# DRIVING FORCE OF LITHIUM IN THE DRC



**Mining Indaba Presentation** 

6 February 2018

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## FORCE COMMODITIES LIMITED

### ASX listed lithium focused exploration and development company

- Majority interests in two lithium joint ventures the Kitotolo Lithium Project and the Kanuka Lithium Production Project
- Located in Tanganyika Province in south east of the DRC
- Projects along trend and within 5km-30km of the world-class Manono-Pegmatites
- Aggressively advancing exploration at Kitotolo Lithium Project in JV with Cominiere SA
- Fast-tracking development options at the Kanuka Lithium Production Project in JV with MMR SARL
- Within 6 months already established a proven operating team on site with full capabilities
- Strong technical and exploration team with excellent in-country support
- Highly experienced Board with a successful track record in the DRC and Africa
- Well funded through next several phases of planned exploration and development activities
- Further consolidation and acquisition opportunities in the region with established partners





### **CORPORATE SNAPSHOT**



2 – 43.4M options at \$0.032 to \$0.08 expiring 30 June 2019 to 1 July 2020

DIRECTORS/ KEY MANAGEMENT
David Sanders, Non-Executive Chairman
Jason Brewer, Managing Director
Gedeon Pelesa. Non-Executive Director
Michael Fry, CFO and Company Secretary
James Sullivan, Head of Exploration
KEY PROJECTS AND INVSTMENTS
Kitotolo Lithium Project - 70%
Kanuka Lithium Production Project – 51%
9.25% shareholding in ASX:MQR

Non-core interests in NSW Projects - 100%



## DRIVING LITHIUM EXPLORATION

### KANUKA LITHIUM PRODUCTION PROJECT

- JV: Force - 51%, Manager; MMR - 49%

- MMR is part of a diversified mining, metals and trading group that has operated in the DRC since 1997.
- Mining License 13082 and Exploration License PR4100; land-holding extends over ~194km2.
- MMR currently undertaking tin and tantalum mining and processing on Project area.
- Located ~5kms S of AVZ's world class Manono Lithium Project & 20km east of Force's Kitotolo Lithium Project.
- Pegmatite exposed across significant areas by historic and current mining operations; observed to extend for over 3km in length and 200m in width.
- Assays from grab samples reported high grade lithium mineralisation in the pegmatite (up to 2.12% Li2O).
- Excellent infrastructure of an established operation, with power, mine camp and offices as well as its own airstrip which will accelerate exploration activities.

### KITOTOLO LITHIUM PROJECT

- JV: Force 70%, Manager; Cominiere SA (DRC state owned company) - 30%
- Mining License PE13247 and Exploration License PR12453; land-holding extends over ~400km2.
- Spodumene identified in pegmatites across significant areas, open in all directions and which are considered to extend for several kms along a NE-SW trend.
- Along strike 30 kms SE of AVZ's world class Manono Lithium Project
- Assays from rock and channel samples confirm high grade lithium mineralisation (up to 2.15% Li<sub>2</sub>O).
- Test pitting and trenching in Dec 2017 has confirmed the continuous strike and NE-SW orientation
- Aggressive exploration to continue in 2018 with maiden drilling program to start following the wet season.



## KANUKA PROJECT HIGHLIGHTS

- Joint venture agreement being finalised now for 51% interest in production focused Kanuka Lithium Production Project
- ✤ JV partner, Mining Mineral Resources SPRL (MMR) currently conducting tin and tantalum mining and processing operations on the mining and exploration licenses
- MMR is part of a diversified mining, metals and trading group that has operated successfully in the DRC since 1997, with existing copper, cobalt, tantalum, tin and tungsten mines and processing plants
- Located 5km south of AVZ Mineral's 'world-class' Manono Project licenses and 20km east of the Company's Kitotolo Lithium Project.
- Pegmatites identified are on a NE-SW trend and exposed at surface, extend for over 3km in length and 200m in width and in places been exposed by historic and current mining operations and have been mined down to depths of up to 15 metres.
- Technical due diligence program successfully completed and reported high grade lithium mineralisation in the pegmatite including 2.12% Li<sub>2</sub>0 and 1.93% Li<sub>2</sub>0
- Project development will benefit from the excellent infrastructure of an established mining operation, with power, mine camp and offices as well as its own airstrip
- Aggressive exploration activities to commence in 2018 and focus on new areas on the licenses areas currently not impacted by mining and which are considered highly prospective for pegmatite hosted lithium mineralisation



"At Kanuka, we are able to see some substantial and quite significant pegmatite exposures that have been exposed by the tin and tantalum mining operations by MMR. We can see the great opportunity and work in front of us, and we look forward to finalising the exploration budget and plans with MMR and commencing an aggressive exploration program now"

James Sullivan, Head of Exploration



## **PROJECT LOCATION, TENURE, ACCESS**

**Comprises Exploration Licence PR4100** and Mining License PE13082

#### Accessible by road, air





### (regular service from Lubumbashi to Manona, established dedicated airstrip at Kanuka servicing the existing mine site, road being upgraded by Chinese)

Excellent Infrastructure

Already well established mining operation, with power, water, mine camp and offices

#### **Existing logistics**

Partner with broad logistics capabilities in the region and well established and proven capabilities

#### Well equipped

On-site drilling equipment and mining fleet and mine and exploration support services which are anticipated to substantially increase operating efficiencies, reduce costs and accelerate exploration and study work timeframes



#### Project area covers approx. 194 km<sup>2</sup>

- Project located 5km South of AVZ's 'world-class' "Manono" lithium project and 20kms East of Company's Kitotolo Lithium Project.
- ~500kms due north of Lubumbashi, the capital of the DRC.



## PROVEN JOINT VENTURE PARTNER

Mining Mineral Resources

**MMR, Mining Mineral Resources** operates a series of tin, tantalum and tungsten mining and exploration and processing operations throughout the DRC.



VIN Mart is a diversified mining, metals and trading group that has operated successfully in the DRC since 1997, with existing copper, cobalt, tantalum, tin and tungsten mines and processing plants.



#### One of DRC's Tin Industry Leaders

Working closely with iTRi, and has been instrumental in the on-going success of the program in the DRC, supplying ICGLR-certified conflict free "3T" minerals to the international marketplace.



### ESTABLISHED MINING COMPANY

MMR acquired the mining and exploration licenses (that will now form the basis of the Kanuka Lithium Production Project) in 2012

- MMR operate an established tin and tantalum mining and processing operation at Kanuaka
- Conventional open pit mining operations are focused on the alluvial sand layers that host the cassiterite and columbite (minerals that are typically coincidental with lithium mineralisation)
- Mined material is fed into a recently expanded processing plant which produces tin and tantalum concentrates
- MMR in conjunction with the iTRi exports ICGLR-certified tin and tantalum concentrates to international markets exports
- Current and historic mining in the license areas has exposed a number of pegmatites, with one identified in the current main mining area being in excess of 3kms long and greater than 200 metres in width. This is open along strike on a NE-SW trend and is typical of other pegmatites identified in the region.









## POSITIVE TECHNICAL RESULTS

Detailed technical due diligence has already confirmed high grade lithium potential

- Head of Exploration, Mr. James Sullivan and the Company's two local geologists completed a preliminary technical due diligence including mapping and sampling
- Mapping within the area established the presence of significant occurrences of pegmatite exposures, which had had been exposed by the current and historical mining activity. In addition, a number of pegmatites were identified at surface.
- Continuous pegmatite exposures were identified extending in excess of 3km on a NE-SW trend, and in places in excess of over 200m wide.
- The pegmatites identified appeared open in all directions and are considered to extend for possibly up to several kilometres along the NE-SW trend.
- Random grab samples were taken from pegmatites outcropping in the license areas.
- Assay results for grab samples of highly weathered shallow material taken as part of the Company's technical due diligence program reported high grade lithium mineralisation in the pegmatite including 2.12% Li<sub>2</sub>0 and 1.93% Li<sub>2</sub>0.









### HIGH GRADE LITHIUM IDENTIFIED

Assay results from pegmatites outcropping in the license areas and exposed in the existing mining operations were taken as part of the due diligence review work.

Tenement	Sample No	UTTM_E	UTM_N	Locality	Sample Type	Orientation	Lithology	ME-MS61 (Li2O%)
PR4100/PE13082	A2 501	541257	9165944	Kanuka	rockchip	Random	Pegmatite	0.45
PR4100/PE13082	A2 502	541269	9165833	Kanuka	rockchip	Random	Pegmatite	1.62
PR4100/PE13082	A2 504	540959	9165840	Kanuka	rockchip	Random	Pegmatite	1.86
PR4100/PE13082	A2 50 5	541850	9166122	Kanuka	rockchip	Random	Pegmatite	1.93
PR4100/PE13082	A2519	543387	9165359	Kanuka	rockchip	Random	Pegmatite	2.12

Summary assay results for rock chip samples at the Kanuka Lithium Project Joint /enture

- Assay results confirmed high grade lithium mineralisation in the pegmatite including 2.12% Li<sub>2</sub>0 and 1.93% Li<sub>2</sub>0.
- Assay results consistent with weathered pegmatites and are indicative of a well mineralised lithium system.
- Lithium mineralisation identified on the Kanuka Lithium Production Project is observed to be preferentially hosted within a near surface and strongly oxidised pegmatite with an LCT affinity (Rare-Element Classed pegmatite with Lithium, Caesium, and Tantalum enrichment.
- Observations and characteristics of lithium mineralisation at the Kanuka Lithium Project is typical of LCT type pegmatite deposits and consistent with recent descriptions of the Manono and Kitotolo deposits located immediately to the north.
- Further exploration including detailed mapping, trenching, pitting and drilling is required to confirm whether the pegmatite is the result of a single intrusion or multiple intrusions.



## EXISTING MINE INFRASTRUCTURE

Tin and tantalum mining and processing operations have been ongoing at Kanuka since 2012 and support the accelerated development of the Kanuka Lithium Production Project.



All infrastructure in place to enable the rapid commencement of exploration activities

Power, water, mine camp and offices already established and operational. Force will be able to immediately utilise this infrastructure.

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A dedicated airstrip at Kanuka already servicing the existing mine site.



All logistics associated with ensuring ongoing mine supplies and services in place



Access to and use of joint venture partners, on-site drilling equipment and personnel, mining fleet and mine and exploration support services



Support from MMR and the Vin Mart Group in accelerating exploration and feasibility study work



### KITOTOLO PROJECT HIGHLIGHTS

- \* 70% interest in joint venture over Kitotolo Lithium Project
- Along-strike from AVZ's world-class Manono Project and within the same geological setting
- Project area contains numerous historical artisanal workings, focussed on cassiterite and columbite-tantalum mining
- \* Project area has not been subject to any modern lithium exploration.
- Initial due diligence investigations have identified spodumene in pegmatites across significant areas within Project area.
- ✤ Assays from rock and channel samples confirm high grade lithium mineralisation (up to 2.15% Li<sub>2</sub>O).
- Aggressive exploration commenced, initial phase to comprise trenching, test pitting and subsequent drilling of fresh spodumene in pegmatite planned
- Phase 1 Lithium Exploration Program commenced in late November 2017
- Test pitting and trenching confirmed continuous strike pegmatite interpretations along the NE/SW orientation in excess of 1 km and open in these directions
- Significant quantities of fresh and weathered spodumene mineralisation in the pegmatite



Described as... "An exciting project comprising large land-holding with demonstrated lithium mineralisation and visible pegmatite across significant areas of Project area in a field proven to host large high grade ore-bodies."



### PROJECT LOCATION, TENURE, ACCESS

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Low Population Density

(airport, hospital, power)

Good infrastructure

License PE13247

Accessible by road, air

Estimated at ~30,000

Main Industry is Subsistence Agriculture

**Government & Community supportive of Mining** 

**Comprises Exploration Licence PR12453 & Mining** 

(regular service from Lubumbashi to Kitotolo)



Project area covers approx. 400 km<sup>2</sup>

- Project located 40km SW of AVZ's 'worldclass' "Manona" lithium project.
- ~500kms due north of Lubumbashi, the capital of the Katanga Province in the south of DRC

www.forcecommodities.com.au





### PROJECT GEOLOGY

Lithium-rich LCT deposit (lithium, caesium, tantalum) style mineralisation

- Historical records suggest that the pegmatite field extends over 500km from Kolwezi in the south-west to Kalemie in the north-east
- Force's Kitotolo Project interpreted to overlay a large section of the pegmatite field
- Pegmatites in the field typically follow a NW orientation.
- Pegmatites in the region can range in size from a few metres long and centimetres wide, to several kilometres long and hundreds of metres wide
- Pegmatites are observed across significant areas of the Kitotolo Project Area



Along strike from AVZ's 'world-class' Manona Lithium Project, which is considered to be **potentially one of the largest lithium-rich LCT**) deposits in the world.



## PHASE 1 EXPLORATION RESULTS

- Initial 43 test pits completed and 42 samples taken and a further 9 trenches completed over pegmatite outcrops for an additional 153 trench samples
- In-situ and fresh spodumene observed in exposed pegmatites in test pits and trenches and from broader 500m and 1km step outs from Katamba Pit
- Test pits and trenches confirm pegmatite extending well in excess of an initial 1km strike length, that remains open towards NE and SW directions and down dip and dipping progressively shallower to the NE
- 195 samples dispatched to the ALS Laboratory in Lubumbashi for analyses
- Step out test pitting from completed trenches identified pegmatites, confirming continuous strike interpretations along the NE/SW orientation and reinforcing the regional pegmatite orientation across the Kitotolo Mining and Exploration licences
- Balance of Phase 1 Lithium Exploration Program underway and Phase 2 commenced already
- Appointment of additional Congolese field geologists underway and further test pitting and trenching work to now recommence
- Initial drilling program to be brought forward at Kitotolo Lithium Project with planning work underway and discussions with drilling contractors advancing





### KANUKA EXPLORATION PLANS

March Quarter 2018

Formalisation of Joint Venture

- Commencement of maiden lithium exploration program at Kanuka
- Mapping, trenching and test pitting to determine extent of exposed pegmatites that have already identified on the license areas

Results from initial lithium exploration at Kanuka

June Quarter 2018

- Second phase exploration program to commence with follow up trenching and sampling
- Appointment of drilling contractor and commencement of initial drilling program to confirm extent of pegmatites

Sept and Dec Quarters 2018

- Results from second phase exploration work and
- Initial drilling program results confirming extent of lithium mineralisation and grades of pegmatites



### KITOTOLO EXPLORATION PLANS

March Quarter 2018

- Assay results from initial Phase 1 Exploration Program
- Finalisation of Phase 1 Pitting and Trenching work at Kitotolo
- Expansion of geological team with additional Congolese geologists retained to expand regional mapping and sampling program

June Quarter 2018

- Drilling contractor appointed for commencement of maiden drilling program at Kitotolo to confirm extent of pegmatites
- Mobilisation to site and commencement of drilling activities
- Phase 2 Exploration Program with additional trenching and pitting on regional scale

Sept and Dec Quarters 2018

- Initial drilling program results and performance
- Results from second phase exploration work and
- Confirmation of lithium mineralisation and grades of pegmatites



## POSITIONED TO DELIVER IN 2018

- Force is well funded to deliver on all its exploration plans in 2018
- ◆ A well resourced and strong technical and exploration team is already in place
- Established joint venture partnerships provide improved logistics support and access to an excellent mining and exploration infrastructure
- ✤ Aggressive exploration and development plans commenced
- Drilling of Kitotolo Lithium Project brought forward to quickly define extent of pegmatites and lithium mineralisation
- Kanuka Lithium Production Project offers a very early and fast-tracked lithium mine development opportunity
- Company working towards a mine development decision by the end of 2018





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