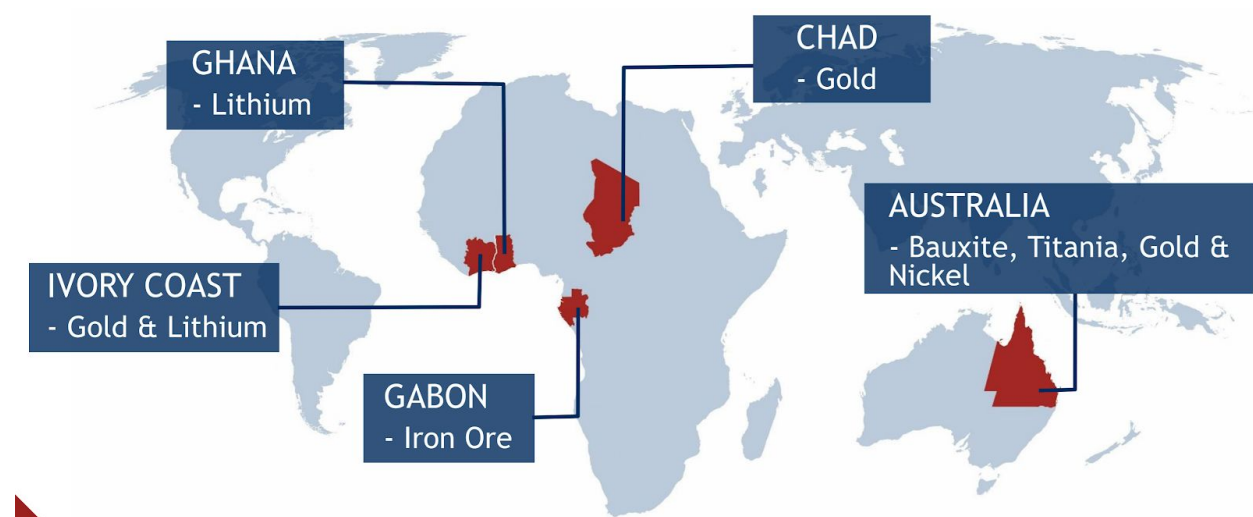


IronRidge Resources:

White Gold in frontier country



Authors & contributors:

James Moore

Mining Analyst: MSci (Geology), MSc (Mining Engineering)

Dan Bloor

Exploration Geologist: MSci (Geology), MSc (Structural Geology)

Will Coverdale

Mining Analyst: MEng (Mining), MBA

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IronRidge Resources (AIM:IRR) have accumulated an exciting and diverse portfolio of mineral assets by successfully leveraging off the back of assets in low sovereign risk jurisdictions, and now look to reap the rewards of a white gold rush on the frontiers of West Africa.

In this research note, The CloudMiner (TCM) will be covering IronRidge Resources (IRR.AIM) @aim_irr. To date; IronRidge have made three (3) discoveries in three (3) jurisdictions within three (3) years, with six (6) further province scale projects under development.

IronRidge's portfolio in Cote d'Ivoire comprises of a 359km² land package believed to be contiguous with major gold producing structural trends.

The project in Chad has uncovered a substantial gold bearing province with a surface footprint rivalling some of today's largest operating gold mines.

Additionally, in Côte d'Ivoire IronRidge possess a solid pipeline of future discoveries, possessing an extensive, highly prospective and strategically clustered gold (~3,187km²) and lithium (~1,172km²) portfolio along major gold producing structural trends.

However, it is IronRidge's Ghanaian Cape Coast Lithium project that is the focus of this brief research note. The Cape Coast Lithium project is shaping up nicely with the benefit of being able to leverage off historical exploration data, it is possible to deliver a maiden resource (JORC 2012) within a short timeframe.

Locale	Commodity	Stage
Chad	Gold	Exploration
Côte d'Ivoire	Gold / Lithium	Exploration
Ghana	Lithium	Exploration
Australia	Bauxite and Gold	Resource
Gabon	Iron Ore	Exploration

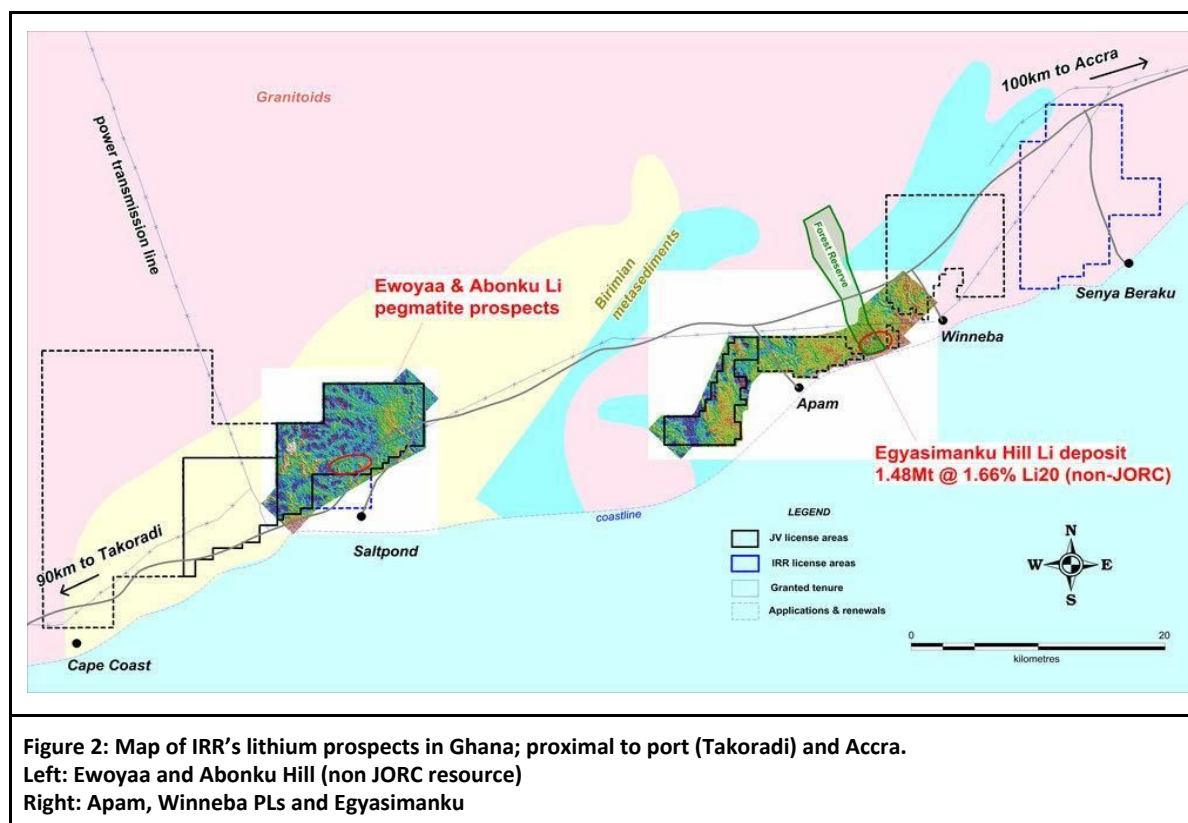
Table 1: summary of IRR's prospect areas by jurisdiction and commodity

The AIM listed company's diverse portfolio encompasses lithium, gold, alumina, nickel and iron ore across five jurisdictions. With a current share price of 23.5p (52-week high/low of 35.73p / 20.30p) at the time of writing, the miner's market cap stands at 66.26 million GBP.

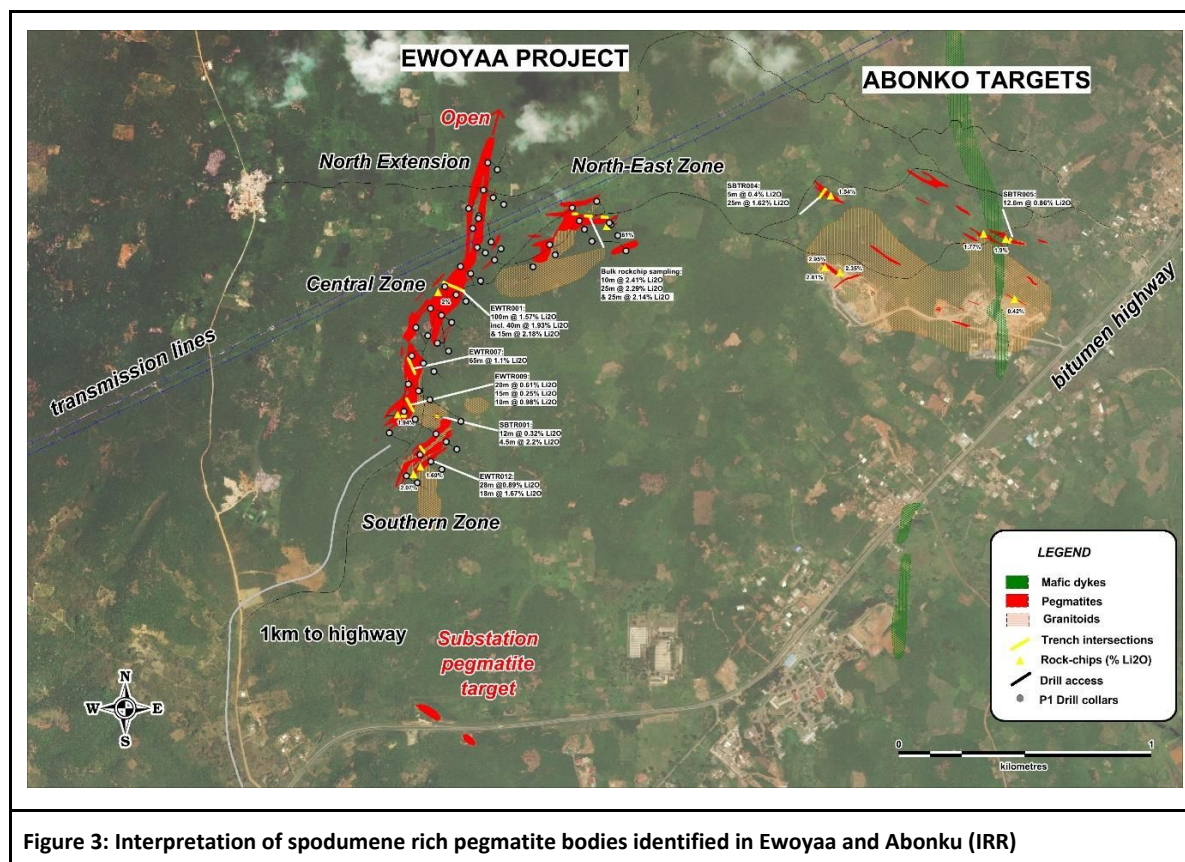
The experienced management team has seemingly not only weathered the down-turn but has successfully acquired a diversified prospect portfolio in the process, which belies the miner's junior status and namesake commodity.

Ghana (Lithium)

IronRidge have been proactive in securing mineral licenses targeting what the company calls 'frontier' assets in Africa. Currently, the focus has been on their lithium assets in West Africa, part of which includes 684km² of land packages in Ghana.



Pegmatite vein swarms striking over a combined 20 km have thus far been identified, with 8 principle pegmatite bodies reported historically to be 100 – 170m in length and containing between 0.5 → 2.2% Li_2O . IRR also report historical Be, Ta-Nb, Sn, Cs and Au potential. Prior exploration at Abonku has returned results including **25m @ 1.62% Li_2O** of trenching, and up to **2.95% Li_2O** in rock chip sampling. At Apam West, LIBS (hand held lithium analyser) continues to define a soil anomaly of 1.8km strike coinciding with airborne geophysics and mapped pegmatites.



We note the close proximity of the PL areas to paved highways (1km), electrification, deep water port (100km) facilities as well as Ghana's capital, Accra (less than 100km). This is a major differentiator to their West African competition for example in neighbouring Mali at Birimian's Goulamina resource, which expects to truck 362,000 tpa of lithium concentrate over 1,000 km to port. Further, Ghana is proving itself to be a mining friendly jurisdiction.

Côte d'Ivoire (Lithium)

In the Côte d'Ivoire, 400km² of tenements have been secured under license granted through JV, with a further 938km² under application under a wholly owned local entity. Adzope is another lithium prospect on the books, with identified pegmatites reported between 15-20m in thickness, which while smaller than at Ewoyaa still reportedly strike on the scale of 100s of metres. Tenements exhibit historical artisanal workings. As expected, mineralisation is analogous to the highly fractionated granitic source rocks and associated subvertical Li pegmatites which occur within IRR's Ghanaian prospects, and notably also host Birimian's newly minted **31 Mt, 1.56% Li₂O** Goulamina reserve (BGS:ASX 0.25, mcap 53.72m AUD).

Chad (Gold)

During a recent 9,360 metre trenching programme, the miner has recently revealed six "high-grade, coherent gold targets" at its Dorothe prospect in Chad. These included assays of **84m @ 1.66g/t, 32m at 2.02g/t, 24m @ 2.53g/t, 12m at 2.32g/t and 4 metres at 18.77 g/t**. This is yet more encouragement that the prospect is progressing well. In what is traditionally oil country, Chad is one of the more underexplored regions in Africa giving IRR a distinct first mover advantage.

Australia (Bauxite) and Gabon (Iron Ore)

Given the current price environment, development of IronRidge's Bauxite and Iron ore assets (in Australia and Gabon respectively) are on care and maintenance. IRR's Belinga Sud deposit in Gabon is strategically located near port, has confirmed DSO high grade material and is adjacent to a significant non-JORC resource currently being upgraded to JORC compliance by the Gabonese government.

Will West African Lithium be a company maker for IronRidge?

IronRidge are an African focussed, diversified minerals exploration company aiming to create shareholder value through the discovery, development and monetisation of mineral projects. Their strategy has been to leverage their African operational, exploration and studies expertise in geological and/or jurisdictional frontier provinces in targeting large-scale contiguous tenure positions.

Thus, having diversified off the back of their large packages of iron ore and bauxite, IronRidge is now looking to their lithium and gold prospects for future upside. Hopes of delineating a company making lithium resource in West Africa are high. The first step to achieving this will be an effort to release a maiden JORC resource for Ewoyaa.

Without a JORC resource on the table, however, it is hard to put this potential into perspective. Until then, we sought to determine a likely positioning vs. their peers by contextualising IronRidge's recent releases of drilling results. Results are compared with African peers in an attempt to achieve some level of cost base parity. Finally, we compare resource tonnage and grade with global hard rock lithium peers.

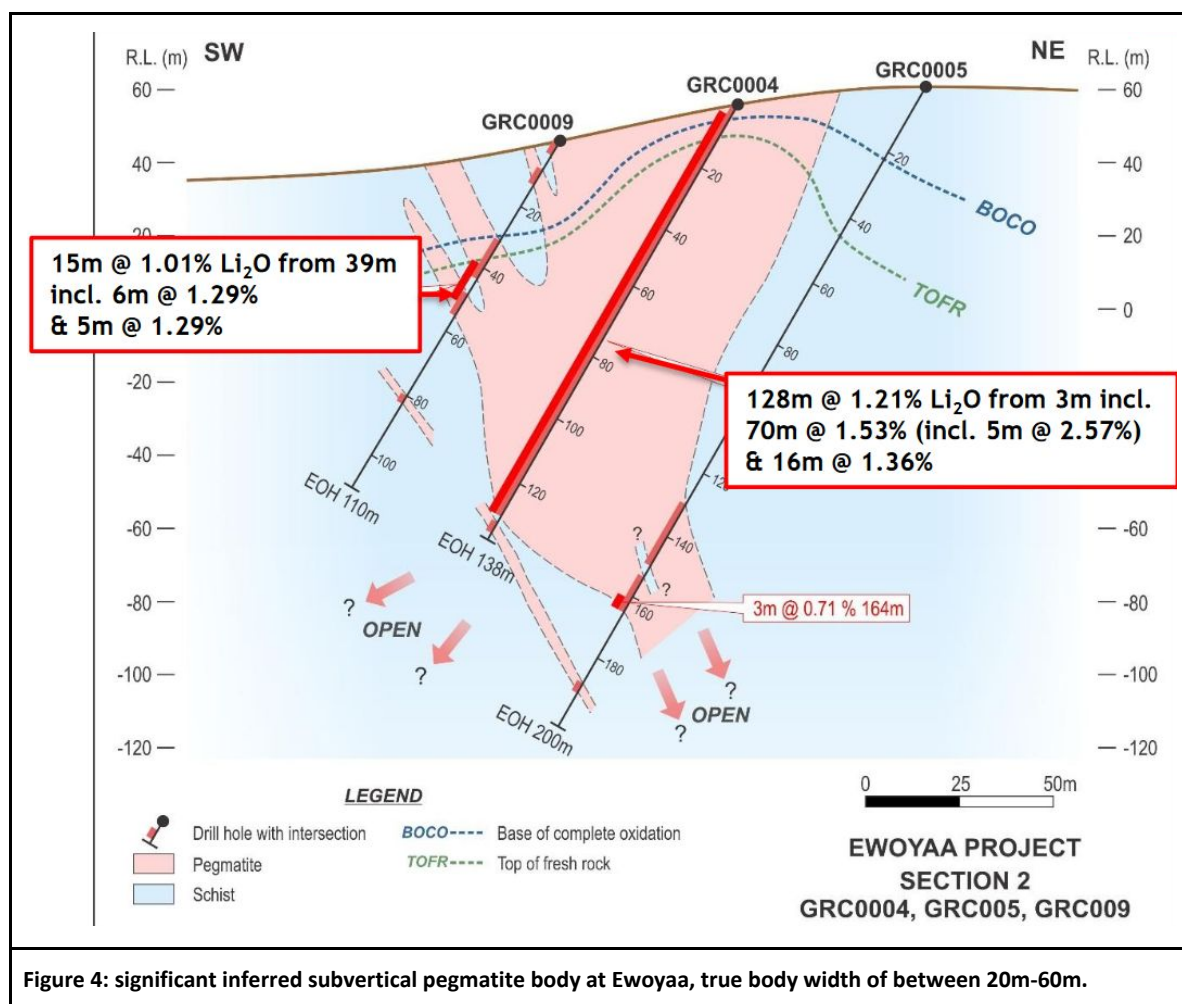
Drilling Results

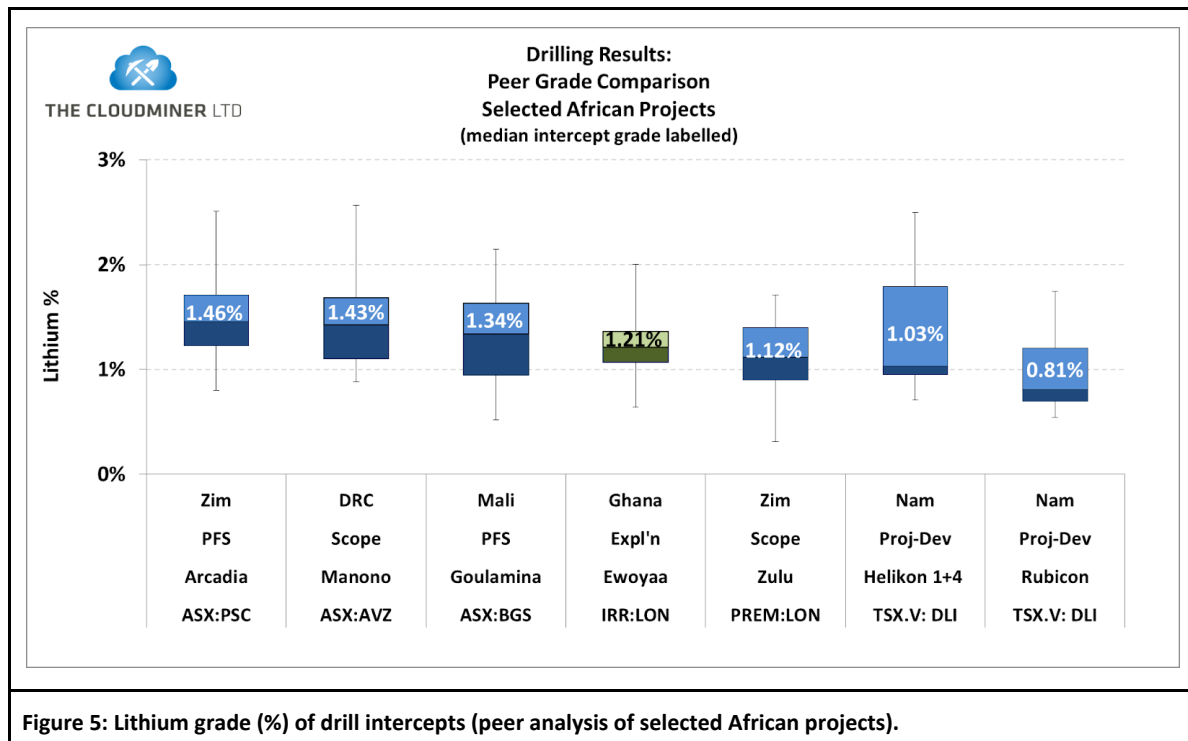
The geological model under validation at Ewoyaa is being advanced via drilling which commenced in April of this year. So far, results are encouraging both in the length and encountered grade of intercepted mineralisation as well as proximity to surface.

Recent highlights include an intercept of **72m @ 1.27% Li₂O from 24m for GRC0048**, itself including an intercept of **56m at 1.5% Li₂O**. Assays from **GRC0049** act as further confirmation of the presence and continuity at depth of moderately thick, lithium bearing subvertical pegmatitic mineralisation with an intercept of **67m at 1.21% Li₂O from 70m**. Other notable intercepts include **36m, 20m, and 16m** ranging between **1.0 and 1.5% Li₂O**. Two further intercepts of **26m** and **18m** were found at **0.64% and 0.79% Li₂O**, respectively.

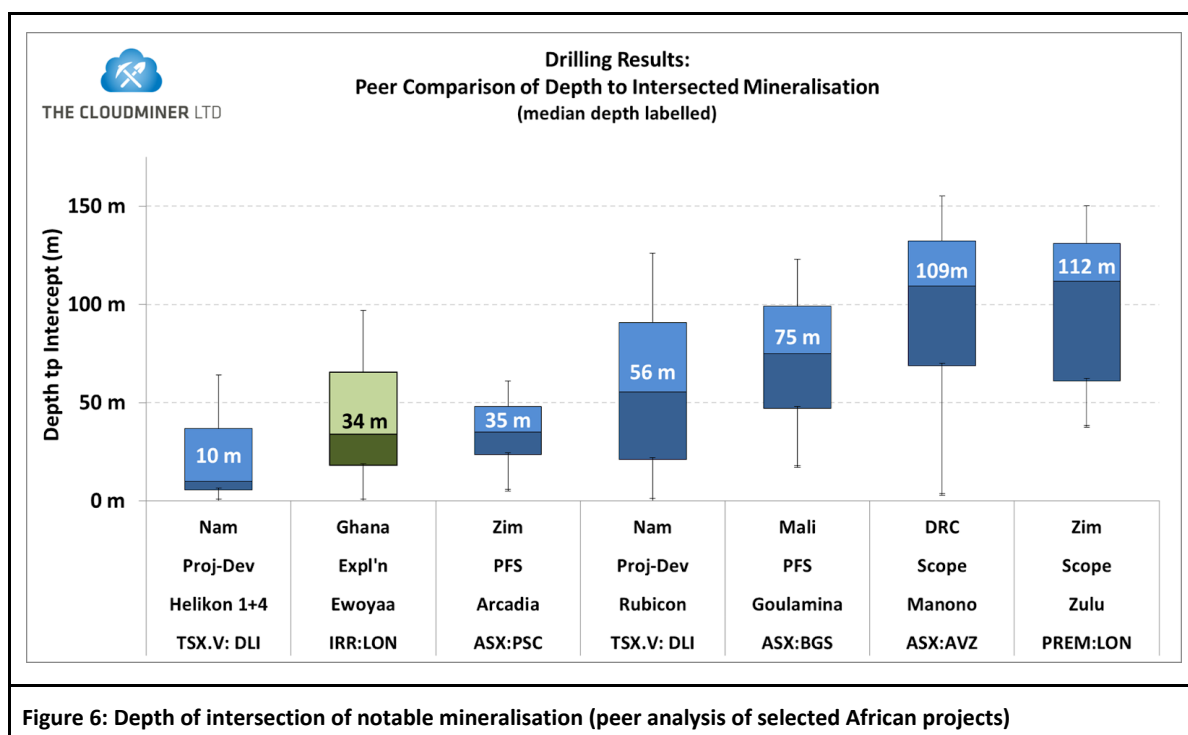
These results come off the back of some interesting prior results, namely an intercept of **128m at 1.21% Li_2O** for **GRC0004** (see figure below).

It should be noted that these intercepts do not correspond to true thickness, which IronRidge approximates to be between 20-60m for the structure intersected by GRC0004.

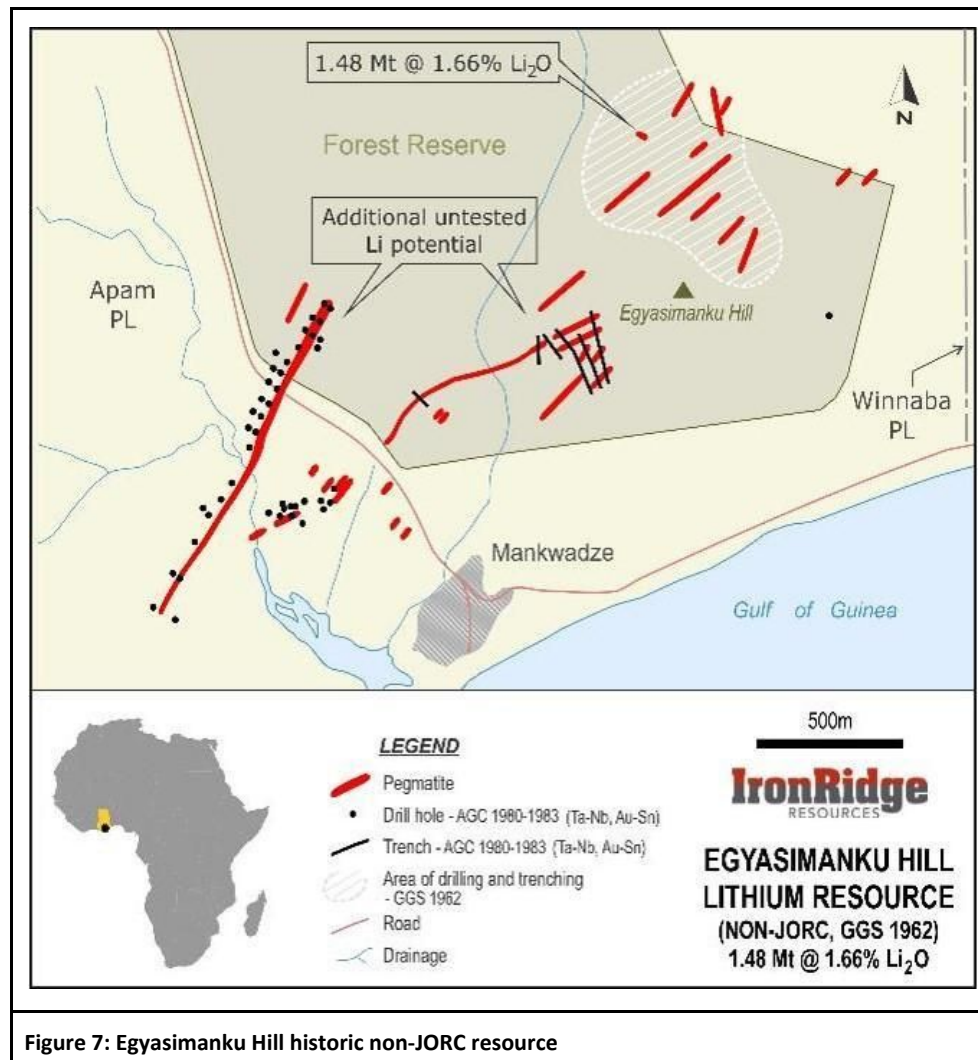




From our analysis, both in terms of intercept grades and proximity of mineralisation to surface, IronRidge's Ewoyaa compares favourably with its African competition.

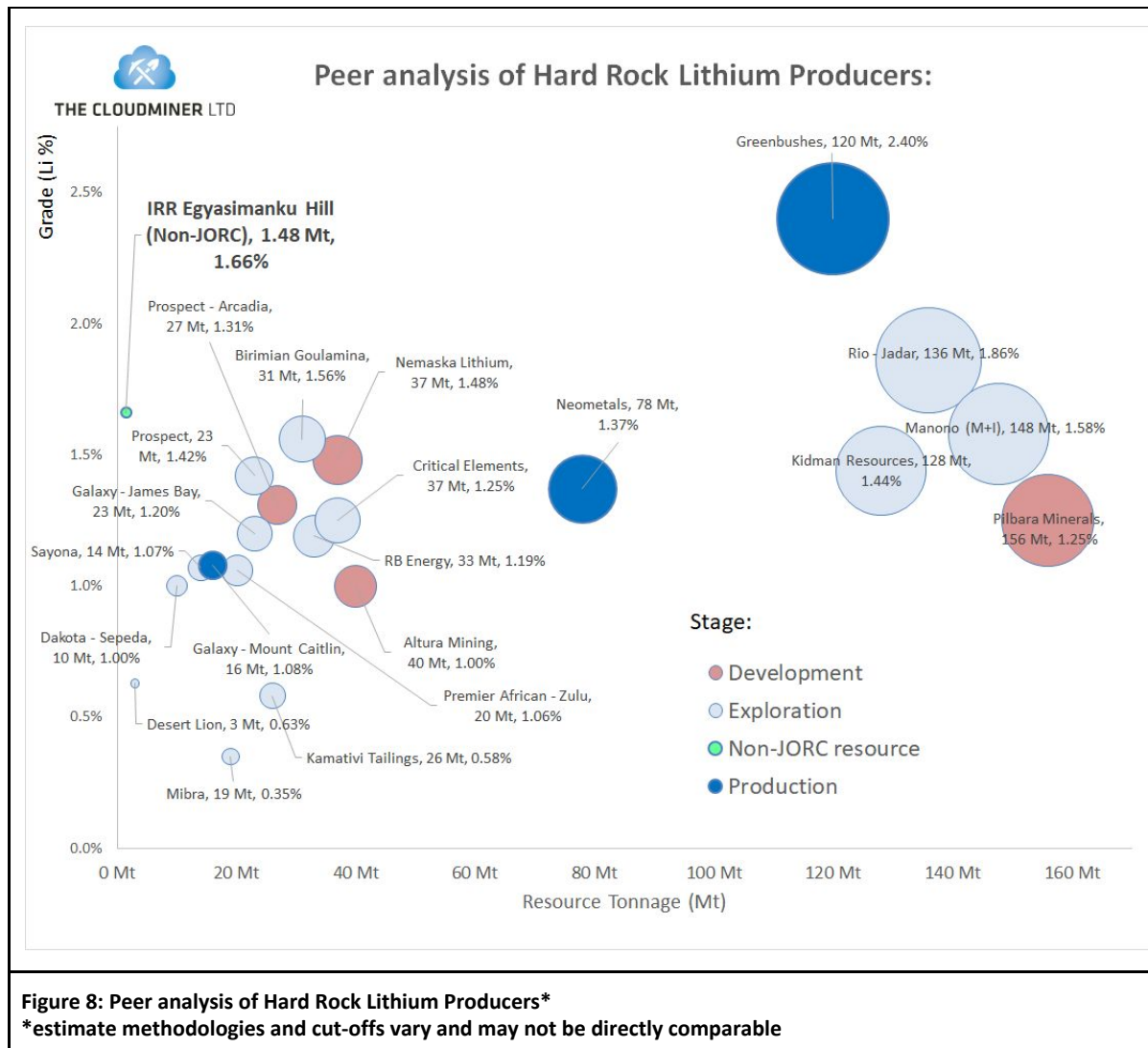


Thirty kilometres to the east, IronRidge are hopeful of expanding a historic resource at Egyasimanku beyond its historical extent, noting that three of four areas of pegmatite mineralisation have largely untested Lithium potential on their Apam and Winnaba PLs.



Given the analogous mineralisation and similar reported grade of the Ewoyaa and Egyasimanku prospects, comparing the latter non-JORC resource with other hard rock pegmatitic lithium peers is a somewhat valid way to assess any likely resource in terms of economic feasibility of extraction (which is largely down to grade), and to a lesser extent, get a feel for the likely order of magnitude of a maiden resource tonnage.

Hard rock Lithium Producers: Peer Analysis



Grades both of the historic non-JORC resource and recently reported RC drill intercepts are encouraging. This combined with near surface mineralisation and tendency of pegmatite outcrops to form local topographic features can only improve the prospect of an economic resource. However in terms of bulk resource tonnage, a comparison with Birimian's Goulamina deposit in Mali and ANZ's Manono resource in the DRC (148Mt M+I scoped, ASX:ANZ 0.08 AUD, mcap 152m AUD) indicates that IronRidge has some ground to cover in catching up to their peers.

Comments on the Lithium Market

Once dominant historically, lithium pegmatitic resources have been overshadowed recently in a market focused on the potential of low-cost producers in the South American Lithium triangle and in China.

TCM notes that the lithium market has seen some recent volatility. After doubling in price during 2017, prices for battery grade lithium carbonate in China slid from \$25,000/t to \$16,500/t in the first half of 2018 (the market for lithium hydroxide and regions outside of China, were much less impacted). There is some uncertainty about the output trajectory of two of the lowest cost lithium producers, Albemarle Corp and SQM who are both located on the Salar de Atacama in Chile. Some analysts forecast substantially higher brine production quotas going forward, while others see renewed scrutiny by the Chilean regulator as a potential limiter on this perceived low-cost competitor.

However, analysts project continued demand growth led by EV adoption and rapid growth of the energy storage sector. Indeed, IronRidge themselves see potential on the African continent for the latter. However it is also pertinent to note the presence of substitute metals and associated technologies on the horizon (such as vanadium batteries). As the market for energy storage evolves, unlike in mobile applications, lithium based technologies may not always be the go to solution.

With Albemarle poised to expand brine production, and Pilbara Minerals amongst others coming into production IRR's speed to market could be an important (and as yet untested) factor in whether the company can capitalise on the historically high prices for the metal. IronRidge currently anticipates a time to production of three to four years for their lithium prospects.

Closing Remarks

IronRidge deserve credit for strengthening their position during a difficult few years for the industry, finding themselves well positioned in West Africa in both gold and lithium. Our analysis helps to put IronRidge's numbers into perspective.

Having drilled only one of their five targets in the region (Ewoyaa), IRR plans to complete further drilling at the adjacent Abonku deposit, subject to funding and permits. At Egyasimanku Hill, the company sees untested Li potential in adjacent pegmatitic structures. Analogous mineralisation in the region has spawned Mali's Goulamina project, a globally significant find with a mineral reserve of 31 Mt and resource of over 100 Mt.

Many peers are looking to secure long term take-off agreements with manufacturers in East Asia seeking to tie up long lead supply, for example Mexican producer Bacanora lithium. Or could the answer lie in leveraging the company's significant gold potential, with the continent looking poised for M&A activity as single mine producers such as Teranga, Centamin, Resolute Mining and Asanko Gold look for opportunities to grow. In this regard, management at IronRidge appear open to the possibility of partnering with strategic downstream partners to advance these projects.

With risk comes potential reward, IronRidge is now tasked with converting valid exploration potential into tangible JORC compliant resources. As a company with great optionality, we look forward to following the progress of IRR as they take steps to de-risk and advance their exciting portfolio of projects.

Disclaimer

This document has been commissioned and paid for by IronRidge Resources (IRR). However, the opinions expressed in this Research Report are those of the authors and have been based on the information that is available in the public domain.

The CloudMiner Team (TCM) has exercised all due care in reviewing the supplied information in accordance with the scope of works. This report is intended for information purposes only it is not intended to replace professional, diligent and complete studies to determine a project's viability in accordance with the relevant industry guidelines. A thorough Due Diligence (DD) process carried out by independent technical experts in their field is highly recommended to review the geology, resource model, mine plan, schedule, metallurgy and cost estimates. While TCM software can be used to quickly access the key assumptions versus global peers and 'sense check' excel models for critical flaw analysis we still recommend a thorough DD process.

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Refer to the appendices for The CloudMiner's indemnity and limitations clauses.

ANNEXURE A – QUALIFICATIONS AND EXPERIENCE

Daniel Bloor, Senior Geologist

BSc (Geology), MSc (Applied Geosciences)

Daniel has over a decade of experience in the mineral and engineering geology industry with a further three years in the UK financial industry. Having worked with multiple commodities as an exploration and production geologist Daniel moved to Hong Kong where he was a consulting resource geologist both for due diligence and independent technical assessments for investment purposes. Daniel Co-Founded the CloudMiner Limited in 2012 and has spent the last five years evaluating and researching a wide spectrum of minerals projects around the globe.

Will Coverdale, Senior Mining Engineer

BEng (Mining), MBA

Will is a qualified Mining Engineer with +14 years diverse experience in both underground and open cut mining across several commodities both at operations and development stage. Roles have varied from design work, modelling, mine planning and scheduling through to feasibility study management and operational production management.

Will has worked for companies such as Newcrest Mining, Barrick-Newmont (KCGM), Goldfields, Byrnecut and Leighton to name a few. Country specific mining experience includes Australia, Kazakhstan, Mongolia, PNG and the Philippines.

James Moore, Mining Engineer with CI specialisation

MSc (Mining Eng.), MSci (Geology)

Trained as both a Geologist and Mining Engineer, James has +6 years engaged primarily as a consultant in the mining industry.

James has completed numerous Continuous Improvement (CI) engagements across South Africa, Tanzania and Senegal. He has experience of underground methods including room and pillar, breast mining, Alimak, long hole and conventional methods as well as various surface mining methods.

In addition to mining operations, James specialises in turnaround engagements for processing plants, encompassing metallurgy, operations, maintenance and engineering.

ANNEXURE B

Limitations and Exclusions

TCM's opinions contained herein are based on information held in the public domain, which in turn reflect various technical and economic conditions at the time of writing. This is an initial review of what is provided but in no way is to be classified as an in-depth due diligence report. As previously discussed these are typically carried out by a team of experienced professionals which would include reviewing the geology, block models, mine plans, schedule, metallurgy and cost assumptions from an independent view point.

This report includes technical information, which requires subsequent calculations to derive subtotals, totals, averages and weighted averages. Such calculations may involve a degree of rounding and consequently introduce an error. Where such errors occur, TCM does not consider them to be material.

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