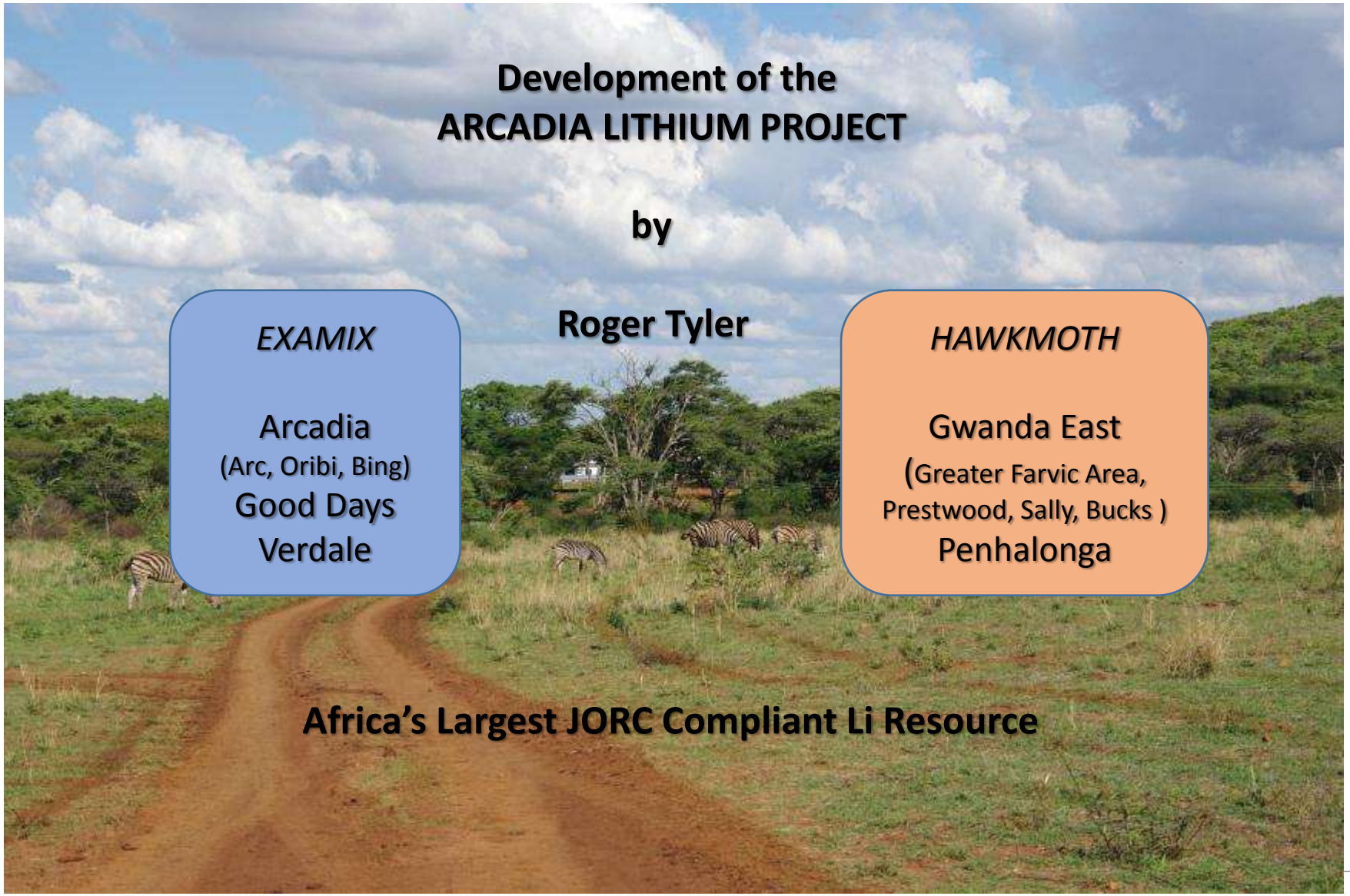
Prospect Resources Limited



Development of the ARCADIA LITHIUM PROJECT

by

Roger Tyler

EXAMIX

Arcadia
(Arc, Oribi, Bing)
Good Days
Verdale

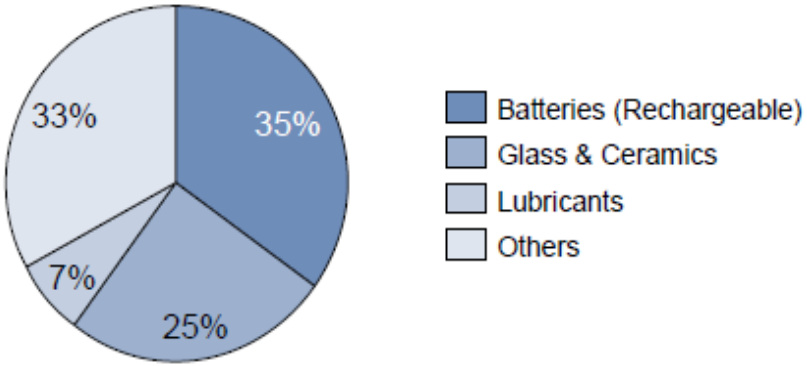
HAWKMOTH

Gwanda East
(Greater Farvic Area, Prestwood, Sally, Bucks)
Penhalonga

Africa's Largest JORC Compliant Li Resource

Batteries account for highest share of Li demand

Share of total Li consumption, 2015 (%)



- Battery usage has been the dominant growth driver for Li over last few years
- Glass demand driven by new products like Gorilla Glass (Lithiated glass for high-end smartphones etc.) with superior properties
- Demand for Li in ceramics and lubricants in tandem with GDP growth

Li Characteristics

Light

Very good conductivity

Most electro-negative metal

High energy density

High mechanical strength

High thermal shock resistance

Adjusts serotonin levels

Introduction: There are 3 major Lithium products together accounting for 65% of total market share (by volume)

Lithium products	Usage areas		Market share[1]	Prices[2]
1 Battery Grade Lithium Carbonate	▪ Li-ion **cathode materials** used in rechargeable batteries ▪ Li-ion **electrolyte solutions** used in rechargeable batteries ▪ Primary battery **cathodes** used in non-rechargeable batteries	 *Lithium cathode*	30%	U$ 6,000-7,000/t
2 Battery Grade Lithium Hydroxide	▪ Li-ion **cathode materials** used in rechargeable batteries ▪ Primary battery **electrolytes** used in non-rechargeable batteries	 *Electrolytes*	20%	U$ 8,000-12,000/t
3 Technical Grade Lithium Carbonate	▪ Glass-ceramics ▪ Ceramic / enamel frits & glazes ▪ Casting powders ▪ Glass ▪ Aluminum smelting	 *Tech grade LC powder used in glass & ceramics etc.*	15%	U$ 5,000-6,000/t

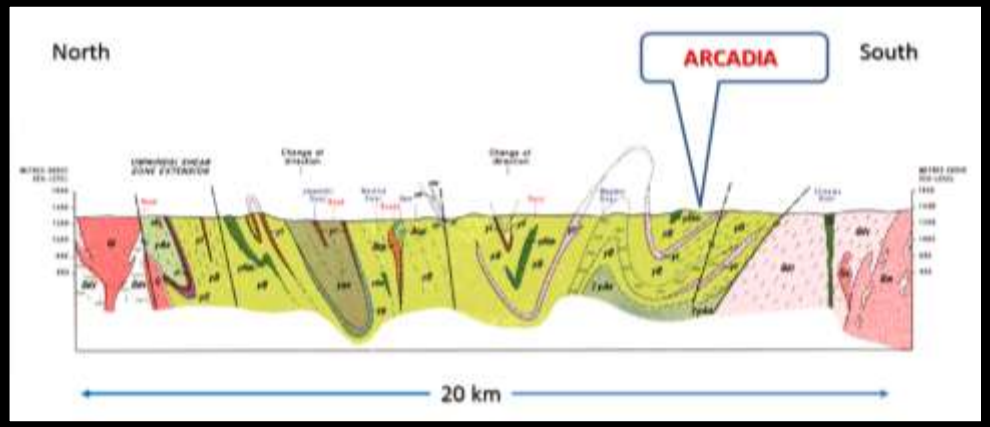
All other Li products[3] have a market share well below 10%

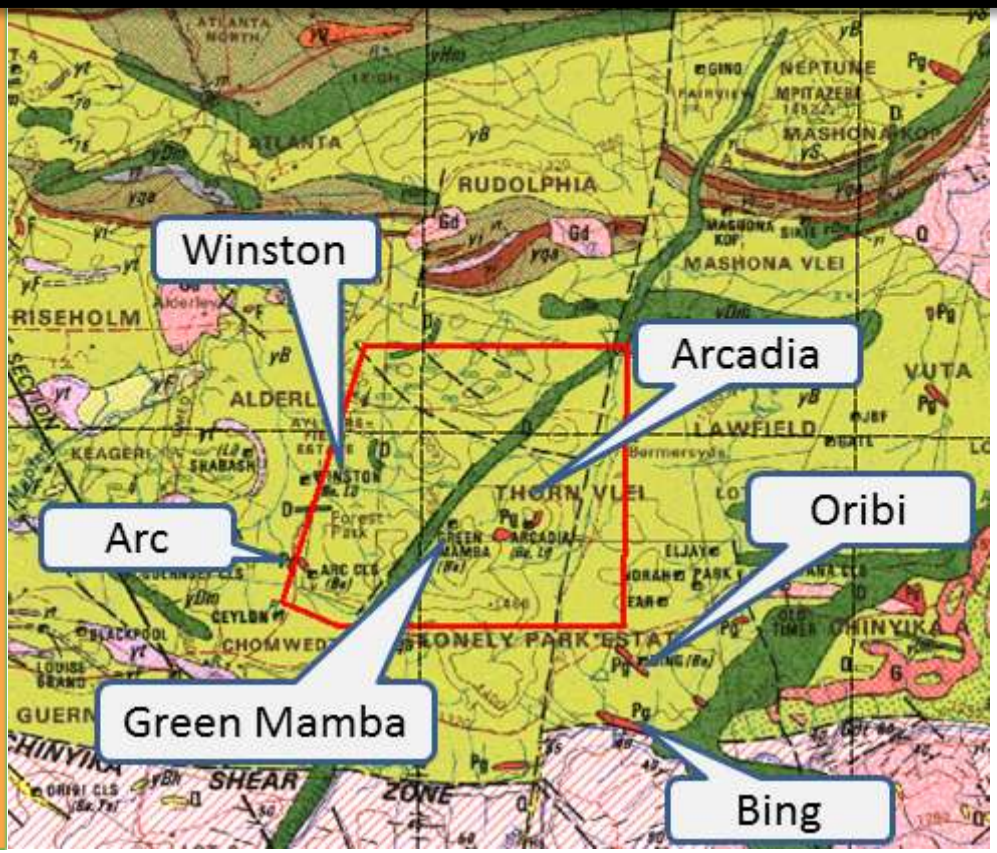
1. Estimated market share by volume for 2015; 2. Estimated price level for April 2016; 3. The balance 35% share is accounted by Lithium bromide, Organolithium, Lithium chloride etc.
Source: Roskill, Company websites, Bryanston research

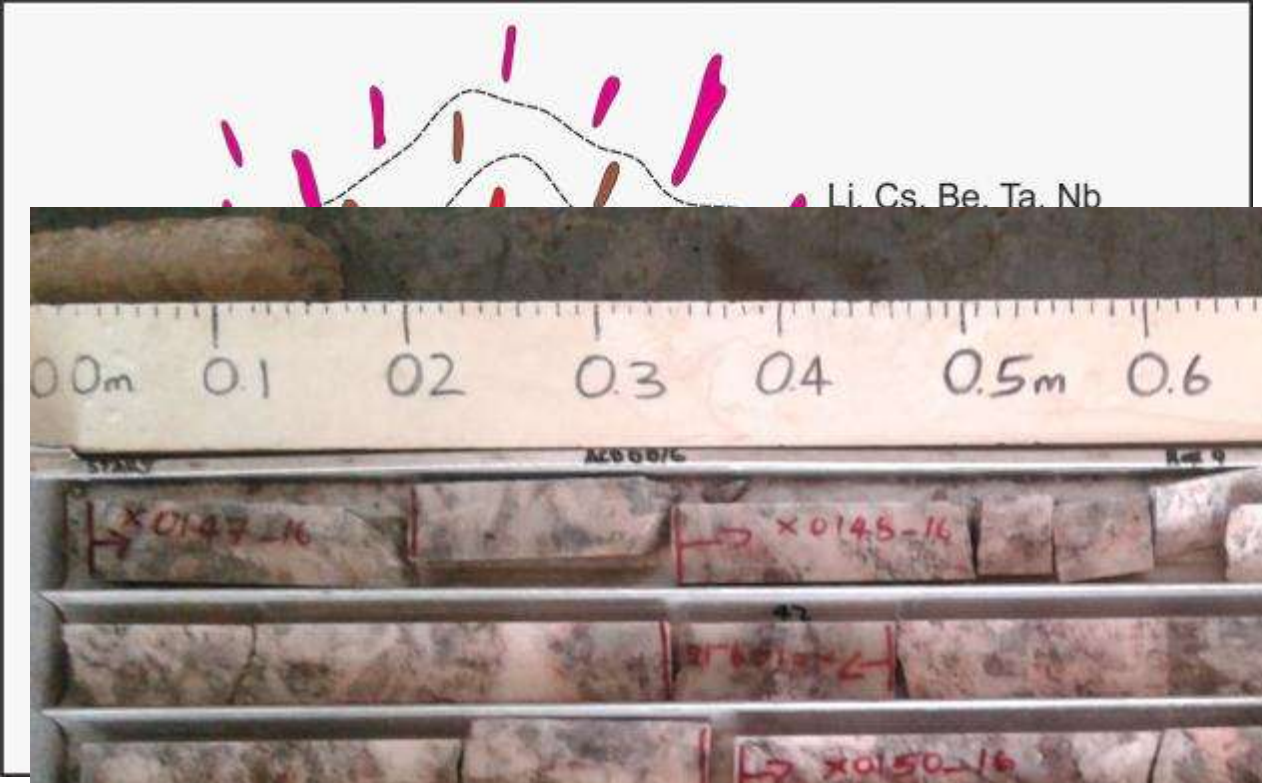
Copyright: Bryanston

Geological Setting

- **Located some 35kms ENE of Harare, within HGB.**
- **Historic mining district; most easterly of three well known Pegmatite camps.**
- **Old beryl & lithium mine.**
- **One of three main spodumene occurrences recorded in Zim.**
- **14 stacked horizontal pegmatites.**
- **LCT group.**
- **Little surface expression.**






Li, Cs, Be, Ta, Nb

0.0m
0.1
0.2
0.3
0.4
0.5m
0.6
0.7
0.8
0.9
1.0
X0147-16
X0148-16
X0150-16
X0153-16
X0154-16
X0155-16

Prospec

Major Lithium Minerals

Petalite - **Lithium Aluminium Phyllosilicate LiAlS4$_2$O$_{10}$**

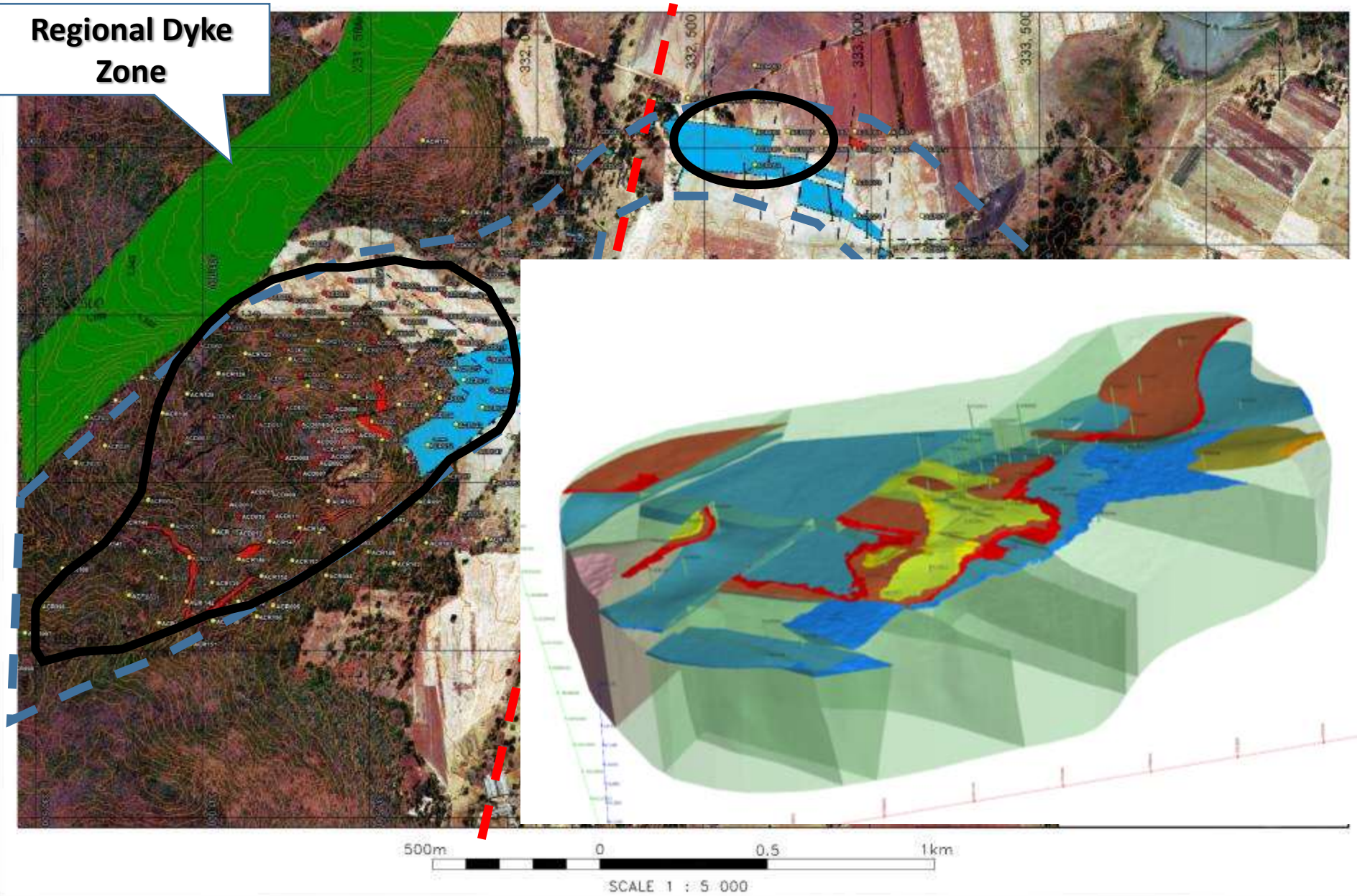
(Contains around 4.8% Li$_2$O)

Spodumene -

Lepidolite – **Lithium Mica KLi2Al(AlSi)$_3$O10(F,OH)$_2$,**

(Contains around 7% Li2O

ARCADIA PEGMATITE SUBCROP

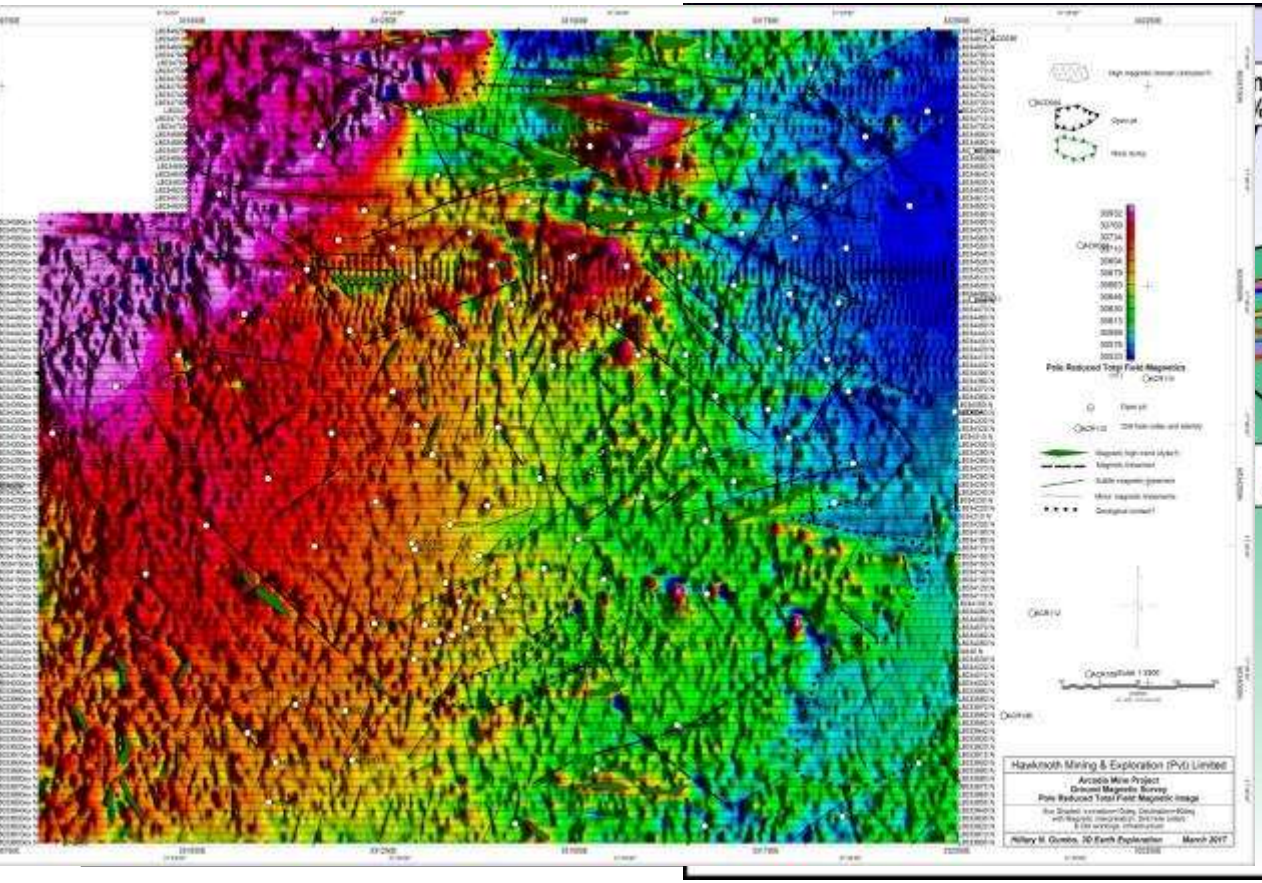


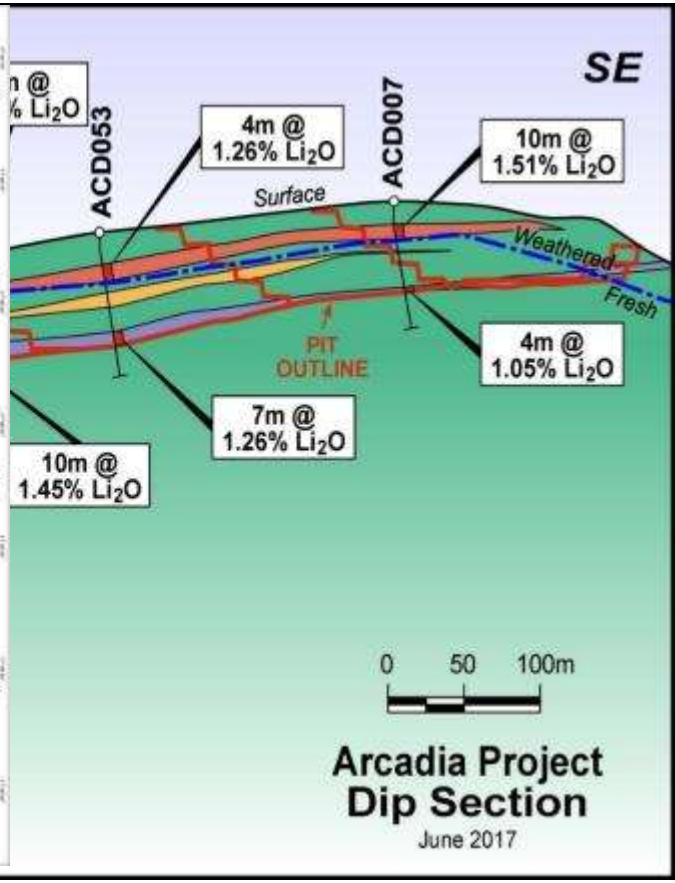
Arcadia Lithium - Exploration Overview

90 DD holes ; 10,000m **188 RC holes ; 15,000m**

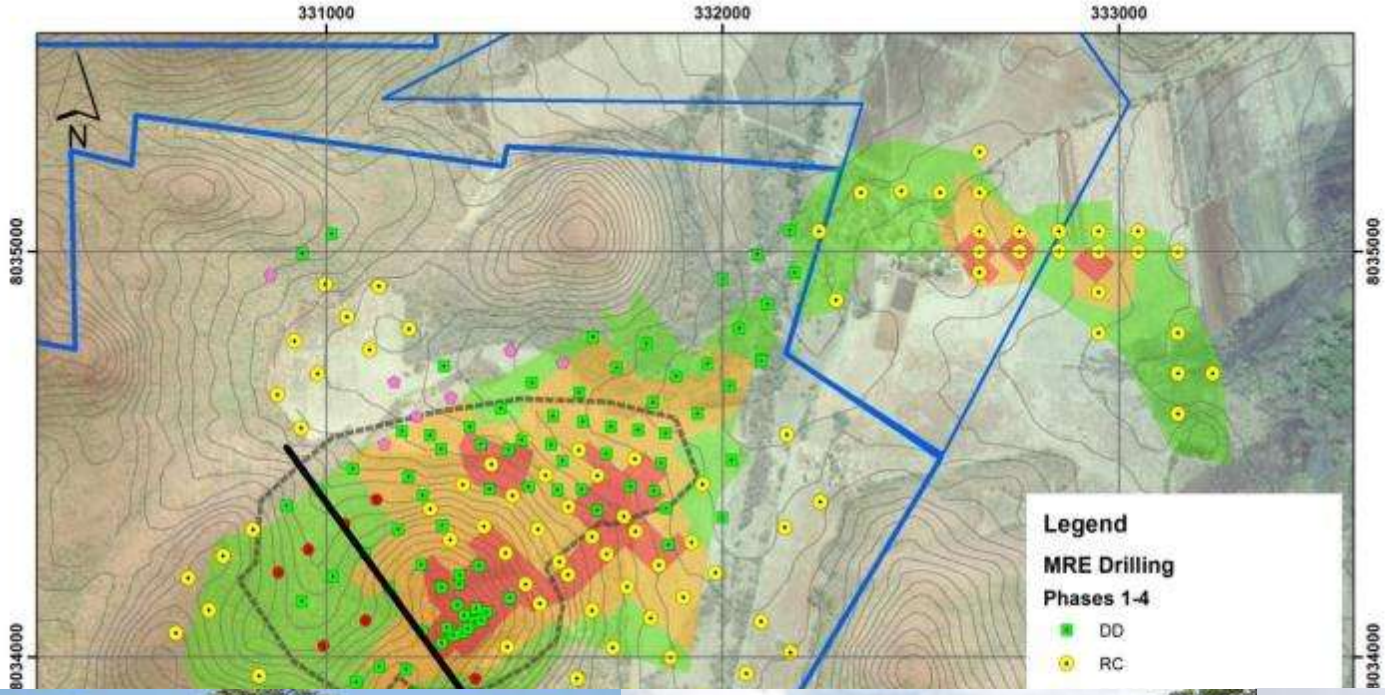
>5,000 Assays & 3,200 XRDs

9,000 Soil samples **Ground Mag Survey**





Arcadia Lithium - Drilling Completed



278 holes drilled totalling >25 000 m completed to date

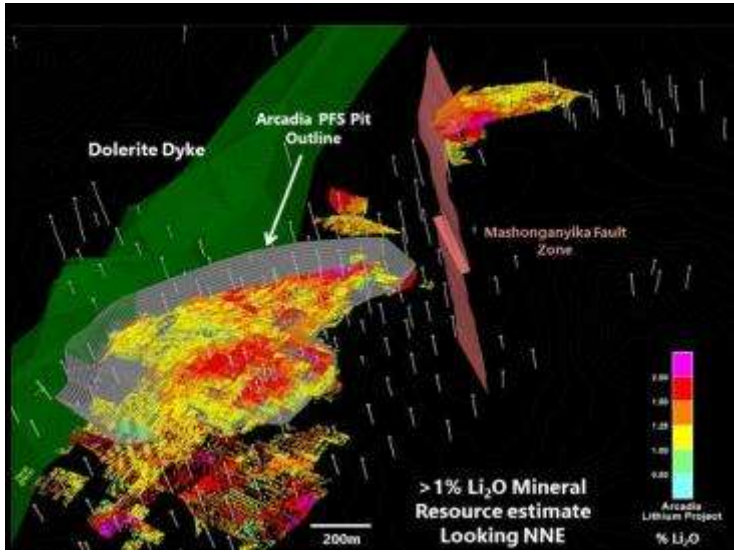
Ground magnetics to aid structural interpretation.

Regional geochemical

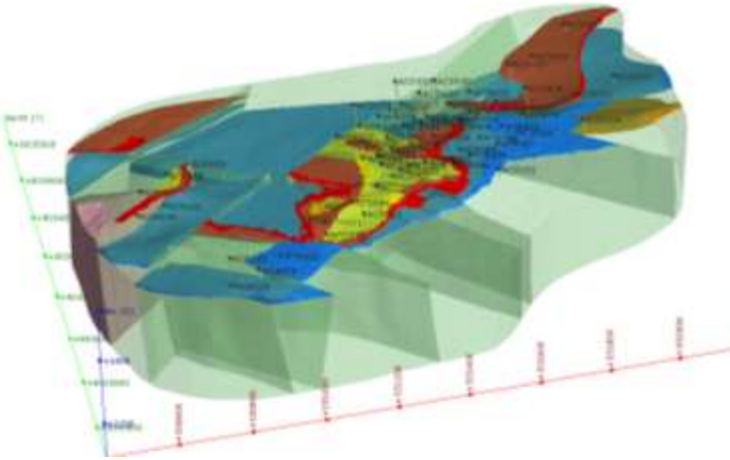
Arcadia Mineral Resources & Reserve Estimates

Arcadia Lithium Deposit Ore Reserve Estimate (>1% Li_2O)*

Category	Tonnes (Mt)	Li_2O (%)	Ta_2O_5 (ppm)	Li_2O (t)	Ta_2O_5 Mlbs	Fe_2O_3 (%)
Proven	0	0	0	0	0	0
Probable	**15.8**	**1.34**	**125**	**212,000**	**4.3**	**1.02**
TOTAL	**15.8**	**1.34**	**125**	**212,000**	**4.3**	**1.02**



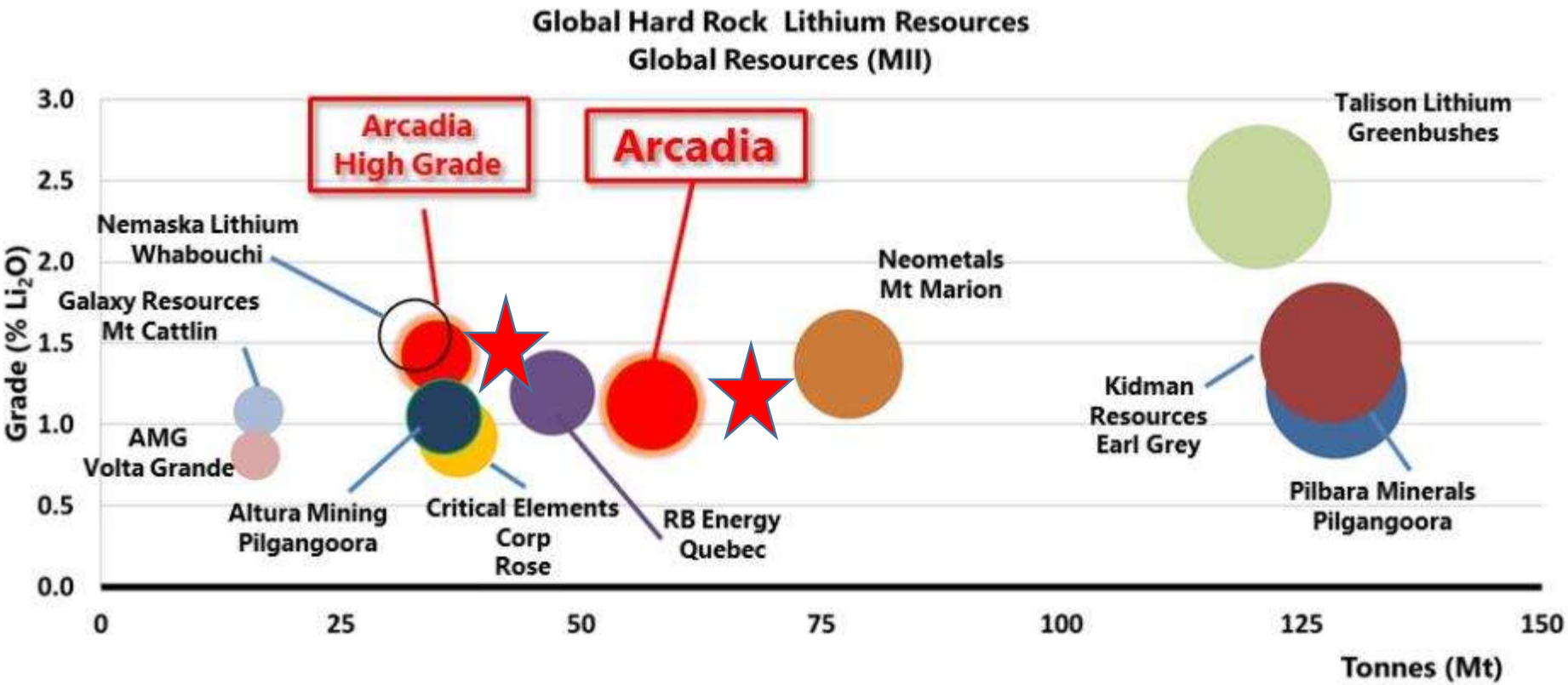
High Grade Zone - 1% Li_2O Cut-off					
Category	**Tonnes**	**Li_2O %**	**Ta_2O_5 ppm**	**Li_2O Tonnes**	**Ta_2O_5 lbs**
Measured	10,200,000	1.45%	132	148,100	3,000,000
Indicated	27,200,000	1.39%	119	378,400	7,100,000
Inferred	5,800,000	1.45%	97	84,000	1,200,000
GRAND TOTAL	**43,200,000**	**1.41%**	**119**	**610,500**	**11,300,000**



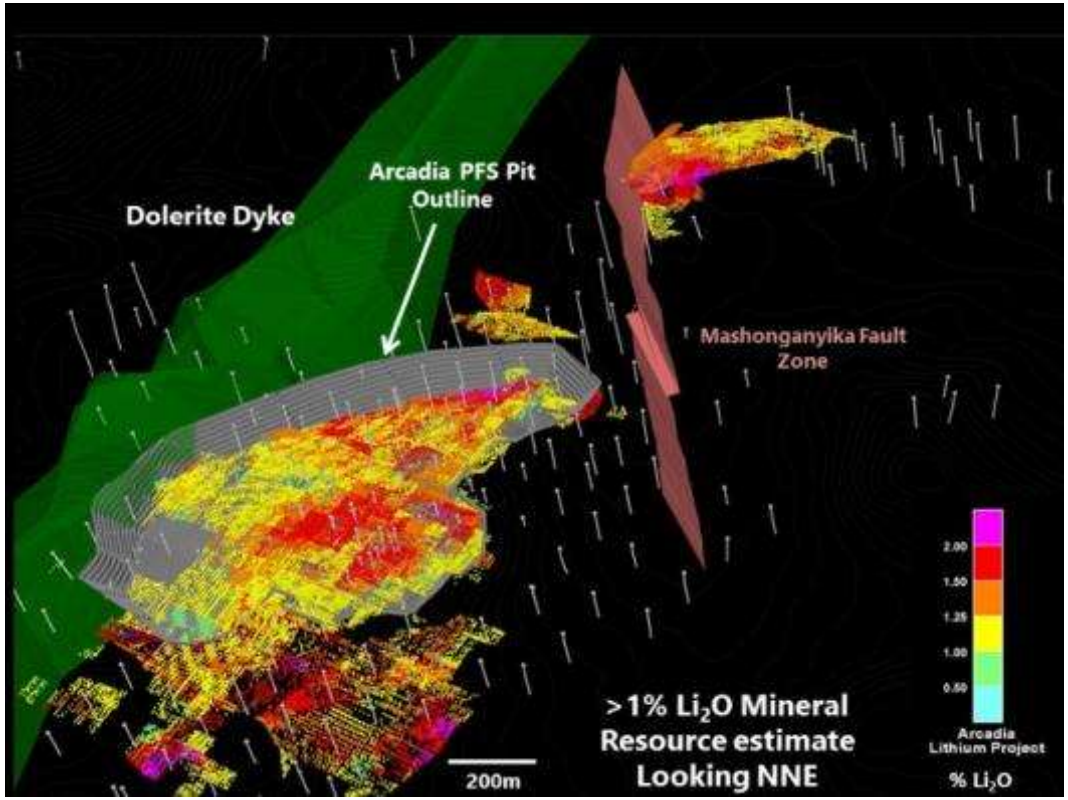
Global Resource - 0.2% Li_2O Cut-off					
Category	**Tonnes**	**Li_2O %**	**Ta_2O_5 ppm**	**Li_2O Tonnes**	**Ta_2O_5 lbs**
Measured	15,900,000	1.17%	121	184,900	4,200,000
Indicated	45,400,000	1.10%	121	501,500	12,100,000
Inferred	11,400,000	1.06%	111	121,400	2,800,000
GRAND TOTAL	**72,700,000**	**1.11%**	**119**	**807,800**	**19,100,000**

Estimations done by Digital Mining Services

Lithium Peer Comparison

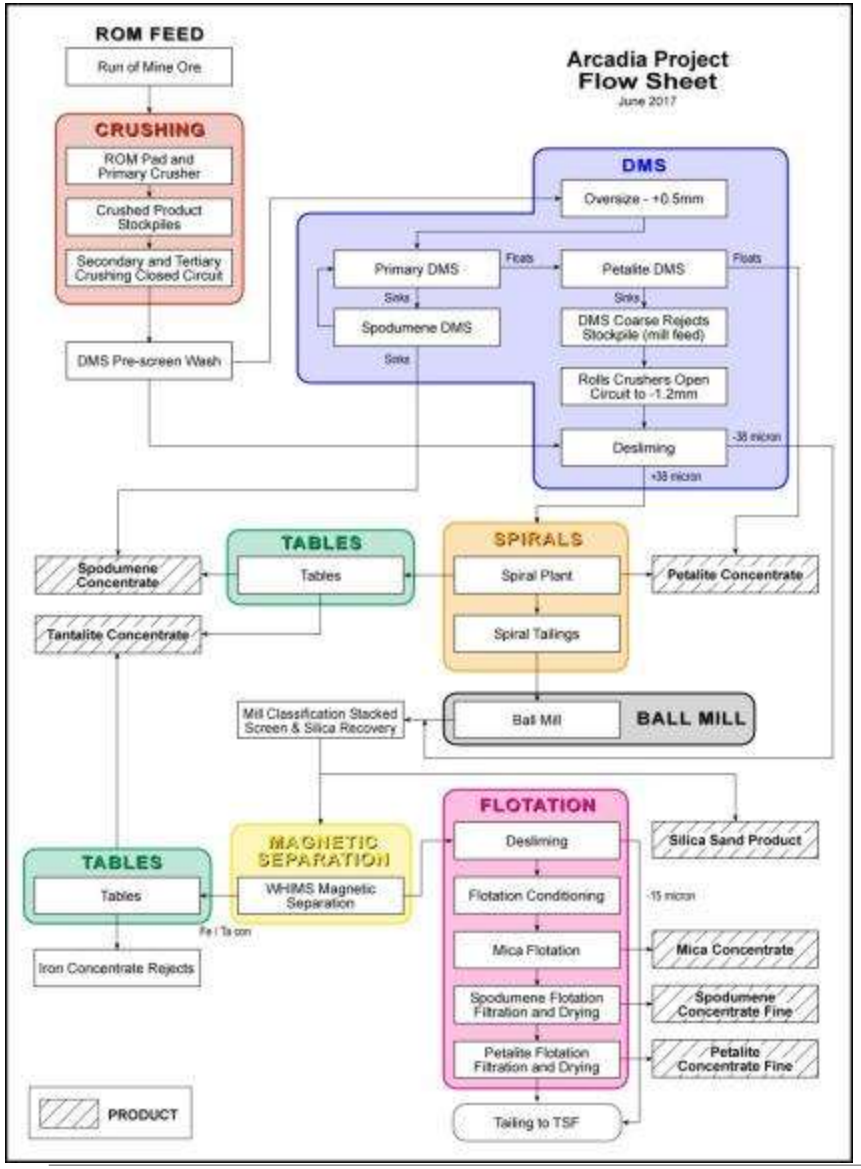


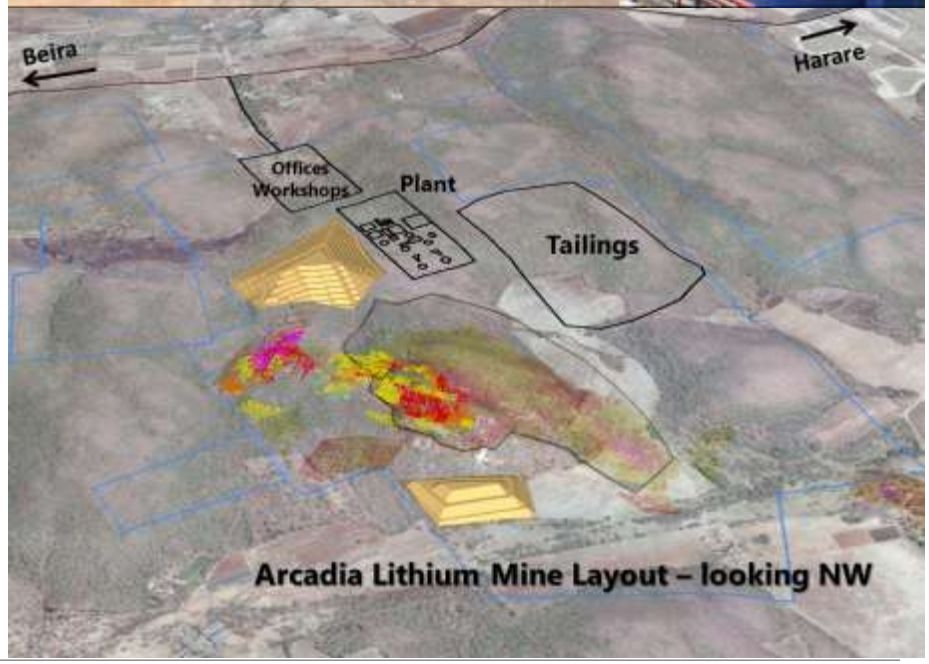
Arcadia PFS Highlights



- **Maiden Ore Reserve of >22Mt @ 1.42% Li_2O & 125ppm Ta_2O_5**
- **Life of Mine of > 20 years with a strip ratio of < 3.1**
- **NPV10 of USD 139 Million, IRR of 39% and payback of 2 years**
- **LOM Revenue ~ USD 2 Billion**
- **Cash Operating Cost of USD 280 /t concentrate.**
- **Spodumene $540t Petalite $400/t**
- **Low CAPEX/start up of USD 52.5 Million**

Arcadia Lithium Project – Processing & Logistics





Arcadia Lithium Project Timeline

Arcadia Achievements From June 2016

Five Phases of Drilling Done
10,000m DD
15,0000m RC

Arcadia PFS Completed

Trial Mining Initiated

Lithium Chemical Plant PFS underway

(ASX Code: PSC)

costs.

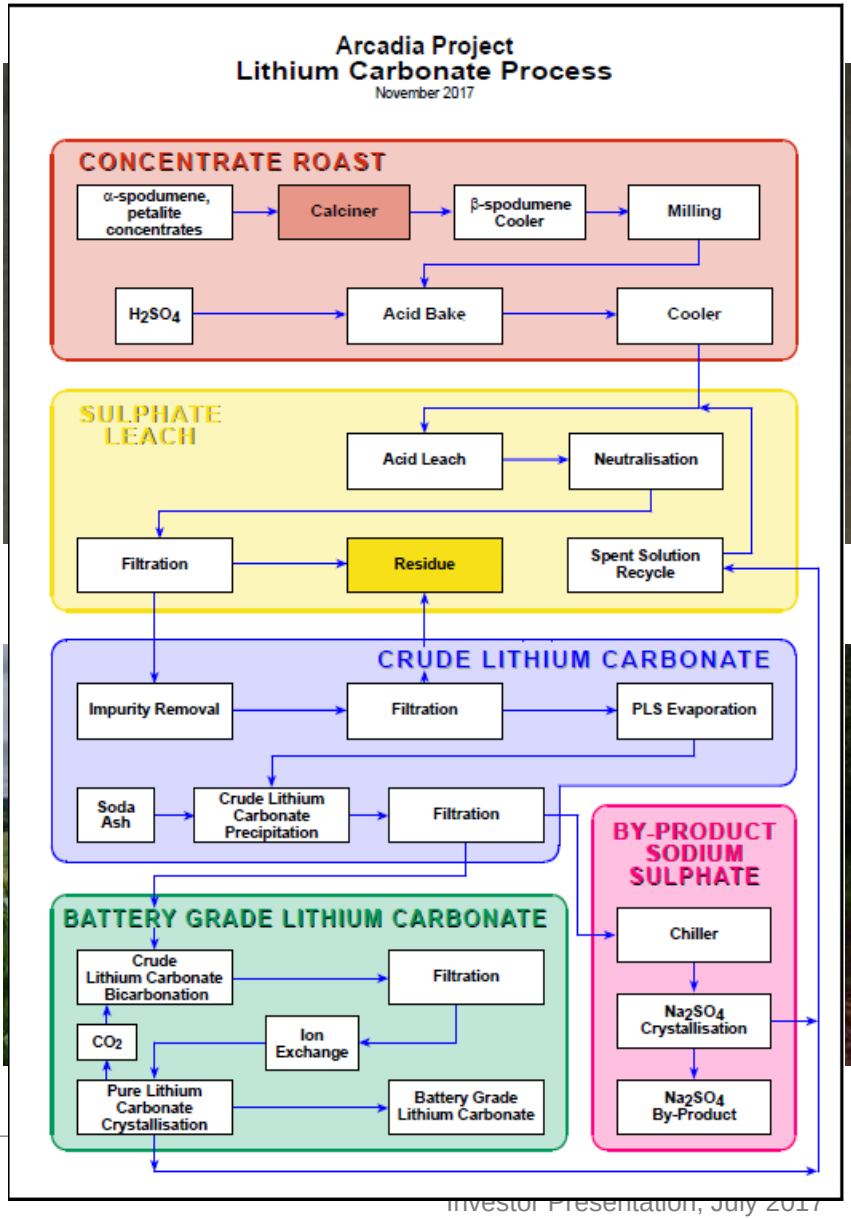
Arcadia Lithium Project

resource in Africa.

- Arcadia set to annually produce:
  - >75,000t spodumene concentrate (6% Li_2O)
  - >155,000t petalite concentrate (4.1% Li_2O)
  - 90,000 lb contained tantalite in concentrate (>25% Ta_2O_5)

In Progress

- FS underway to develop a lithium chemical plant at Arcadia.
- Make only lithium chemical plant outside Australasia.
- Identify strike extensions of known ore body and parallels.



Questions