



# AVZ MINERALS MARKET PRESENTATION

## MANONO - THE ESCONDIDA OF LITHIUM?

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# Important Notice and Disclaimer

This presentation should be considered in its entirety. If you do not understand the material contained in this presentation, you should consult your professional advisors. The sole purpose of this presentation is to provide shareholders with an update on current activities of the Company and the current state of exploration at the Manono Project in the Democratic Republic of Congo.

Any statements which may be considered forward looking statements relate only to the date of this presentation document. Such forward looking statements involve known and unknown risks, uncertainties and other important factors beyond the Company's control that could cause actual results, performance or achievements of the Company to be materially different from future results, performance, or achievements expressed or implied by such forward looking statements. As a result of these factors, the events described in the forward-looking statements in this document may not occur.

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## **JORC statements & Qualifications / Competent Persons Statement**

Given the size and mineralised nature of the pegmatites at Manono, the Company has generated an exploration target tonnage of between 400 and 800Mt at grade between 1% to 1.5% Li<sub>2</sub>O within pegmatite ore. The potential quantity and grade as stated, is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

This conceptual target has only been based on detailed prospect scale mapping, some 37 trenches totalling 2,800m producing 1200 assay samples and approximately 1750m of logs relating to diamond core drilling from 7 drill holes as completed to-date. There has been insufficient exploration completed to date to prepare a JORC compliant mineral resource. The company intends to embark on a significant drilling program to enable drill definition of Mineral Resources to JORC 2012 standard.

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr. Peter Spitalny, a Competent Person whom is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Spitalny is a full-time employee of Hanree Consultants Pty Ltd. Mr Spitalny has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Spitalny consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

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# AVZ Minerals Capital Markets Snapshot (ASX:AVZ)

## CAPITAL STRUCTURE (As At 31/7/17)

Shares Outstanding 1,474,466,643

Performance Rights and Options Outstanding 335,001,000

Share Price (31/7/17) AU\$0.079

Market Capitalisation AU\$116.5 million

52 week share price range

ASX AU\$0.09–AU\$0.084

## HISTORIC SHARE PRICE



## MAJOR SHAREHOLDERS

Dathomir 16.3%

Executives & Directors 9.7%

## INVESTOR RELATIONS CONTACT

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Executive Chairman  
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# AVZ Minerals – A Multi-Credit Lithium Company with World Class Potential

## Corporate Objective

- AVZ's objective is confirmation and expansion driven, leveraging the Company's Democratic Republic of Congo expertise and capital to advance the historical & highly prospective Manono and surrounding permits up the value curve.

## Strategy

- Evaluation/Confirmation drilling & advance resource delineation of Company maker assets over a defined timeline.
- By applying financial & geological disciplined expertise in advancing its assets close to feasibility to crystalize & return/create value to/for shareholders.

In order to achieve this, the Company has a highly experienced management team with successful track record of project confirmation through to development.

## AVZ - a Unique Lithium Asset Opportunity

- Lithium mineralisation in pegmatites extending along strike for more than 13 kilometres.
- Two largest pegmatites are individually larger than the famous Greenbushes Pegmatite in Western Australia.
- Exploration target 400Mt to 800Mt of 1% to 1.5% Li<sub>2</sub>O\* (with additional tin and tantalum credits).
- Dathomir (10% owner of Manono project) is co-ordinating the commitment of capital expenditure of up to USD 345 million for road upgrading from Lubumbashi to the project and refurbishment of the Piana Mwanga hydro facility.
- The MW potential for Piana Mwanga is historically rated at 38MW of power with potential to significantly increase this.



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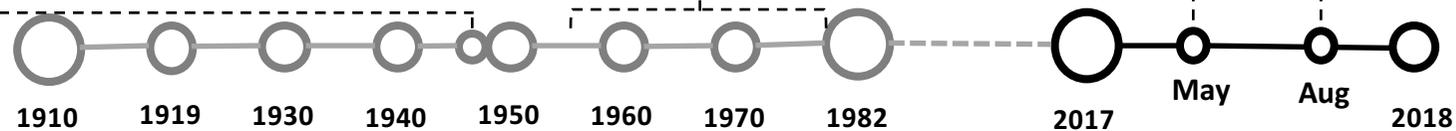
\* Given the size and mineralised nature of the pegmatites at Manono, the Company has generated an exploration target tonnage of between 400 and 800Mt at grade between 1% to 1.5% Li<sub>2</sub>O within pegmatite ore. The potential quantity and grade as stated, is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

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# Manono Project – Asset History

The Manono Project is currently held by AVZ Minerals 60%, La Congolaise D'exploitation Miniere SA (Cominiere, DRC State-owned enterprise) 30% and Dathomir Mining Resources SARL 10%.

- The Manono pegmatite can be classified as an “LCT” or Lithium-Caesium-Tantalum pegmatite which are well known for hosting significant amounts of lithium. Manono Project is a rare element LCT Pegmatite deposit defined as largest pegmatitic deposit of spodumene, tin and tantalite ever worked (Bassot et Mario 1989).
- Manono Project previously owned by Geomines SA (Belgium mining company); operated 6 open pit mines from 1910-1982 on the Manono Kitotolo pegmatites, producing 140,000 - 185,000 tons of tin concentrate (Zairetain 1981).
- Between 1948 and 1949 a study of the hard-rock pegmatite was initiated. Forty two holes, totalling 2,202 m were completed.
- Beneficiation test work carried out by Belgium government (1956, 1976 and 1981) demonstrated that a 6% lithium concentrate was produced using combination of heavy media separation, tables and spirals.
- AVZ acquires 60% interest in Manono in May 2017. First JORC expected before Jan 2018.
- 1<sup>st</sup> of 7 Assays from AVZ's first reported diamond drill hole, MO17DD002, returned 202.8m\* @ 1.57% Li<sub>2</sub>O and 1078ppm Sn



\* Down-hole length. Additional drilling is required to confirm the pegmatite's true-thickness but it is estimated to be approximately 190m.

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## AVZ Minerals – Board of Directors



**Klaus Eckhof** Executive Chairman

Geologist with over 20 years of experience identifying, exploring and developing mineral deposits around the world. In late 2003, Mr Eckhof founded Moto Goldmines which acquired the Moto Gold Project in the Democratic Republic of the Congo. There, Mr Eckhof and his team delineated more than 20 million ounces of gold and delivered a feasibility study within four years from the commencement of exploration. Moto Goldmines was subsequently acquired by Randgold Resources who poured first gold in September 2013. Mr Eckhof is also a director of Burey Gold Ltd, and Carnavale Resources Ltd.



**Nigel Ferguson** Executive Director

Geologist with over 30 years of experience in gold & base metals exploration, resource definition & feasibility studies. He has held senior management positions for the past 18 years and has experience in overseas locations including Saudi Arabia, South East Asia, South and Central America with a focus on Africa. Mr. Ferguson was Country Manager – Tanzania for Ashanti Goldfields, being instrumental in assessing and the acquisition of the now multi-million ounce Geita Gold Project. He has been active in the DRC since 2004 in gold and base metals exploration and resource development.



**Patrick Flint** Non-Executive Director

Mr Flint has been involved in the resources sector as a director or company secretary of ASX and Toronto Stock Exchange listed companies with mineral projects in Australia, Africa and Asia for the last 20 years. He is a Chartered Accountant and has significant experience with project acquisitions, joint venture negotiations and management, fundraisings and corporate matters.



**Gary Steinepreis** Non-Executive Director

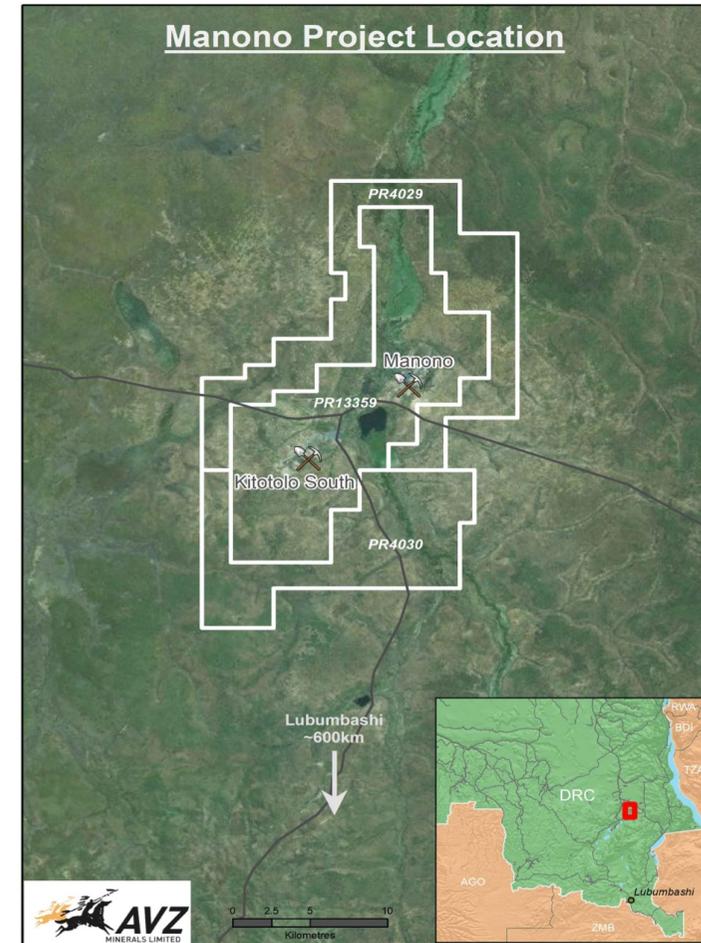
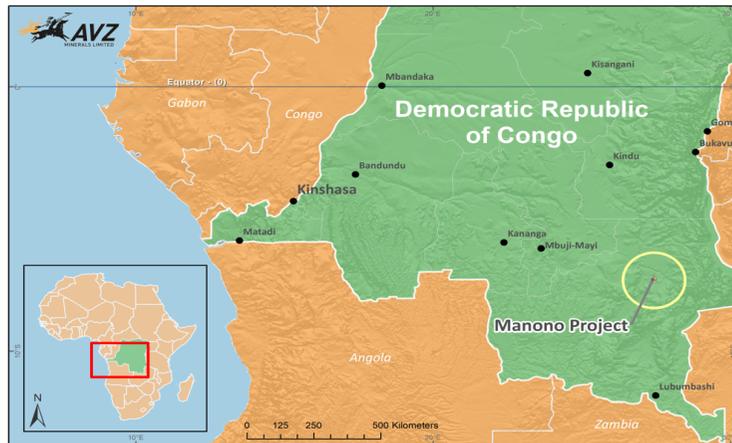
Mr Steinepreis holds a Bachelor of Commerce degree from the University of Western Australia and is a Chartered Accountant. He provides corporate, management and accounting advice to a number of companies involved in the resource, technology and leisure industries.

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# Manono Project– Asset Location

## Project Location

- The Manono Project comprises PR13359, which covers approximately 188km<sup>2</sup>. The licence was granted on 28 December 2016 for a period of five years, and may be renewed in accordance with the DRC's Mining Code. AVZ has secured a 100% interest in licences PR4029 and PR4030 (242.25km<sup>2</sup>) which surround licence PR13359.
- The Manono Project is approximately 500km due north of Lubumbashi, the capital of the Katanga Province, in the south of the DRC. The project area can be accessed from Lubumbashi by 1.5 hour flight or by road.
- The Project is adjacent to the Manono and Kitotolo townships. The region has a low density of population, but the greater Manono town area has a population estimated at 20,000 to 30,000 people, who are occupied mostly in subsistence agriculture and artisanal mining in the region.



# Democratic Republic of Congo – Operating Environment

## DRC Mining Law and Taxation

- The Mining Code was developed with the support of the World Bank and is based on best practice examples from other mineral rich countries like Chile and Zambia. Today, it provides a transparent framework for the exploration, development and mining of mineral ore resources.
- The profit-based tax for instance is set at the preferential rate of 30% (as opposed to the 40% corporate tax rate) and is levied on the net profits from exploitation. Mining royalties are currently set at 2% for non-ferrous metals.
- The Mining Code does not make any distinction between mining rights that may be acquired by foreign parties and those that may be acquired by domestic parties.

## Fraser Institute Annual Survey of Mining Companies

		Score					Rank				
		2016	2015	2014	2013	2012	2016	2015	2014	2013	2012
Africa	Botswana	77.62	68.32	75.10	76.21	81.92	19/104	39/109	27/122	22/112	4/96
	Burkina Faso	68.18	71.88	63.80	65.16	60.08	48/104	29/109	53/122	47/112	49/96
	Democratic Republic of Congo (DRC)	72.80	59.37	58.38	54.86	50.39	29/104	60/109	67/122	75/112	75/96
	Eritrea*	71.86	68.10	55.51	66.50	**	33/104	41/109	80/122	40/112	**
	Ethiopia*	57.32	64.11	50.76	55.05	**	68/104	51/109	89/122	74/112	**
	Ghana	75.56	71.27	67.17	71.30	63.47	22/104	31/109	44/122	30/112	38/96
	Ivory Coast*	78.93	67.99	62.35	59.09	**	17/104	42/109	56/122	61/112	**
	Kenya	46.71	38.43	35.24	56.16	**	86/104	102/109	120/122	71/112	**
	Mali	69.32	50.84	64.70	54.68	50.78	42/104	83/109	51/122	76/112	73/96
	Mozambique*	41.87	50.69	55.91	44.72	**	95/104	84/109	75/122	96/112	**
	Namibia	66.11	69.78	76.37	68.97	68.30	53/104	33/109	21/122	35/112	29/96
	Sierra Leone*	46.26	**	43.11	52.46	**	87/104	**	103/122	82/112	**
	South Africa	53.62	58.04	56.49	61.50	53.76	74/104	66/109	74/122	57/112	68/96
	South Sudan*	49.60	**	37.13	**	**	80/104	**	116/122	**	**
	Tanzania	60.45	57.46	63.82	58.40	62.53	64/104	69/109	52/122	65/112	41/96
	Uganda*	56.34	**	50.48	**	**	70/104	**	90/122	**	**
	Zambia	72.78	57.48	75.71	70.30	63.01	30/104	68/109	25/122	33/112	40/96
	Zimbabwe	41.84	41.45	39.07	36.04	35.50	96/104	98/109	112/122	109/112	93/96

DRC 4<sup>th</sup> most attractive in Africa & 29<sup>th</sup> most attractive globally

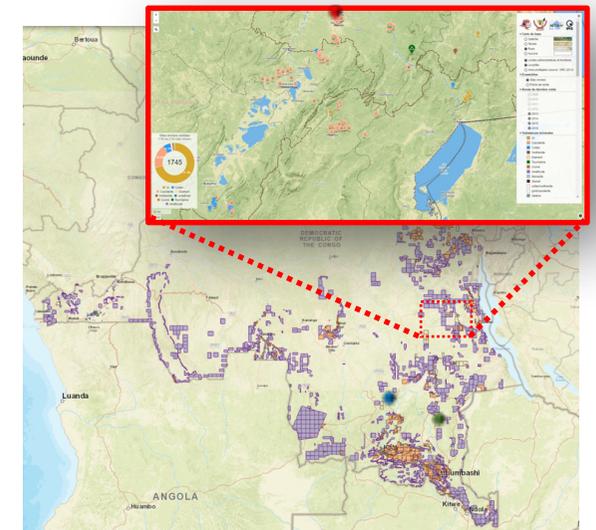
## Active mining & exploration permits in the DRC

- The Manono Project
- Lubumbashi
- Kolwezi

Manono Project is located north of the copper belt where there are many other active exploration projects and mines as shown on the DRC Cadastre Map.

Majority of mines located near Manono are focused on Tin with China Minmetals operating a copper mine within 200km.

The majority of the mines are located in the south of Katanga Province near Kolwezi and Lubumbashi.



# Manono Project – Katanga Mining Region

	<b>Major Mining Groups</b>	<b>Market Capitalisation (USD)</b>
	China Non-Ferrous Metals Co.	Fortune 500 Company
	China Molybdenum Co Ltd	10.84 billion
	Glencore	52.76 billion
	Huayou Cobalt Co Ltd	5.1 billion
	Wanbao Resources	China Large Private
	Jiayuan Cobalt	China Large Private
	Nanjing Hanrui Cobalt Co Ltd	1.8 billion
	JMT Mining Sprl	China Large Private
	Zijin Mining	10.36 billion
	China Minmetals Resources	Fortune 500 Company
	China Railway Eng. Corp.	27.14 billion
	Galena PE Resources	400 million
	AVZ Minerals	117 million



# Manono Project – Infrastructure Energy

## DRC Electrical Infrastructure

Piana Mwanga Hydro - Piana Mwanga would comprise an installation of up to a 32MW power plant- rehabilitation and addition of one unit.#

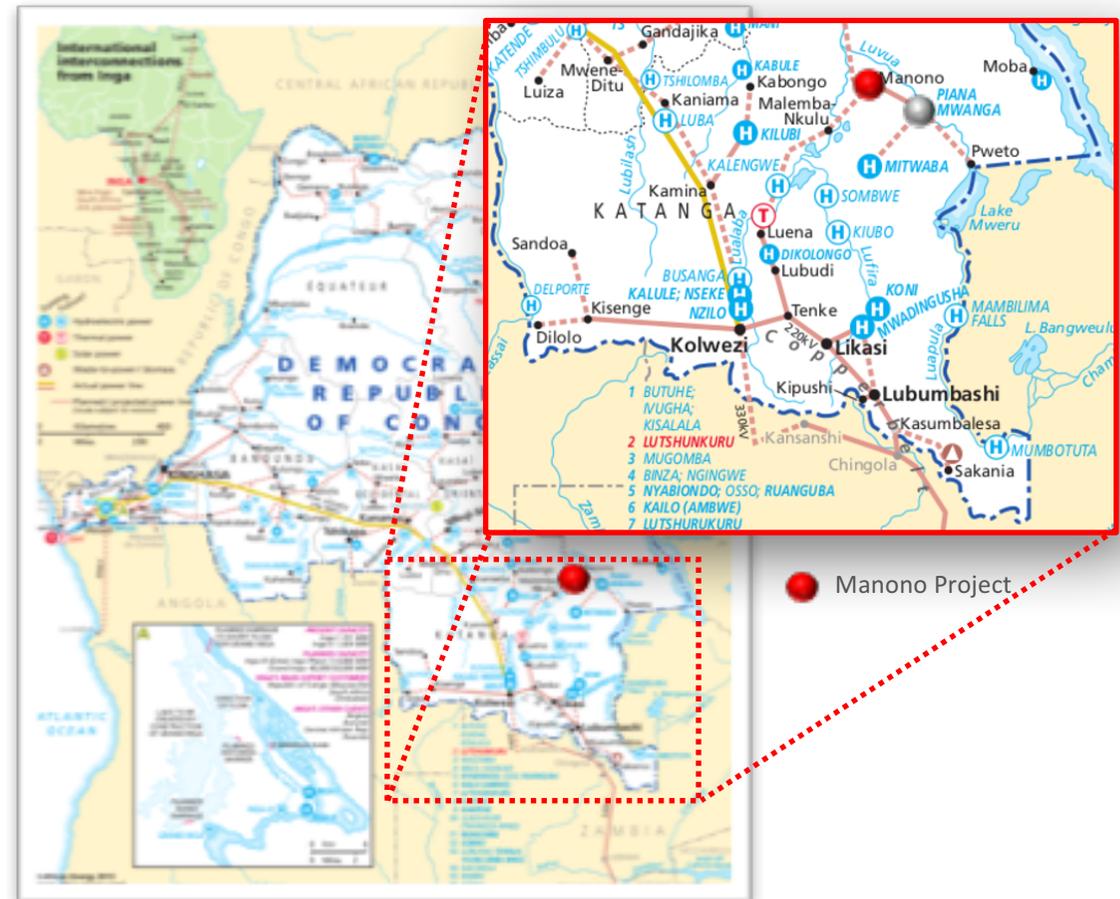
- The project was last evaluated in about 1990.
- The project has to be restudied and data brought up to date before being included in a generation plan.
- Earliest on-power is estimated to be 2018.
- There is room for 4 gen sets for total production of 64MW.

**Dathomir and Cominiere have agreed that Dathomir will secure up to USD45M funding for the rehabilitation of the Piana Mwanga hydroelectric power station.**

- 98% of energy in DRC is generated from hydroelectric power stations.

## Secondary Sources of Energy

- Alternatively short term power can be sourced from Aggreko or other similar energy service companies for placement of electricity generators on site. (there is also the site dam with a Hydro capacity once rehabilitated – 3MW).
- Solar panels recently installed at Manono are another example of distributed energy generation in DRC.



# Manono Project – Infrastructure Transport

## DRC Infrastructure

Dathomir and Cominiere have agreed that Dathomir will secure funding for the rehabilitation of the road from Lubumbashi to Manono.

High quality road currently being built by China First Railway from Lubumbashi to Manono. Estimated to take 12 - 24 months to complete.

**Dathomir has agreed that it will secure up to an estimated USD300 million for the rehabilitation and rebuilding of the road from Lubumbashi to Manono for heavy truck haulage.**

## Multiple Train Transportation Options Exist

- Road to Lubumbashi then three rail freight options:
  1. Lubumbashi and from there to Dar es Salaam the route that tin and cobalt exports presently utilize.
  2. Lubumbashi and from there to Durban, South Africa as the copper mines current utilize.
  3. Angola by the Katanga Railway and then via the new route Benguela railway from Lobito on the Atlantic.



● The Manono Project ● Lubumbashi

# Geology

Manono has the potential to host one of the world's largest lithium rich pegmatite deposits:

- Assay results from trenches confirm the presence of lithium mineralisation in pegmatites extending along strike for more than 13 kilometres. Results include intervals of 29m @ 1.54% Li<sub>2</sub>O and 38m @ 1.29% Li<sub>2</sub>O.
- Initial diamond core drilling of 1,734m is now complete, all samples have now been sent to the laboratory.
- Within the 13,000m zone there are six separate large pegmatites defined to date with lengths from 400m to 5,400m.
- Confirmed that the six large pegmatites all contain spodumene, with spodumene mineralisation constituting up to 30% of the rock volume.
- Logging of drill core completed to date indicates true widths of the large pegmatites range from 50 to 220 metres.
- Exploration target 400Mt to 800Mt of 1% to 1.5% Li<sub>2</sub>O\* (with additional tin and tantalum credits).

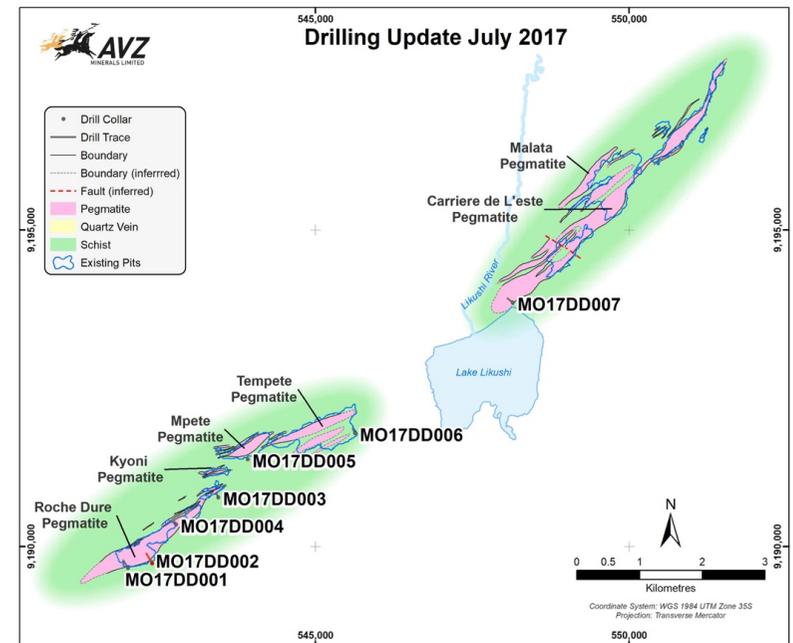
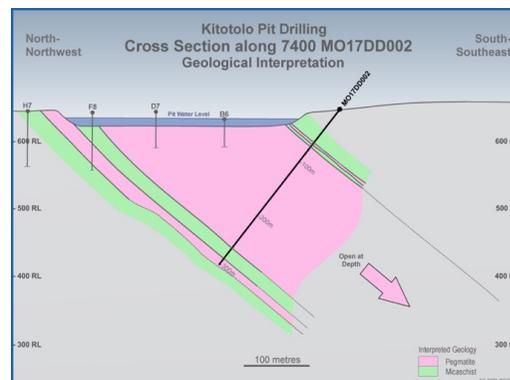
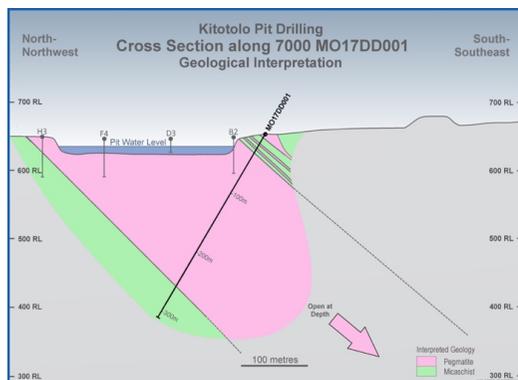


Table 1. Drill-hole Collar Summary Data

Drill-hole ID	Drilling method	Easting (mE)	Northing (mN)	Elevation (m)	Grid	Zone	Dip [degrees]	Azimuth (Magnetic) [degrees]	EOH (m)	COMMENTS
MO17DD001	DDH	542009	9189655	656	WGS-84	35 S	-60	330	311.5	PQ to 38.75m, HQ to EOH.
MO17DD002	DDH	542391	9189727	653	WGS-84	35 S	-50	320	300.7	PQ to 66m, HQ to EOH.
MO17DD003	DDH	543453	9190760	632	WGS-84	35 S	-60	330	234	PQ to 61.5m, HQ to EOH.
MO17DD004	DDH	542774	9190346	637	WGS-84	35 S	-70	330	153	PQ to 53m, HQ to EOH.
MO17DD005	DDH	543921	9191373	631	WGS-84	35 S	-70	330	138.5	PQ to 74.2m, HQ to EOH.
MO17DD006	DDH	545683	9191760	618	WGS-84	35 S	-70	330	250.25	PQ to 62.5m, HQ to EOH.
MO17DD007	DDH	548145	9193850	606	WGS-84	35 S	-70	310	351	PQ to 47.3m, HQ to EOH.

\* Given the size and mineralised nature of the pegmatites at Manono, the Company has generated an exploration target tonnage of between 400 and 800Mt at grade between 1% to 1.5% Li<sub>2</sub>O within pegmatite ore. The potential quantity and grade as stated, is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

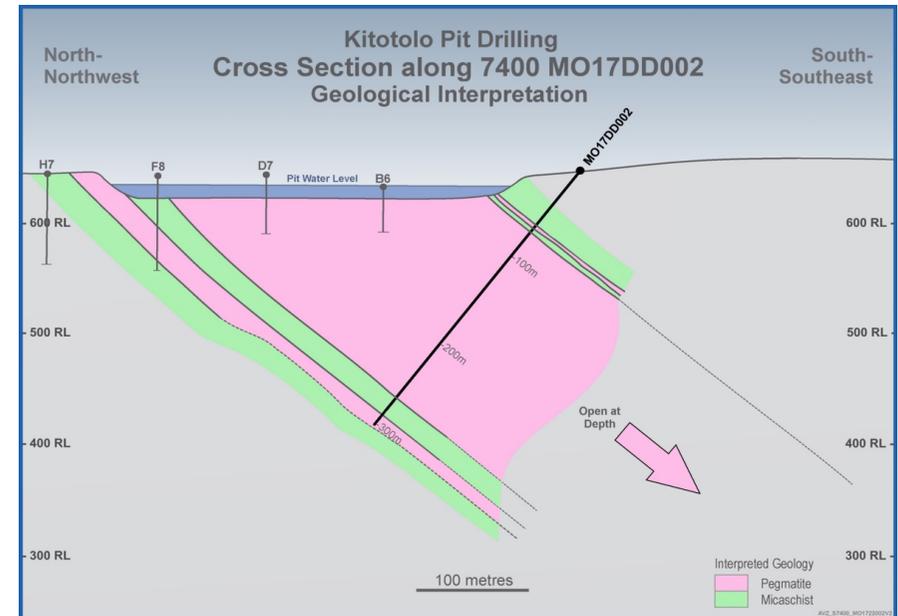
# Confirmation & Exploration Drilling Program Status

Initial seven-hole drill program at Manono Lithium Project completed and first drill-hole assays received:

- High-grade lithium mineralisation is present throughout the intersection of the Roche Dure Pegmatite.
- Assays from AVZ's first reported diamond drill hole, MO17DD002, returned 202.8m\* @ 1.57% Li<sub>2</sub>O and 1078ppm Sn.
- The visual estimates of spodumene abundance logged in drill core are reflected in the reported assay results.
- Tin grades are reported up to 0.73% within narrow intercepts near contact zones
- Six drill hole results remaining are expected by the end of August 2017.
- Extensive RC and diamond drilling program is planned for late Q3 / early Q4 2017.

AVZ's Executive Chairman Mr Eckhof commented *"The excellent assay results from hole MO17DD002 are a major step forward in defining a world class resource at the Manono Lithium project. I look forward to being able to report further world class results from the remaining 6 drill holes in this initial program (due by the end of August) and the next round of drilling planned for late Q3 / early Q4 2017."*

\* Down-hole length. Additional drilling is required to confirm the pegmatite's true-thickness but it is estimated to be approximately 190m.



**Table 2: MO17DD002 Summary of Mineralisation.**

From(m)	To(m)	Mineralisation	Comments
0	65.5	nil	Schist Host-rock
65.5	268.3	202.8m @ 1.57% Li <sub>2</sub> O & 1078ppm Sn	<b>The entire Roche Dure Pegmatite</b>
65.5m	68m	2.5m @ 0.02% Li <sub>2</sub> O & 7342ppm Sn	Wall-zone of the pegmatite
68m	73.85m	5.85m @ 0.07% Li <sub>2</sub> O & 2838ppm Sn	Greisen zone
73.85m	268.3m	194.45m @ 1.63% Li <sub>2</sub> O & 957ppm Sn	<b>Main body of the pegmatite</b>
268.3	288	nil	Schist Host-rock
288	300.7	12.70m @ 1.29% Li <sub>2</sub> O & 917ppm Sn	Footwall pegmatite beneath the Roche Dure Pegmatite

# Belgian Government Beneficiation Test Work

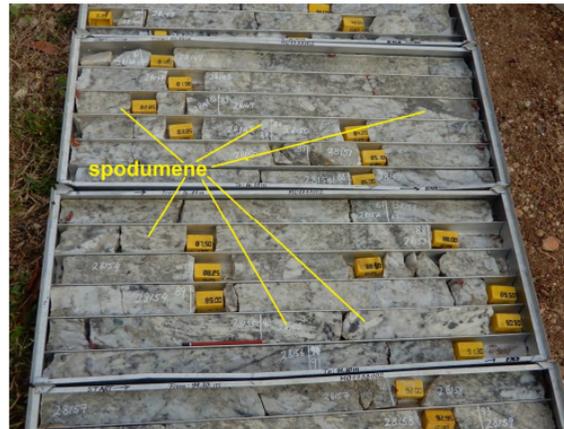
## Historical Findings

Beneficiation test work carried out by Belgium government (1956, 1976 and 1981) demonstrated that a 6.82% lithium concentrate was produced using combination of heavy media separation, tables and spirals.

- Table opposite shows the variance using different grind sizes.
- Promising results for basic heavy liquid testing, further grind size optimisation is required and a flotation stage will add further improvement.
- Work to date has confirmed that the six large pegmatites all contain spodumene, with spodumene mineralisation constituting up to 30% of the rock volume.
- AVZ planning to commence preliminary metallurgical test-work in H2 2017.

## Core sample from current drilling shown:

- Sample shows high spodumene content;
- Drilling core very homogenous across width.
- Drilling matching historical drilling data.
- Cut drill-core of the interval from about 81m (top of image) to about 93m (bottom of image) of drill-hole MO17DD002.



	Fraction granulo-densimétrique	P %	Teneur Li <sub>2</sub> O %	Répartition Li <sub>2</sub> O %	Teneur SnO <sub>2</sub>	Répartition SnO <sub>2</sub> %
D broyé à 10 mm	+0,06-10mm/d<2,95	86,53	1,05	56,1	332 ppm	24,9
	+0,06-10mm/2,95<d<3,31	11,14	6,14	42,4	509 ppm	5,0
	+0,06-10mm/d>3,31	0,33			23,9 %	68,7
	- 0,06 mm	2,00	1,09	1,5	826 ppm	1,4
	T.V. reconstitué	100,0	1,61**	100,0	1151 ppm	100,0
D broyé à 4 mm	+0,08-4mm/d<2,95	79,35	0,59	29,5	207 ppm	11,2
	+0,08-4mm/2,95<d<3,31	17,51	6,24	68,6	453 ppm	5,5
	+0,08-4mm/d>3,31	0,34			34,5 %	80,0
	- 0,08 mm	2,80	1,07	1,9	1778 ppm	3,3
	T.V. reconstitué	100,0	1,79**	100,0	1467 ppm	100,0

\*\* teneur reconstituée par calcul, sans tenir compte de la tranche densimétrique d > 3,31 où Li<sub>2</sub>O est supposée nulle.

Tableau n°27

Bilan global de l'analyse granulo-densimétrique de l'échantillon D broyé à 10 mm et à 4 mm

	Fraction granulo-densimétrique	P %	Teneur Li <sub>2</sub> O %	Répartition Li <sub>2</sub> O %	Teneur SnO <sub>2</sub>	Répartition SnO <sub>2</sub> %
D broyé à 10 mm	+0,06-10mm/d<2,95	80,78	0,79	34,2	38 ppm	6,4
	+0,06-10mm/2,95<d<3,31	17,84	6,79	65,0	193 ppm	7,1
	+0,06-10mm/d>3,31	0,11			36,8 %	84,3
	- 0,06 mm	1,27	1,11	0,8	826 ppm	2,2
	T.V. reconstitué	100,0	1,67**	100,0	480 ppm	100,0
D broyé à 4 mm	+0,08-4mm/d<2,95	75,23	0,36	14,8	37 ppm	3,2
	+0,08-4mm/2,95<d<3,31	22,52	6,62	83,9	408 ppm	10,4
	+0,08-4mm/d>3,31	0,13			57,6 %	84,9
	- 0,08 mm	2,12	1,15	1,3	635 ppm	1,5
	T.V. reconstitué	100,0	1,83**	100,0	882 ppm	100,0

\*\* teneur reconstituée par calcul, sans tenir compte de la tranche densimétrique d > 3,31 où Li<sub>2</sub>O est supposée nulle.

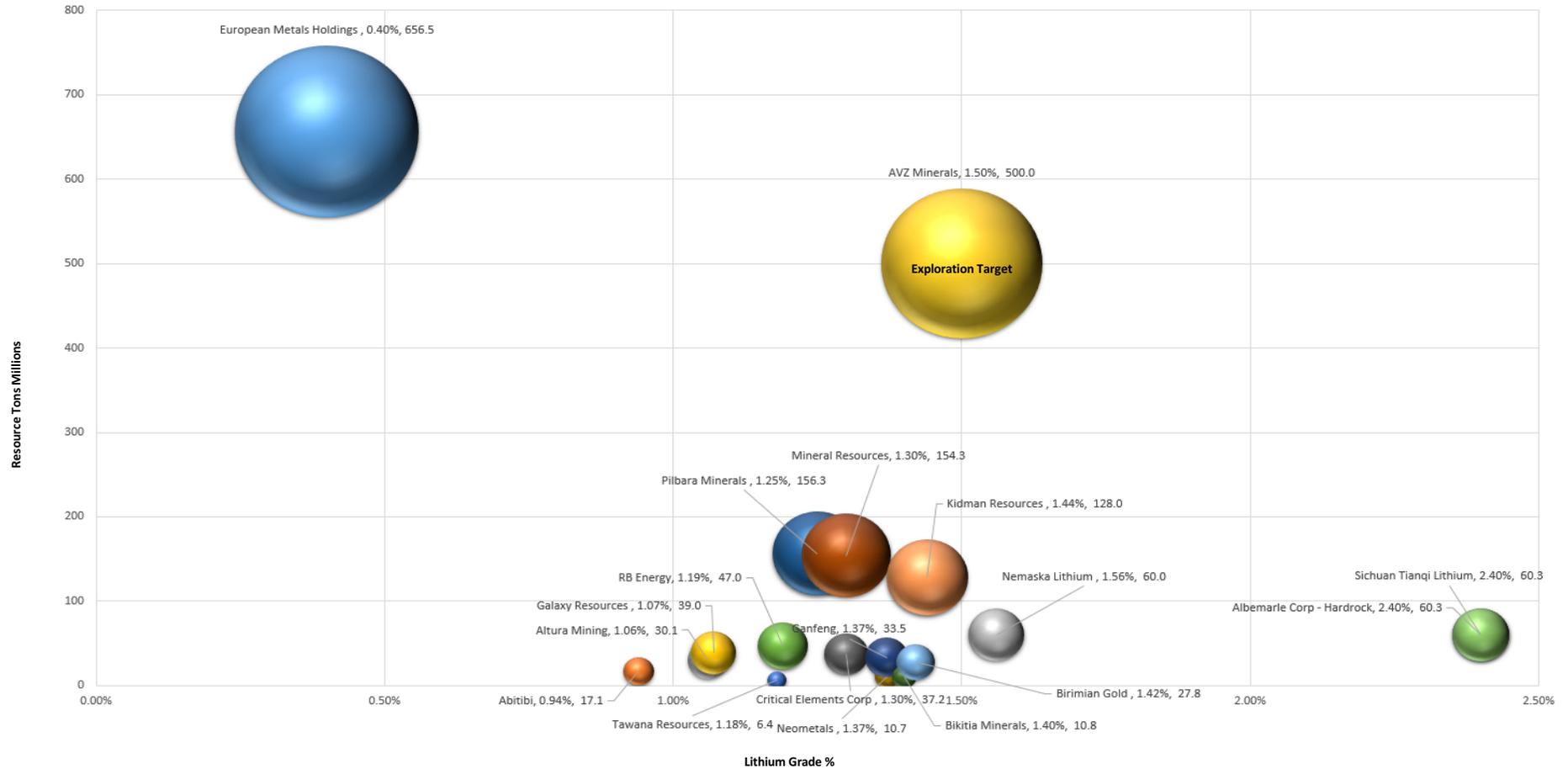
Tableau n°28

Bilan global de l'analyse granulo-densimétrique de l'échantillon E broyé à 10 mm et à 4 mm

# Target Pathway to Development

	Completed	Complete By	Start By
Evaluate country risk and market opportunities			
Design and implement initial funding strategy			
Search for commercially exploitable resources			
Exploration right application / approval			
Commencement of metallurgical test-work		Q3, 2017	
Commencement of extensive drill program		Q3, 2017	
Competent Persons Report - Initial Resources		Q4, 2017 Q1, 2018	
Pre-feasibility study (PFS)			Q3, 2018
Preparation of Mining permit and licence application			Q4, 2018
Project financing			Q4, 2018
Construction of infrastructure and plant			Q3, 2019
Plant commissioning			2019/2020
Commercial operations begin			2019/2020

# Peer Comparison



- Source: Airguide / Industry Reports / Company Presentations



**August 2017**

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