



STRATEGIC ENERGY RESOURCES LIMITED
ACN 051 212 429

October 27, 2014

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Quarterly Report to September 30, 2014

SOLID PROGRESS WITH OUR GRAPHENE RESEARCH WITH MONASH – WORKING TOWARDS GOAL OF GRAPHENE COMMERCIALISATION

HIGHLIGHTS FOR THE QUARTER:

- **Launched our new graphene brand - Ionic Industries**
- **Agreement to build bench scale graphene facility – graphene emerges from the lab to product manufacturing**
- **Exclusive worldwide licence to commercialise graphene IP signed with Monash**
- **Another successful Australian Research Council Linkage application with Monash University on graphene Nano-filtration membranes for water purification**
- **Undertook discussions with brokers and funders regarding potential spin-out of graphene technology**

GRAPHENE RESEARCH WITH MONASH UNIVERSITY

Ionic Industries – our New Graphene Brand

SER's subsidiary Graphitech and Monash University are involved in a ground breaking collaboration on graphene research & commercialisation. The partners, introduced the new name and brand for the potential upcoming spin out of the business.



The term ionic refers to a structure or bond that involves the attraction of opposite charged ions to create a positive outcome. It is solid and embodies strength. It reflects the principles behind graphene and what can be done with it.

Graphene Bench Scale Facility

Graphitech, our wholly owned subsidiary, signed a jointly funded Research Agreement with Monash University to develop a bench-scale facility for the production of graphene.

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 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

Our super-sand has multiple uses and we are concentrating on developing the super-sand specifically targeting biological contaminants.

Membranes

We will produce large area nano-filtration membranes, for the mining and food processing industries.

The project is jointly funded by Monash University and Graphitech. Monash is contributing \$100,000 towards the project with the balance paid by Graphitech. The graphene making facility will take 3 months to set-up and test and the setup will begin in November 2014. Graphitech 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 graphene production will be in the range of 1kg to 2kg per day.

The graphene bench scale facility is of major importance as our researchers will be able to manufacture and tailor graphene products for use in our applications.

Dr. Mainak Majumder said, “Our multi-disciplinary engineering research team at the Mechanical and Chemical Engineering Departments of Monash University will develop technologies that can be increased to multi kilogram scales, if necessity arises, while making graphene production significantly cheaper and greener”.

Dr Akshat Tanksale, co-investigator on this project said “large scale graphene 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 till date and the reactor technology, we are developing is highly modular.”

Exclusive Worldwide Licence to Commercialise Graphene IP Signed

SER/Graphitech has 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 and Monash University, and relates to our super capacitor technology.

The licence has been granted on the following material terms:

- Graphitech 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 Graphitech, subject to the consent of Monash (which is not to be unreasonably withheld)
- If Graphitech 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.

Graphitech 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.

Another ARC Linkage Grant

SER 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”.

Dr Mainak Majumder said "This is another feather in the cap for the teams at Monash and SER. ARC Linkage is a prestigious grant system and we are pleased our proposal was approved after rigorous peer-review. We have been the only recipients of the grant for our research using graphene, the first awarded three ago for our research on super capacitors."

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 went on to say "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 research team will establish a green chemical route for transforming an industrial by-product into high-value material. Through using graphite fines, which is a low cost product, to create graphene, which is currently high cost, the intention is to value-add but also to reduce the cost of graphene.

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 SER/Graphitech.

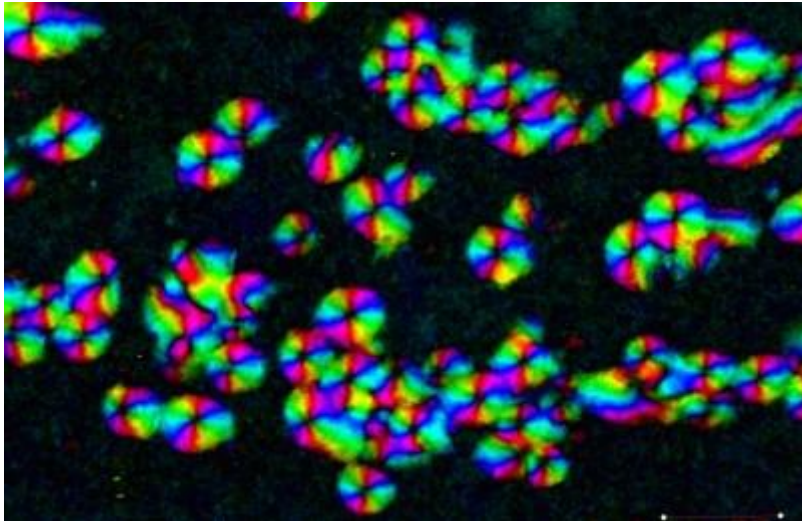
The contributions for the successful application are as follows:

ARC has approved \$255,000 over three years, while Graphitech will contribute \$120,000 over three years. Thus total budget is \$375k.

Utilizing fluid phase dispersed graphene, 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.

Breakthrough in the use of Graphene for Possible Drug Delivery and Early Disease Detection

Our researchers from Monash University have discovered that graphene oxide sheets can change structure to become liquid crystal droplets spontaneously and without any specialist equipment.



With graphene droplets now easy to produce, our researchers believe this opens up possibilities for its use in drug delivery and disease detection.

The findings were published in the journal *ChemComm*. Dr Mainak Majumder said “because graphene droplets change their structure in response to the presence of an external magnetic field, it could be used for controlled drug release applications”.

“Drug delivery systems tend to use magnetic particles which are very effective but they can’t always be used because these particles can be toxic in certain physiological conditions. In contrast, graphene doesn’t contain any magnetic properties. This combined with the fact that we have proved it can be changed into liquid crystal simply and cheaply, strengthens the prospect that it may one day be used for a new kind of drug delivery system,” Dr Majumder said.

Usually atomisers and mechanical equipment are needed to change graphene into a spherical form. In this case all the team did was to put the graphene sheets in a solution to process it for industrial use. Under certain pH conditions they found that graphene behaves like a polymer - changing shape by itself.

First author of the paper, Ms Rachel Tkacz from the Monash University Faculty of Engineering, said the surprise discovery happened during routine tests.

“To be able to spontaneously change the structure of graphene from single sheets to a spherical assembly is hugely significant. No one thought that was possible. We’ve proved it is. Now we know that graphene-based assemblies can spontaneously change shape under certain conditions, we can apply this knowledge to see if it changes when exposed to toxins, potentially paving the way for new methods of disease detection as well.” Ms Tkacz said.

Commonly used by jewellers, the team used an advanced version of a polarised light microscope based at the Marine Biological Laboratory, USA, to detect minute changes to graphene.

Dr Majumder said collaborating with researchers internationally and accessing some of the most sophisticated equipment in the world, was instrumental to the breakthrough discovery. “We used microscopes similar to the ones jewellers use to see the clarity of precious gems. The only difference is the ones we used are much more precise due to a sophisticated system of hardware and software. This provides

us with crucial information about the organisation of graphene sheets, enabling us to recognise these unique structures,” Dr Majumder said.

Commercialisation Strategy for Super Sand

Our goal is to be the first to commercialise a graphene based technology with our Super Sand. Our focus on water purification is at an advanced level. A series of graphene coated sand development milestones have been met for use in low-cost water treatment & chemical separation technologies.

Our Super Sand is now at Technology Readiness Level 5: *Analytical and experimental critical function and/or characteristic proof of concept*

The next step is to undertake a scoping study which will be part of the prospectus for Ionic Industries. Our program could be advanced dramatically depending on results and capital requirements.

MINERAL EXPLORATION

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

SER as Operator of the ‘Spencer Joint Venture’ (SER 75% and Kingston Resources Ltd (ASX:KSN) 25%) completed a first round drilling campaign in late 2013.

The Spencer area comprises 321 km² and is located on the west coast of Spencer’s Gulf. It had remained one of the few undrilled areas along the Olympic Dam trend where modern exploration techniques including gravity, magnetics, HeliTEM, geological mapping and geochemistry had not been followed up. This same trend is the home to some exceptional discoveries including Olympic Dam, Carrapateena, Prominent Hill, Mount Gunson, Wallaroo, Moonta and Hillside.

A geophysical review by consultants of the Kijani Trend was completed during the quarter. This review in conjunction with geology and geochemistry has enhanced the understanding of the geological setting of the Kijani Trend. The review has shown the need to better understand the spatial relationship between the Hiltaba Granite and the outcropping Moonarbi Formation to the south and the drill intersected Backy Point Formation to the north. The prospectivity still remains high in the area interpreted to represent Hiltaba granite (where there is only airborne gravity coverage) but accessing the potential targets requires further liaising with the Department of Defence.

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.

A few years has passed since the three hole program on a fault target was suspended due to weather and drilling conditions. This area has now been rehabilitated and further drilling is not appropriate given below commercial grades of copper mineralisation encountered in the first two holes and the shift to the Zambian mineralisation model.

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 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. During the quarter the Falconbridge Ni sulphide project underwent a significant review from geological, geochemical and geophysical perspective. The review has concluded that current drilling has not tested the late time TEM anomaly defined and interpreted by consultant geophysicist. The lower order magnitude of the anomaly does not preclude the Falconbridge anomaly from potentially containing a discrete nickel sulphide body. SER are currently reviewing the possibility of joint venture opportunities with regards to testing this anomaly.

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, however to date, the company has not seen the assay results. EL 5040 comprises 486 graticular sections and is located some 350 kilometres west of Melbourne, Victoria.

CORPORATE UPDATE

SER is now preparing for the demerger of our graphene subsidiary. 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. 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 in early 2015.

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. VXL has announced that the Premier of South Australia will be officially opening the processing facility on November 25.

SER holds 13 million (unrestricted) shares in OBL from the sale of Vic/P41 and Vic/P47. The sales have relieved the company of substantial financial liability, and has opened the possibility of potential upside from any transaction or progress within the permits.

The company has made an investment of \$200,000 in Magnum Gas & Power Ltd, ASX code: MPE. SER holds 20,000,000 shares in MPE. We have been reviewing several coal bed methane projects around the world and this investment was viewed as a more risk averse entry into this type of exploration.

Mr Stuart Rechner has been appointed as an Alternate Director for Mr Anthony Rechner, an Executive Director of SER. Mr Rechner is appointed in the capacity of a non-executive director and the appointment will continue until Mr Anthony Rechner revokes it or until he ceases to be a Director, whichever occurs first.

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")

30 SEPTEMBER 2014

Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (3 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	(72)	(72)
(b) development	-	-
(c) production	-	-
(d) administration	(263)	(263)
(e) bank guarantee	-	-
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	21	21
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Demerger Implementation Fees	-	-
Net Operating Cash Flows	(314)	(314)
Cash flows related to investing activities		
1.8 Payment for purchases of:		
(a) prospects	-	-
(b) equity investments	(200)	(200)
(c) other fixed assets	-	-
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	(48)	(48)
Net investing cash flows	(248)	(248)
1.13 Total operating and investing cash flows (carried forward)	(562)	(562)

+ See chapter 19 for defined terms.

1.13	Total operating and investing cash flows (brought forward)	(562)	(562)
	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	(562)	(562)
1.20	Cash at beginning of quarter/year to date	2,441	2,441
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	Cash at end of quarter	1,879	1,879

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	174
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 September 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	179	168
5.2 Deposits at call	1,700	2,273
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
Total: cash at end of quarter (item 1.22)	1,879	2,441

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	VIC/P47	Sale of exploration permit	12.5%	-
6.2 Interests in mining tenements acquired or increased	-	-	-	-

Issued and quoted securities at end of current quarter

+ See chapter 19 for defined terms.

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)	28,000,000	-	Exercise price \$0.0452	Expiry Date 25 December 2016
7.8 Issued during quarter				
7.9 Exercised during quarter				
7.10 Cancelled during quarter				
7.11 Debentures (totals only)				
7.12 Unsecured notes (totals only)				

Compliance statement

+ See chapter 19 for defined terms.

- 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: 27 OCTOBER 2014

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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