

# **Quarterly Activities Report**

**March 2019** 



# **Highlights**

# **Mulga Rock Project**

- Uranium long-term contract discussions continue in major markets of US, Europe and China
- Secondary approvals progressing with WA authorities

# **Alligator River Project**

- Field season to commence in June quarter
- Walk-up drill targets generated at Such Wow-Shiba and Angularli West
- New regional Ranger-Jabiluka style targets identified at Condor and Southern Flank
- Exploration "tool-kit" for rapid regional target generation

### **Uranium Market**

- Section 232 petition in the US continues to dominate uranium market sentiment
- Final decision by President Trump to be made by 14 July 2019
- After the decision, certainty will return to the market and contracting will recommence

Vimy Resources CEO, Mike Young, said, "The Vimy team is really looking forward to the upcoming field season at Alligator River. Our geologists have leveraged off the field work done last year to generate new drill targets as well as some exciting, large scale regional prospects.

"We have drill-ready targets at Such Wow-Shiba and Angularli West that we're ready to get stuck into as soon as possible. In addition, we will conduct regional geochemical and geophysical surveys on Jabiluka-Ranger style conceptual targets at Condor and Southern Flank.

"Our marketing team continues to discuss contract opportunities with US and global utilities despite the market hiatus caused by the Section 232 petition in the US. However, with the decision pending by July, we see certainty returning to the market despite the outcome and a return to some pretty robust contracting opportunities."

+61 8 9389 2700

vimvresources.com.au

Telephone:

Website:



# **CEO Commentary**

### **Uranium Market**

The Section 232 (s.232) petition in the US, a trade investigation into whether US nuclear utilities should be required to purchase 25% of their uranium from US domestic production, continues to dominate sentiment in the uranium markets. US utilities remain largely unwilling to write mid to long-term contracts due to the uncertainty caused by the investigation. This issue, when combined with scheduled refuelling cycles, has seen the overall market flatten during the Quarter owing to lack of activity by the US buyers.

A decision by the US administration is expected by 14 July. Once a decision is made, the uncertainty surrounding the outcome will disappear and the spot market is likely to increase in the expectation of a resumption of long-term contracting.

## **Mulga Rock Project**

Vimy obtained State and Federal Environmental Approvals for the Mulga Rock Project in late 2016 and early 2017. After completion of the Definitive Feasibility Study in 2018, Vimy has been progressing the secondary approvals, such as works approval, mine closure plan, and environmental management plans with the relevant WA State Government departments. Compilation and assessment of these approvals is ongoing and is expected to be completed in the last half of 2019.

Despite the hiatus caused by the clumsily concocted s.232 petition, Vimy has continued to engage with the utility markets in the US and Europe. Vimy is specifically targeting US utilities because they make up almost 30% of the overall uranium market and have open requirements from now that grow significantly into the early 2020s.

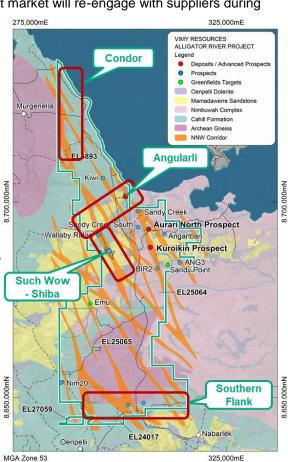
Financing for the Mulga Rock Project will be dependent on obtaining long-term contracts at prices and volumes sufficient to underpin the debt and equity required to move to Final Investment Decision. Once the uncertainty surrounding s.232 is removed, Vimy expects that the US contract market will re-engage with suppliers during the second half of 2019.

# **Alligator River Project**

The wet season in the "Top End" is coming to a close and our geologists are preparing for the upcoming field season. Vimy conducted a visit with the Traditional Owners of the Wellington Range project area to outline our upcoming activities and has obtained permission for the entire work programs conditional on normal archaeology surveys.

Following on from the 2018 field season, Vimy has generated two 'walk up' targets at Angularli West and the Shiba Zone at Such Wow. Vimy's current field season includes broad reconnaissance work over several other targets including Ranger-Jabiluka style targets at Condor and the Southern Flank, ensuring a continuous pipeline of targets into the foreseeable future.

Work programs undertaken will be contingent on working capital and varying sources of funding are being assessed to ensure maximum shareholder value.





# Alligator River Project - Regional Work Programs

During the Quarter, the Company released an update on regional exploration programs completed during 2018 within the King River-Wellington Range Joint Venture (78% Vimy Resources, 22% Rio Tinto Exploration Pty Limited). The results of the various surveys reported below are extremely encouraging and will help Vimy progress regional targets over the 2019 and 2020 field seasons.

The Vimy team has developed an 'exploration tool-kit' for the Alligator River Project, a suite of exploration techniques tailored to locate the key ingredients for uranium mineralisation. The techniques were trialled over the known mineralisation under cover at Angularli as well as more regional mapping and sampling surveys. The methods will be refined and applied in future regional target generation activities across the broader tenement portfolio.

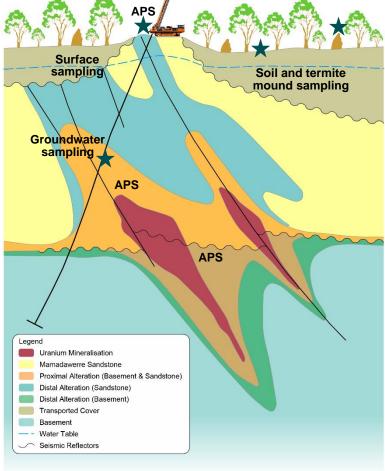
The high-grade uranium mineralisation of this area is surrounded by alteration zones or haloes. These haloes occur as secondary minerals including clays, carbonates and phosphates. They are often sensitive to changes in physicochemical conditions and change relative to their position to uranium mineralisation so they are useful vectors in the search for uranium mineralised zones (Figure 1). The alteration haloes present a larger drill target compared to the smaller footprint of the uranium mineralised zones, and essential vectoring tools.

Uranium mineralisation is controlled by space created along structures which provide a pathway for mineralising fluids. These fluids permeate the country rock immediately around the structures and therefore form a much larger alteration halo. The intensity of alteration diminishes away from the host structure and zone of maximum fluid flow. It can, therefore, be used as a mapping tool to zero in on uranium mineralisation.

The exploration tool-kit allows the Vimy team to understand and predict the interaction of the local regolith (air, biosphere, surface and ground waters, weathering profile) with the underlying geology, including variations in the depth and geometry of the major contacts in the cover sequences, which will assist in locating the alteration haloes.

At the Alligator River Project, the Vimy team is exploring for unconformity-related deposits, the richest and largest deposits on earth, similar to those found in the Athabasca Basin in Northern Saskatchewan, Canada. These deposits are commonly hosted at the contact between an upper sequence of oxidised sandstone unconformably overlying a basement of much older, reduced crystalline basement. The deposits are specifically hosted within structural corridors at or near the unconformity, or in some cases, wholly within the basement.







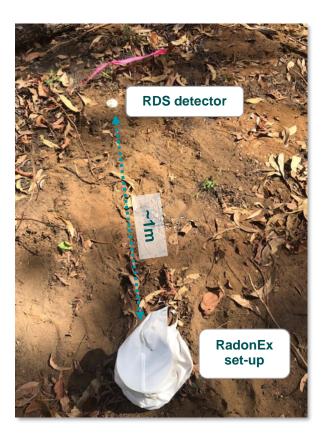
#### **Radon emanation**

Two radon emanation surveys were conducted during the 2018 field season. Radon is a gas formed during the radioactive decay of radium. The proportion of radon gas typically correlates with the concentration of radium. Under suitable oxidising conditions, radium is soluble and can become mobile in groundwater. Due to hydrogeochemical processes occurring below the water table, radium can concentrate along faults or fracture zones extending upward and away from uranium mineralisation. This can significantly increase the radon concentration along those faults, which can be measured in groundwater via drilling, or soils and air at the surface.

Two pilot surveys were carried out over known mineralisation to determine if the radon emanating from the Angularli deposit, comprising 25.9Mlbs of  $U_3O_8$  at 1.29%  $U_3O_8$  and some 280m deep, could be measured at the surface. If successful, this geochemical exploration procedure will be rolled out across the Alligator River Project as a relatively cheap 'first pass' exploration tool, and to test its ability to predict buried mineralisation.

Seventy-five sites were sampled along four traverses covering the surface projection of the Angularli deposit. Two systems were deployed: Electret ionisation chambers (RadonEx), measuring radon in the air about 1m down in cased holes in the ground; and track-etch detectors (RDS) measuring radon in the soil. Both systems were set up a very short distance from each other to allow comparison of results (Figure 2).

Results from the RadonEx technique were particularly encouraging, with a clear anomaly marking the up-dip projection of the Angularli deposit along the interpreted footwall fault zone (Figure 3).



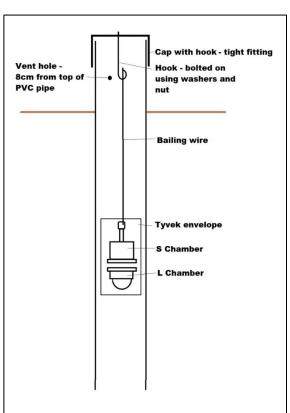


Figure 2: Radon detection survey layout and RadonEx survey set-up



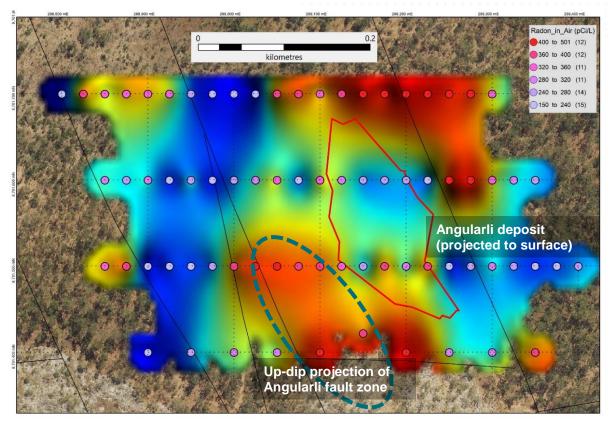


Figure 3: Point and contoured data for RadonEx orientation survey at Angularli

### **Mobile Metal Ion geochemistry**

The Mobile Metal Ion (MMI) analytical procedure is a surficial geochemical exploration method that uses a weak partial extraction and ICP-MS ultra-trace element analysis to liberate and measure weakly bound metals ions in the soil. These ions are the product of upward migration of metals through a range of mechanisms associated with the overlying profile.

MMI anomalies tend to be sharply bounded and mostly directly overlie buried primary mineralised zones, forming as a result of the upward migration of mobile metal ions into overlying surface soils.

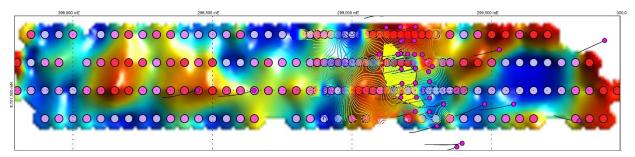


Figure 4: Contoured and point data of uranium response ratio (2018 MMI orientation survey across the Angularli deposit), with RadonEx contour data overlay

One hundred and eighty-eight samples were collected across four traverses and sent for multi-element analysis at very low levels of detection (parts per billion). Anomalous results from the MMI survey showed a good correlation with the radon emanation data generated with the RadonEx technique (Figure 4) and showed that weakly-bound uranium is not correlated to any other element in the Angularli soil profile.



#### **Passive seismic**

A key challenge in planning mineral exploration on the Alligator River Project lies in understanding the depth and geometry of major contacts between the transported cover and underlying rocks, and between the sandstone and metamorphic basement.

The thickness of the transported cover can constrain the range and suitability of exploration techniques that can be deployed.

Airborne methods, such as electromagnetics, can provide a useful guide to estimating the depth of these unconformities and mapping underlying conductors in the metamorphic basement, such as graphitic shear zones in the Athabasca Basin. However, under Australian conditions, changes in groundwater and weathering profile conductivity can result in false or misleading depth interpretations.

Passive seismic is an inexpensive technique that measures the way that the ground's background ambient noise is reflected and refracted around below the surface. The technique has been used successfully to image shallow sub-surface geological contacts both in the Alligator River Project and in the Athabasca Basin.

During the 2018 field season, Vimy completed a detailed passive seismic orientation survey across the Angularli project area on a 100 x 50 m grid (for a total of 368 readings) to test the potential of this cheap and low-impact method to map unconformities in the sub-surface.

Results to date are very encouraging (Figure 5), with two contacts identified in individual readings and cross-sections. These results allow mapping of the topography of those surfaces with disruptions in the profile interpreted to be the result of pre- and post-depositional faulting (Figure 6).

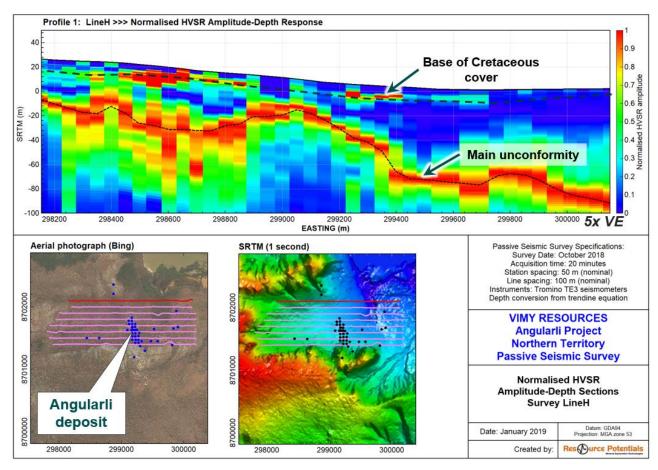


Figure 5: Passive seismic cross-section (Angularli project area)



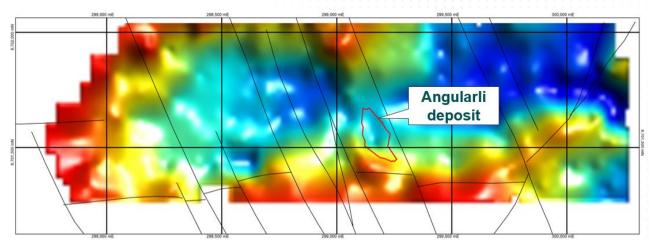


Figure 6: Preliminary depth mapping of the sandstone-basement unconformity (Angularli project area)

# **Alumino Phosphates Sulphates (APS)**

The rare earth elements concentration in APS, which are hydrothermal minerals overprinting the sandstone and basement along fault zones, can be used as a vector towards uranium mineralisation; in these deposits, APS are known to precipitate and capture rare earth elements a short distance from uranium mineralisation, up to 100m above the unconformity.

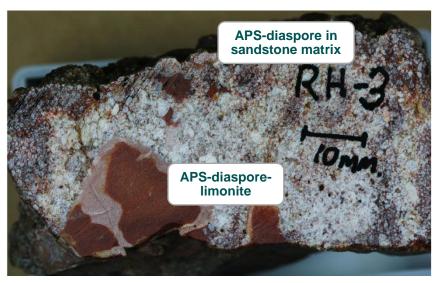


Figure 7: Strongly altered sandstone surface sample from the Shiba prospect (with high APS content)

Mineralogical analytical work on surface samples collected from the Shiba zone (Figure 7) received recently demonstrate significant APS alteration in the sandstone. The surface samples were collected from a fault zone, approximately 120 m above the interpreted unconformity (Figure 8). Those results are supported by portable XRF analyses, with significant phosphorus, aluminium, sulphur, strontium and yttrium anomalism and are more than 20 times background values.



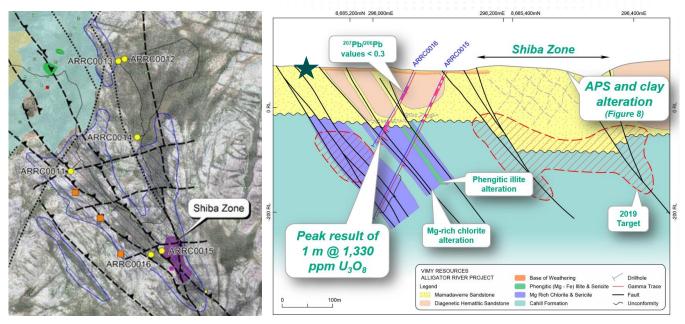


Figure 8: Results of groundwater geochemical sampling across the southern part of the Such Wow project area (the size of the graph relates to the overall concentration of elements reported)

# **Groundwater geochemistry**

Groundwater moves below the surface and recharges at depth, and its chemistry is influenced by the interaction with sub-surface mineralisation. Compared to surface water geochemistry, groundwater is a sampling media which provides a three-dimensional perspective, more constant chemical composition and a greater sampling volume. It can identify broad alteration haloes concealed under thick and complex weathering profiles which have been subjected to extensive leaching, as well as a transported cover.

Results of groundwater sampling carried out during the 2018 drilling program show very high uranium concentrations in three drill holes; ARRC0008 at Angularli and ARRC0015 and 0016 at Such Wow (Figure 10). Those concentrations are well in excess of the regional threshold associated with uranium mineralisation (~10 ppb U).

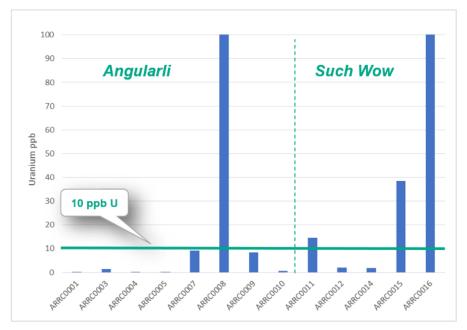


Figure 9: Uranium results of groundwater geochemical sampling completed in the Alligator River project area in 2018. Note the anomalous uranium results from the southern part of the Such Wow prospect



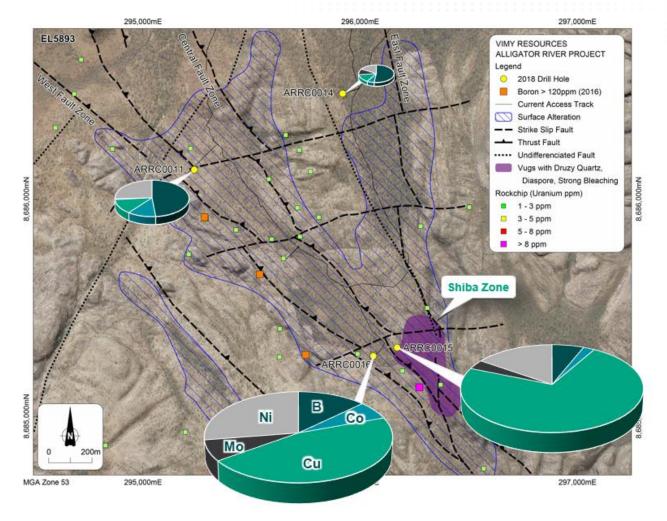


Figure 10: Results of groundwater geochemical sampling across the southern part of the Such Wow project area (the size of the graph relates to the overall concentration of elements reported)

Groundwater samples for drill holes ARRC0015 and 0016 near the Shiba zone at the Such Wow prospect (Figure 10) and ARRCC0011 further to the northwest also returned very high concentrations of pathfinder elements (boron, cobalt, copper, molybdenum, nickel). This indicates the interaction of groundwater with alteration haloes typically associated with unconformity-related deposits and warrant follow-up drilling along Such Wow's West Fault zone.

## **Consultation with Traditional Owners**

Shortly after the reporting period, Vimy presented the proposed work program (outlined in the Next Steps section below) to Traditional Owners of EL5893 (Wellington Ranger-King River JV), which was well received. Two work program meetings for EL25064 and EL25065 are also planned.



#### **Section 232 Petition**

The s.232 petition, a trade investigation into whether US nuclear utilities should be required to purchase 25% of their uranium from US domestic production, continues to cause uncertainty as utilities remain largely unwilling to write long- to mid-term contracts. Furthermore, the US utilities spent an inordinate amount of time filling in the questionnaires required by the Department of Commerce (DoC) and this, combined with scheduled refuelling cycles, has seen the overall market flatten during the Quarter owing to lack of activity by the US buyers.

On 14 April 2019, the DoC submitted its recommendations on the s.232 to President Trump who now has ninety days to deliberate on a course of action (i.e. by 14 July 2019). The Nuclear Energy Institute speculates that President Trump will use the allotted time before rendering a decision. Details of the report will remain confidential, and the DoC has provided no indication of a final recommendation.

Vimy believes the DoC has, in fact, made a recommendation. Otherwise an announcement of no recommendation would have been made almost immediately. President Trump now has the task of finding a solution that assists the underperforming uranium miners while maintaining a competitive nuclear power industry.

President Trump has historically favoured import tariffs in trade standoffs. However, a universal import tariff on uranium would need to be so high to incentivise new US production, that it would inevitably damage the competitive position of the US nuclear utilities. Therefore, Vimy considers that the recommendation will involve a form of 'targeted quota' that decreases imports from the countries that are said to represent a risk to national energy security, notably Russia, Kazakhstan, Uzbekistan and Chinese-owned mines in Africa. The magnitude of the quota needs to ensure that the US utilities are encouraged to buy domestic production in order to compensate for the loss of the global supply. Targeted quotas would also leave Australia and Canada free to increase their exports to the USA to make up some of the shortfall as well.

However, as the US utilities have been keen to stress, the recommendation has gone to Trump and now any outcome is possible.

Irrespective of Vimy's view, once a decision is made the uncertainty surrounding the outcome will disappear and the spot market is likely to increase in the expectation of a resumption of long-term contracting.

#### **Next Steps**

## **Mulga Rock Project**

- Continue to progress secondary approvals expected in second half of 2019
- Escalate marketing following s.232 decision in USA
- Increase marketing efforts in Europe and Asia
- Continue to investigate financing options

### **Alligator River Project**

The planning of activities to take place after the re-opening of access to the Alligator River Project in May 2019 is the top priority of the exploration team. Planning is focussed on the following areas:

- Exploration drilling to locate down dip extensions along known deposits or prospects.
- Such Wow drilling program with traverses up to 400-500m apart, to a level consistent with hydrothermal alteration footprints typical of this style of deposit.
- Angularli drilling to follow up the several 'fertile' structures identified in 2018 program and to improve the confidence of the existing Mineral Resource.
- Analysis of detailed geophysical data to consider the implications for additional prospectivity along the fault corridor, which extends under shallow Cretaceous to the northwest of the escarpment.
- Additional radon emanation, passive seismic and soil surveys at Angularli and Such Wow prospects.



#### **Tenements**

Tenement details for Mulga Rock and Alligator River Projects (Vimy Resources) and the tenements held by Vélo Resources Pty Ltd are shown in Table 1.

## Mulga Rock Project - Exemption from Expenditure granted

On 8 March 2019, the WA Government supported the Mulga Rock Project by granting a five-year exemption from minimum expenditure commitments for M39/1104 and 1105. This exemption enables Vimy to maintain a low-spend profile on the Mulga Rock Project; there are no work programs planned while the Project is at the offtake and funding stage. The exemption is effective until December 2023 and is for a total of \$6.1M over the period, as follows: M39/1104: \$3,257,600 and M39/1105: \$2,844,000.

### Alligator River Project - Joint Venture Interest

The King River-Wellington Range tenement group, which contains the Angularli deposit, is managed in a joint venture with Rio Tinto Exploration Pty Limited (Rio Tinto), a wholly-owned subsidiary of Rio Tinto Ltd. In March 2018 when Vimy acquired the tenements from Cameco Australia Pty Ltd, interests were Vimy 75% and Rio Tinto 25%. Rio Tinto is currently not contributing to joint venture expenditure, with its interest diluting based on expenditure by Vimy. At the end of the March Quarter, the interests are Vimy 78% and Rio Tinto at 22%.

Table 1: Tenement details as at 31 March 2019

Tenement	Nature of Interest	Interest at Beginning of Quarter	Interest at End of Quarter
MULGA ROCK PROJECT (Mt Margaret Mineral Field, Western Australia)			
M39/1104	Granted	100%	100%
M39/1105	Granted	100%	100%
E39/876	Partial Expiry	100%	100%
E39/877	Expired	100%	0%
E39/1148	Granted	100%	100%
E39/2049	Granted	100%	100%
L39/193	Granted	100%	100%
L39/219	Granted	100%	100%
L39/239	Granted	100%	100%
L39/240	Granted	100%	100%
L39/241	Granted	100%	100%
L39/242	Granted	100%	100%
L39/243	Granted	100%	100%
L39/251	Granted	100%	100%
L39/252	Granted	100%	100%
L39/253	Granted	100%	100%
L39/254	Granted	100%	100%
L39/279	Granted	0%	100%
L39/280	Granted	0%	100%
P39/5844	Granted	100%	100%
P39/5853	Granted	100%	100%
R39/0002	Application	0%	100%
ALLIGATOR RIVER PROJECT (Northern Territory)			
EL24017	Granted	75%	78%
EL25064	Granted	75%	78%
EL25065	Granted	75%	78%
EL27059	Granted	75%	78%
EL5893	Granted	75%	78%
VÉLO RESOURCES PTY LTD (Mt Margaret Mineral Field, Western Australia			
E38/3203	Granted	100%	100%
E39/2012	Granted	100%	100%



## **Corporate**

## **Expenditure**

Cash spend on exploration, evaluation, staff, administration, corporate and uranium marketing activities in the March 2019 Quarter amounted to \$1.1 million.

This was lower than the December 2018 quarter cash spend of \$2.1 million as a consequence of completing the Alligator River Project 2018 field season exploration drilling and scoping study work programs, and the timing of Mulga Rock Project annual rent and rate payments.

#### **Cash at Bank**

Cash at 31 March 2019 amounted to \$2.4 million.

### **Changes to Board and Executive Team**

During the Quarter, the Company announced that Tony Chamberlain would conclude his role as Chief Operating Officer at the end of January 2019 and would join the Vimy Board as a Non-Executive Director, effective from 1 February 2019.

On 8 March 2019, Vimy announced the appointment of Marcel Hilmer as Chief Financial Officer and Company Secretary of the Vimy Group of companies. Mr Hilmer has over thirty years' experience as a finance professional in the resources and manufacturing industries with significant involvement in funding, exploration, mergers and acquisitions. His most recent position was with uranium development company Forsys Metals Corporation (TSX: FSY) and Caravel Minerals Limited (ASX: CVV).

Vimy continues to maintain the modifications to executive contracts as announced last year, with the Chief Financial Officer and Company Secretary role maintained as a part-time position to provide flexibility to respond to uranium market conditions. The Company also continues to reduce ongoing remuneration expenditure under executive contracts for Mike Young, Managing Director and CEO, and Julian Tapp, Chief Nuclear Officer, and the conclusion of the role of Chief Operating Officer.

Mike Young

**Managing Director and CEO** 

Tel: +61 8 9389 2700

30 April 2019

John Gardner/Henry Downing Citadel-MAGNUS

Tel: +61 8 6160 4900

#### **Compliance Statement**

The information in relation to the Angularli Deposit Mineral Resource that is contained in this announcement is extracted from ASX announcement entitled 'Maiden Mineral Resource at Angularli Deposit Alligator River Project' released on 20 March 2018 and available to download from asx.com.au ASX:VMY. The Company is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.



# **Competent Person Statements**

The information in relation to the Angularli Scoping Study that is contained in this announcement is extracted from ASX announcement entitled 'Angularli Uranium Project Scoping Study Update" released on 3 September 2018 and available to download from asx.com.au ASX:VMY. The information relating to the metallurgical testwork results for the Angularli Uranium Project was compiled by Dr Anthony Chamberlain, who is a Member of the Australian Institute of Mining and Metallurgy. Dr Chamberlain is a Non-Executive Director of Vimy Resources. The metallurgical results were derived from test work completed by ANSTO and ALS Metallurgy. Dr Chamberlain 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 JORC code. Dr Chamberlain consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.



# **About Vimy Resources**

Vimy Resources Limited (ASX: VMY) is a Perth-based resource development company. Vimy's flagship project is the Mulga Rock Project, one of Australia's largest undeveloped uranium resources, which is located 290km ENE of Kalgoorlie in the Great Victoria Desert of Western Australia.

Vimy also owns (78%) and operates the largest granted uranium exploration package in the world-class Alligator River uranium district, located in the Northern Territory. Vimy is exploring for large high-grade uranium unconformity deposits identical to those found in the Athabasca Basin in Canada.

**Directors and Management** 

The Hon. Cheryl Edwardes AM Non-Executive Chairman

Mike Young CEO and Managing Director

David Cornell Non-Executive Director

Mal James Non-Executive Director

Dr Tony Chamberlain Non-Executive Director

Marcel Hilmer Chief Financial Officer and Company Secretary

Julian Tapp Chief Nuclear Officer

Scott Hyman Vice President Sales and Marketing

Xavier Moreau General Manager, Geology and Exploration

For a comprehensive view of information that has been lodged on the ASX online lodgement system and the Company website please visit **asx.com.au** and **vimyresources.com.au** respectively.

**Principal Place of Business** 

First Floor 1209 Hay Street West Perth WA 6005

Postal Address: PO Box 23 West Perth WA 6872 T: +61 8 9389 2700 F: +61 8 9389 2722

E: info@vimyresources.com.au

ABN: 56 120 178 949

#### Share Registry

MULGA ROCK PROJECT

Computershare Investor Services

T: 1300 850 505 (within Australia) +61 3 9415 4000 (outside Australia)

ALLIGATOR RIVER

**PROJECT** 

F: +61 3 9473 2500

W: www.computershare.com

E: www.investorcentre.com/contact



The creation of approximately

350 direct site jobs
IN WESTERN AUSTRALIA

Royalty and payroll tax payments of around

A\$17m
PER YEAR TO THE
STATE GOVERNMENT

The amount of uranium produced when used in nuclear power plants to displace coal fired electricity would offset more than



## 64 million tonnes

of carbon dioxide equivalent emissions which is

## around 12%

of Australia's total greenhouse gas emissions.

