underlying basalts by the overlying ultramafic sequence. This erosional channel allows for emplacement of Komatiitic nickel sulphides elsewhere in Western Australia, however the presence of massive nickel sulphides at Toro Grande is unproven and remains an exploration target. Previous drilling at Toro Grande included published results for 7 holes with intersected down hole widths of 12-39m with grades between .41 to .69% Ni which are clearly not massive sulphides.



CASTERON (SER 5%) EL 5040 VICTORIA

As reported on 29 October 2009, SER entered into a sale and operating agreement with Encounter Minerals Pty Ltd. SER sold a 95% interest in the exploration licence for a 5% free carried interest for the first 5 years of the permit or the first \$600,000 of expenditure on the work program, whichever occurs first.

Encounter Minerals has completed a 5 hole drilling program. SER has been advised that the results have been encouraging, and further geophysics and geochemistry is planned. EL 5040 comprises 486 graticular sections and is located some 350 kilometres west of Melbourne, Victoria.

CORPORATE UPDATE

SER's preparation for the demerger of our graphene subsidiary are well advanced and an announcement should be made on ASX in February. In keeping with our strategy of spinning out single focus companies, we believe this strategy will give our shareholders substantial upside and will help underpin the value in SER. During the quarter a tax consultant was engaged to review the tax position and has confirmed over \$23 million of operating tax losses, which could be utilised on profits from the sale of any of our investments.

Our plan is to demerge 80% of our graphene entity, with SER retaining 20%. We are currently holding discussions with various funders and brokers and subject to further accounting and other advice the demerged 80% will be distributed pro-rata to SER shareholders at a record date, to be determined. Following this important first step our graphene technology company (Ionic Industries) will, subject to funding agreements, apply for listing in an IPO process.

The Company is well placed to receive substantial financial benefit from the demerger of the Uley Graphite project, with its successful capital raising and listing of Valence Industries. SER is the major shareholder with 21,788,907 shares, escrowed till January 2016.

SER will also benefit from a 1.5% royalty from any graphite sales of Uley graphite by Valence Industries.

INTERESTS IN MINING TENEMENTS

Mining Tenement	Location	Beneficial Percentage held	Interest acquired/farm-in during the quarter	Interest disposed/farm-out during the quarter
EL 5010	South Australia	75%	-	-
EL 5011	South Australia	50%	-	-
E38/1970	Western Australia	95%	-	-
EL 5040	Victoria	5%	-	-



Mark Muzzin
CEO

Risk Factors

Various statements in this release constitute statements relating to intentions, future acts and events. Such statements are generally classified as forward looking statements and involve known and unknown risks, expectations, uncertainties and other important factors that could cause those future acts, events and circumstances to differ from the way or manner in which they are expressly or impliedly portrayed herein.

Furthermore, exploration for oil, gas and minerals is speculative, expensive and subject to a wide range of risks. Individual investors should consider these matters in light of their personal circumstances (including financial and taxation affairs) and seek professional advice from their accountant, lawyer or other professional advisor as to the suitability for them of an investment in the Company.

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10.

Name of entity

STRATEGIC ENERGY RESOURCES LIMITED

ABN

14 051 212 429

Quarter ended ("current quarter")

31 DECEMBER 2014

Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (6 months) \$A'000
Cash flows related to operating activities		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for		
(a) exploration and evaluation	(124)	(196)
(b) development	-	-
(c) production	-	-
(d) administration	(114)	(377)
(e) bank guarantee	-	-
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	24	45
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Demerger Implementation Fees	-	-
Net Operating Cash Flows	(214)	(528)
Cash flows related to investing activities		
1.8 Payment for purchases of:		
(a) prospects	-	-
(b) equity investments	-	(200)
(c) other fixed assets	7	7
1.9 Proceeds from sale of:		
(a) prospects (including deposits received)	-	-
(b) equity investments	-	-
(c) other fixed assets	-	-
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Research and Development – Monash University	(104)	(153)
Net investing cash flows	(97)	(346)
1.13 Total operating and investing cash flows (carried forward)	(311)	(874)

+ See chapter 19 for defined terms.

Appendix 5B
Mining exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(311)	(874)
	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	(312)	(874)
1.20	Cash at beginning of quarter/year to date	1,879	2,441
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	Cash at end of quarter	1,567	1,567

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

		Current quarter \$A'000
1.24	Aggregate amount of payments to the parties included in item 1.2	141
1.25	Aggregate amount of loans to the parties included in item 1.10	-

1.26 Explanation necessary for an understanding of the transactions

Director's fees and consulting fees paid during the December 2014 quarter.

Non-cash financing and investing activities

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

Nil

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Nil

+ 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	-	-
3.2 Credit standby arrangements	-	-

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	50
4.2 Development	-
4.3 Production	-
4.4 Administration	150
Total	200

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	217	179
5.2 Deposits at call	1,350	1,700
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
Total: cash at end of quarter (item 1.22)	1,567	1,879

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed	-	-	-
6.2	Interests in mining tenements acquired or increased	-	-	-

+ See chapter 19 for defined terms.

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.

	Number issued	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 Preference securities (description)				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	348,622,501	348,622,501		Fully paid
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.5 +Convertible debt securities (description)				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.7 Options (description and conversion factor)	27,000,000	-	<i>Exercise price</i> \$0.0452	<i>Expiry Date</i> 25 December 2016
7.8 Issued during quarter				
7.9 Exercised during quarter				
7.10 Cancelled during quarter	1,000,000	1,000,000	\$0.0452	25 December 2016
7.11 Debentures (totals only)				
7.12 Unsecured notes (totals only)				

+ See chapter 19 for defined terms.

Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Law or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.

Sign here: 

Date: 30 JANUARY 2015

Print name: MELANIE LEYDIN
(Company Secretary)

Notes

- 1 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.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining 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, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **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.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting 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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