# Africa's most viable new iron ore project









Roadshow Presentation | July 2015





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#### **Competent Persons Statement**

Information in this presentation that relates to Exploration Results and Resources is based on information compiled by Len Kolff, who is a member of the Australian Institute of Geoscientists. Len Kolff is a Non-Executive Director of the Company and 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Len Kolff consents to the inclusion of the matters in this report based on his information in the form and context in which it appears.

The information in this presentation relating to the Mofe Creek Resource Estimate and Scoping Study is extracted from the 31 March 2014 Maiden Resource and 3 July 2014 Scoping Study announcements. The Company is not aware of any new information or data that materially affects the information included in the original market announcements. 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 announcements.

#### **Scoping Study:**

Full details of the Scoping Study referred to in this presentation were initially released to the ASX in an announcement dated 3 July 2014, and should be read in conjunction with this presentation. All material assumptions underpinning the Scoping Study, production targets and forecast financial information derived from the production targets as well as any cautionary statements and disclosures as required under the ASX Listing Rules and 2012 JORC Code are set out in the announcement dated 3 July 2014 and continue to apply and have not materially changed.

The Scoping Study referred to in this presentation is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised. In discussing 'reasonable prospects for eventual economic extraction' in Clause 20, the Code requires an assessment (albeit preliminary) in respect of all matters likely to influence the prospect of economic extraction including the approximate mining parameters by the Competent Person. While a Scoping Study may provide the basis for that assessment, the Code does not require a Scoping Study to have been completed to report a Mineral Resource.

The Scoping Study is preliminary in nature as its conclusions are drawn on inferred (74%) and indicated mineral resources (26%). The relative sequence of mining is the indicated mineral resource is assumed in Years 1 to 4, then the inferred mineral resource is assumed to commence in Year 4.

There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. The stated production target is based on the Company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that this target will be met.



### **Board & Management Team**



Wayne Richards
Executive Chairman & CEO

- 27yrs mining, processing & project development & financing experience
- Corporate funding & Project Development experience

#### Previously

- MD of Brockman Resources. Lead company from \$18m explorer to \$960m developer prior to its takeover in 2011
- BHPB Iron ore. Held senior positions responsible for integrating projects across mine, rail & port
- Minara Resources. Former commissioning & operations manager for Anaconda Nickel



Michael Bohm
Non-Executive Director

- Qualified mining professional
- Extensive Corporate, Feasibility Study, Project Development & Mine Operations experience in multiple jurisdictions.

Previously (&/or concurrently)

- Perseus Mining Ltd, Non-Executive Director
- Ramelius Resources Ltd, Non-Executive Director
- Herencia Resources plc, Non-Executive Director
- Sally Malay Mining Ltd (now Panoramic Resources), Executive Director
- Ashton Mining of Canada, Non-Executive Director
- Argyle Diamond Mines Pty Ltd (Rio Tinto JV), Director



Michael Naylor
Chief Financial Officer & Co. Sec

- Chartered accountant
- 19 years in corporate advisory and company management

Previously (&/or concurrently)

- Accountant Ernst & Young
- Resolute Mining, Financial Controller
- Dragon Mining, Finance Director
- Coventry Resources, CEO
- Gryphon Minerals, CFO



Frédéric van Haute General Manager - Liberia

 17 years experience in West Africa (Ghana, Mali, Mauritania, Congo, DRC)

#### Previously

- Luna Mining, GM
- Kinross Gold Corporation, Senior Finance Manager -Ghana
- International Barytex Resources, MD – Congo (Dem. Rep.)
- MagIndustries International, GM - Congo (Dem. Rep.)
- AngloGold, Finance Controller - Mali



**Rockson Coffie** *Exploration Manager* 

Geologist with 13 years experience

#### Previously

- Ashanti Gold
- Redback Mining (now Kinross)
- Liberty International
- Hummingbird
- Shankill



# **Corporate Snapshot**

### **Capital Structure**

Share Price (10 July 2015)	\$0.005
Shares on Issue	1,475m
Market Cap	\$7.4m
Options	67m
Cash Balance (as at 31 Mar 2015)	\$2.2m





#### **Share Price Performance**



### **Critical Success Factors**

### **Low Capex**

- ✓ Potential DSO start up project
- ✓ End to end infrastructure solution:
  - Close to existing roads, port
     & infrastructure
  - ✓ MoU signed with WISCO CAD
- Soft, friable mineralisation -low crushing index
- Simple process plant using gravity separation for beneficiation
- Modular/expandable plant minimum site construction
- Potential use of third party iron ore port in Monrovia

### **High Margins**

- ✓ OPEX low due to DSO and/or simple circuit design for beneficiation
- ✓ High grade +65%Fe beneficiated product Price Premium
- Project expansions potentially funded from cashflow and/or debt
- Low CAPEX DSO start up and/or beneficiation
- ✓ Bottom quartile OPEX costs production sustainability & expandability
- Staged CAPEX from sustaining cashflow

### **Huge Upside**

- Only 4 of potentially 74 mineralised zones drilled to date
- Continuity of mineralisation across tenements
- Expandability of plant & infrastructure | minimum CAPEX | incremental tonnes | OPEX decrease with scalability
- Potential for independent ownership of logistics, infrastructure and mine(s)
- High EBIT potential from DSO start up project

High Margin, Low Risk Project with Huge Upside Potential

### **Mofe Creek - High Margin, Low Risk Project with Huge Upside Potential**

- Tawana Resources developing the Mofe Creek iron ore project in Liberia
  - Liberia Historically largest exporter of iron ore in Africa; 5th largest in the world in 1970's
- High grade +65% Fe beneficiated product Price premium (DSO grade of 60 67% Fe) 1
- Low OPEX / tonne FOB or CFR (due to DSO and/or simple circuit design, high recoveries, and immediate proximity to infrastructure)
- Minimal CAPEX intensity for road and transhipment facility (potentially less than US \$60/annual tonne) bottom quartile
- Low CAPEX intensity for potential DSO project (existing highway adjacent to future mine(s) and MoU signed with third party port owner/operator WISCO CAD)<sup>2</sup>
- Soft, friable mineralisation low crushing index and low power draw
- Maiden Resource of 62Mt at 33% Fe capable of producing a +65% Fe product (after beneficiation)<sup>3</sup>
- Only 4 of potentially 74 mineralised zones drilled to date significant resource upgrade potential (+500MT exploration target) 4
- Close to existing roads, Monrovia port & working infrastructure for DSO start up project

<sup>1.</sup> Refer ASX Release 8 July 2015. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.

<sup>2.</sup> Refer ASX Release 18 May 2015. Tawana is not aware of any new information or data that materially affects the information included in the said announcement

<sup>3.</sup> Refer ASX Release 31 March 2014. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.

<sup>4.</sup> This information was prepared and first disclosed under JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will results in the estimate of a Mineral Resource. The potential quantity and grade of an exploration target is conceptual in nature. There has been insufficient exploration to determine a mineral resources and there is no certainty that further exploration work will result in the determination of mineral resources. Refer ASX announcement of 18 March 2013 for further details.

# **Low Capex for Staged Production**

### **Production Profile: From Scoping Study**

Stage 1A (Year 1 & 2)	1 Mtpa
Stage 1B (Year 3)	2.0 Mtpa
Stage 2 (Year 4-14 inclusive)	2.5 Mtpa
Life of Mine (LOM)	14 years (including 10 years of steady state operation at 2.5 Mtpa)
Strip Ratio	0.52:1 (waste to ore) average LOM
Final Product Grade 60-68% Fe - Premium Fines Product	

Stages 1A & B have the potential to represent DSO grade product, thereby:

- Reducing CAPEX to a minimum (no beneficiation plant initially required)
- Minimising OPEX due to simplification of processing (crushing and screen only)
- Utilising existing logistical infrastructure (road and port facilities)
- Reducing project execution time typically associated with studies, funding and construction of facilities
- Allowing Tawana to fast-track the MDA and mining licence reflective of a potential DSO Start-up project

<sup>1.</sup> Refer ASX Release 3 July 2014. All material assumptions underpinning the production target detailed on the release continue to apply and Tawana is not aware of any new information or data that materially affects the information included in the said announcement.

# **Scoping Study – Summary Findings**

### **Stage 1A &1B: Commence Production at 1.0Mtpa – 2.0Mtpa – Trucking to Monrovia:**

- Minimal site and logistics costs for early start-up capital potential DSO
- Quality product (60-67% Fe) premium pricing above 62%Fe
- 1st stage of beneficiation plant installed post DSO mining
- Deferral of capital for beneficiation plant Improved economics and cash flow potential

### **Stage 2: Expand Production to 2.5Mtpa – Install Beneficiation Plant**

- Design and construct private haul road from mine(s) to new coastal port location
- Migrate logistics solution from Stage 1B, once road and port completed
- Implement 1st stage beneficiation plant output capacity of 2.5 Mtpa (of final product)
- Staged development to 2.5 Mtpa over 4 years using cash flow, and/or debt or strategic funding
- Design and construct barging/transhipment facility at coastal location with capacity of >2.5 Mtpa<sup>1</sup>
- Potential for increased tonnage and/or Life of Mine

### **Pre Feasibility Study Underway**

- DSO start up project to be studied as part of PFS
- Baseline studies for Environmental and Social Impact Assessments ongoing
- MDA Negotiations progressing well
- Processing plant design confirmed: Proposed road & port design confirmed
- Pilot plant licence for 1 Mtpa being negotiated in MDA

<sup>1.</sup> Note: Both the haul road and transhipment facility will have outflow capacity exceeding a nominal rate of 2.5Mtpa

### Recent discovery of new high-grade Direct Shipping Ore (DSO) hematite mineralisation

- > The new zone of DSO hematite mineralisation occurs within the Goehn South East (SE) prospect, within a broader >550m strike length of friable, coarse grained itabirite, with potential for additional strike extensions.
- Mineralisation averages 62.8% Fe and up to 66% Fe in rock chip sampling no drilling to date.
- > The discovery is located a short trucking distance to the operating Freeport of Monrovia.
- Due to the hematite DSO style mineralisation discovered, initial crushing & screening costs for DSO will be minimal while beneficiation costs for the itabirite are likely to be very low.
- Significant potential exists for an early start-up, low-capital intensity mining and trucking operation within the initial years of production (Years 1-3) (subject to a DSO Resource being confirmed).

#### Tawana has also discovered >2.2km strike of friable itabirite mineralisation in the Goehn prospect

- Mineralisation averages 26.4% to 52.6% Fe in rock chip samples, representing one of four additional high-priority target areas defined within the Mofe Creek South licence area.
- Itabirite mineralisation defined has similar geological characteristics to the 61.9Mt at 33% Fe maiden resource estimate<sup>2</sup> and is within 8km trucking distance thereof.

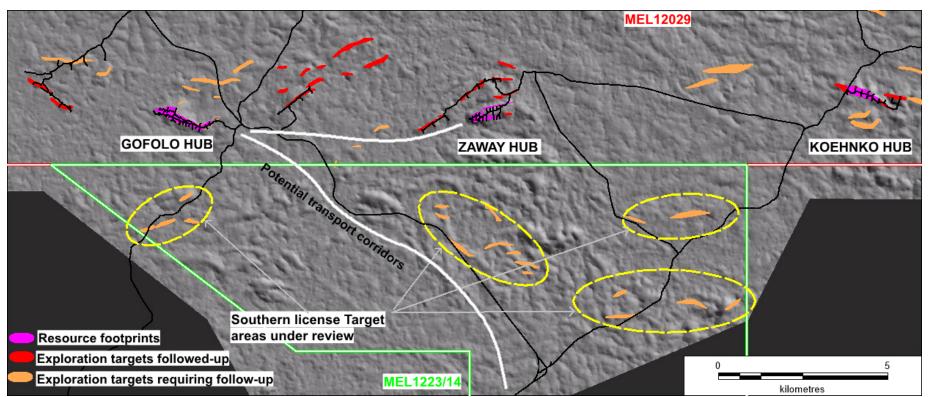
The target areas have significant potential to add additional resource tonnes to the project, in addition to further DSO prospectivity and the opportunity to build a DSO start up project.

<sup>1.</sup> Refer ASX Release 8 July 2015. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.

<sup>2.</sup> Refer ASX Release 31 March 2014. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.



# **Location - Exploration Targets & Deposit Locations**



High-priority target areas defined within MEL1223/14 from remote sensing data, relative to existing resource footprints; topography greyscale image background.

Total Exploration Target Size Potential*	<b>Potential Range</b>	Potential Avg. Grade	<b>Potential Contaminants</b>
Friable Itabirite	90-230 Mt	40-45% Fe	31% SiO <sub>2</sub> , 5% Al <sub>2</sub> O <sub>3</sub> , 0.05% P, 4% LOI
Mixed Friable Itabirite/Amphibolite	270-440 Mt	25-35% Fe	40% $\mathrm{SiO}_2$ , 11% $\mathrm{Al}_2\mathrm{O}_3$ , 0.04% P, 7% LOI, 0.2% $\mathrm{TiO}_2$
GLOBAL	>500 Mt <sup>1</sup>		

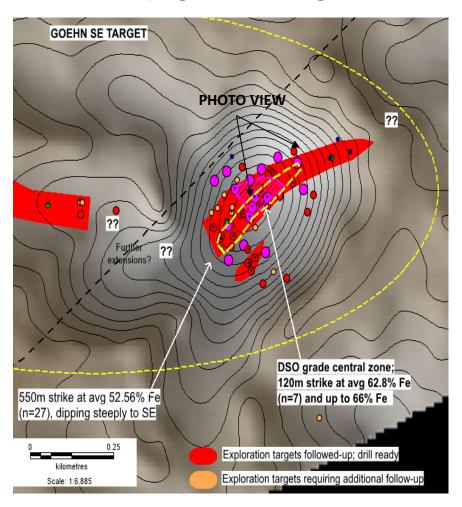
<sup>&</sup>lt;sup>1</sup> This information was prepared and first disclosed under JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will results in the estimate of a Mineral Resource.

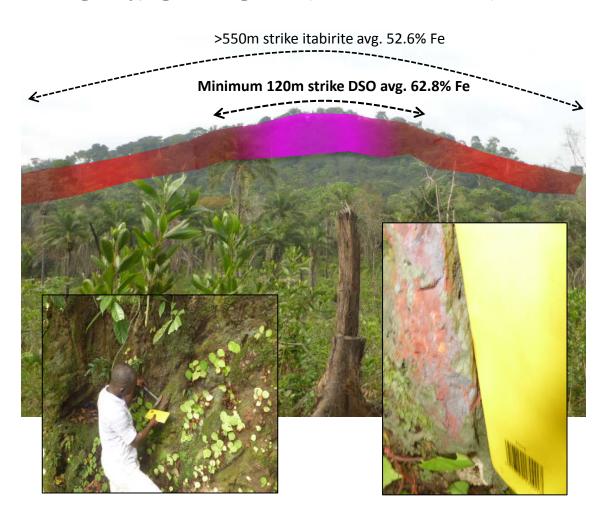
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# **Goehn South-East Target - DSO Potential**

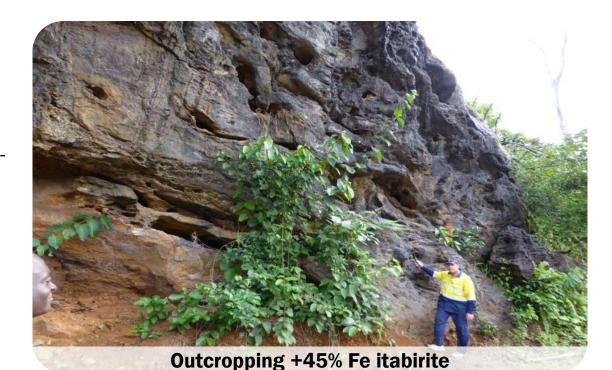
- > Area of surface DSO mineralisation (mainly hematitic) defined by rock chip sampling (handheld XRF) of outcrops
- ➤ Highest grade co-incident with hill-top; average 62.8% Fe and up to 66% Fe ¹ over 120m strike, low contaminants
- Potential supergene weathering of itabirite, or weathering of hypogene magnetite (similar to Bomi Hills)





1. Refer ASX Release 8 July 2015. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.

- Oxidised high-grade hypogene magnetite (DSO) from surface at Goehn
- Coarse grained itabirite accompanying the DSO at Goehn deposit
- Coarse grained final product high 'value-inuse' potential
- Fines sinter product ideal for blast furnaces
- Price premium forecasted ~\$6-7/t premium above 62% Fe Fines (CFR China pricing)
- Displaces lower quality ore supplies to steel plants around the globe





**Surface outcrop at Goehn SE prospect** 



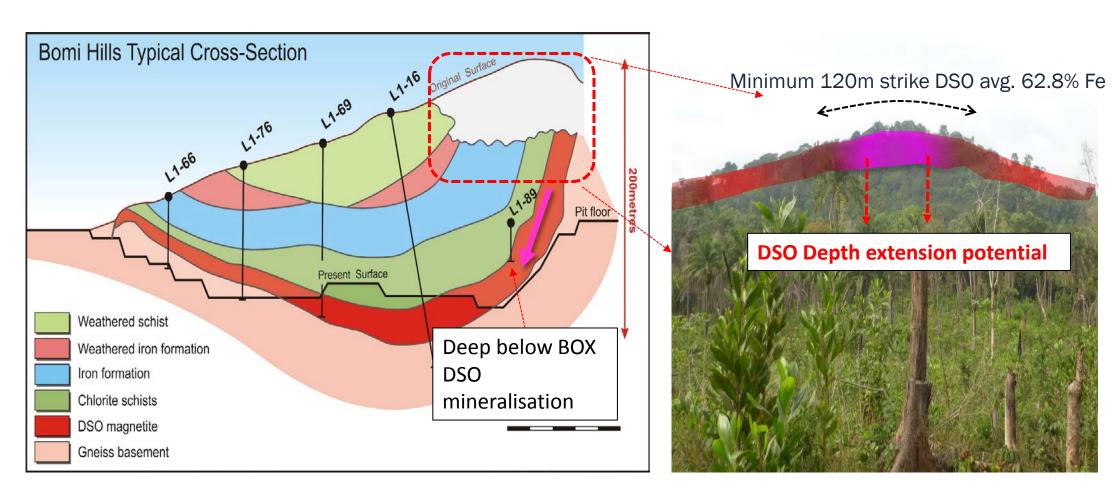
DSO mineralisation grading 65.1% Fe in rock-chip at Goehn SE prospect





# **Bomi Hills Model- Hypogene Magnetite**

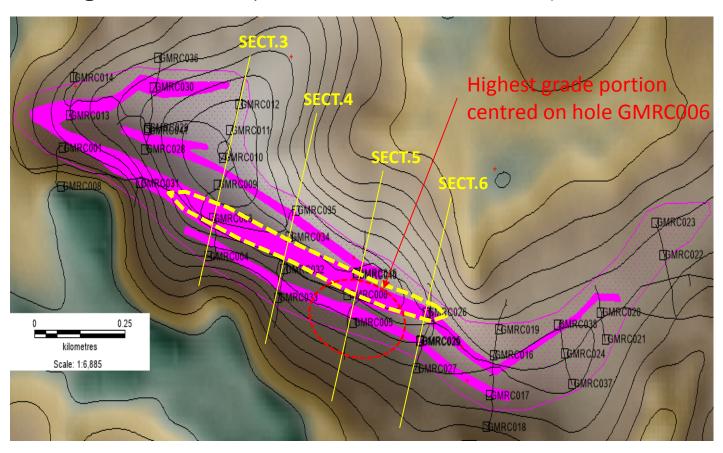
- Hypogene magnetite on footwall contact below base of oxidation
- Typical weathered itabirite
- Produced >50Mt DSO and >100Mt friable weathered itabirite
- Potential Goehn analogue –deep 'hypogene' magnetite (NB –only estimated to 25m depth; potential upside)





# **Gofolo Main Target - DSO Potential**

- Zone of mainly hematitic mineralisation centred around GMRC006
- Potential strike continuation from 250m to 750m outwards from hole GMRC006
- Supergene weathering of itabirite with highest grade co-incident with intersection between hill-top and iron formation (IF)
- $\triangleright$  Average >55% Fe, and up to 60.3% Fe in hole GMRC006 (intersected weathered iron formation on hill crest)<sup>1</sup>





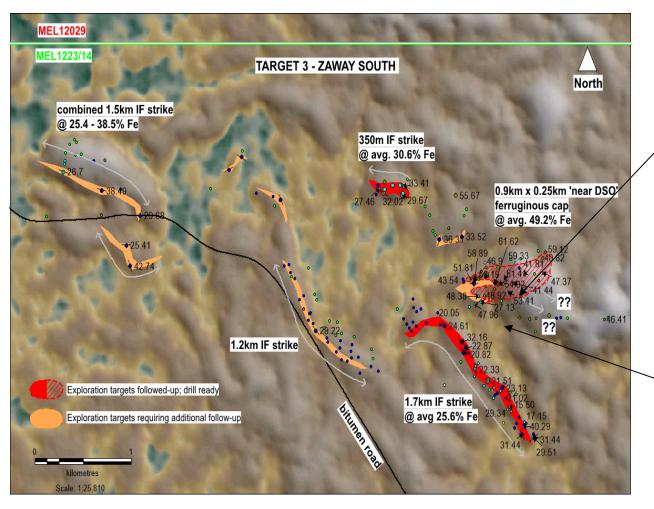
Twinned hole GMDD001

<sup>1.</sup> Refer ASX Release 8 July 2015. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.



# **Zaway South Target - DSO Potential**

- Ferruginous hard-cap –weathering of iron rich parent rock
- Average 49.2% Fe in handheld XRF of rock-chips; up to 61.6% Fe<sup>1</sup>
- Mixed iron formation and potential mafics;





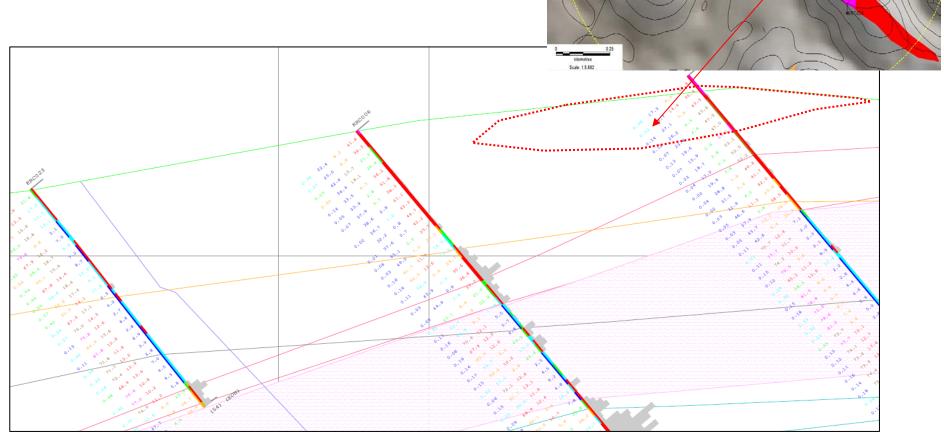


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# Koehnko Main - DSO Potential

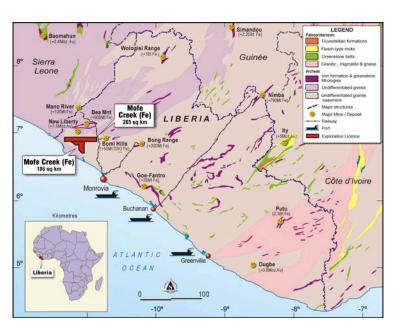
- Central 'higher-grade' portion
- ➤ Hole KRC012; 8m intersection at 53.5% Fe from 12m -up to 55.1% Fe<sup>1</sup>
- Coincident topo high & cross-cutting structure
- Supergene mineralisation

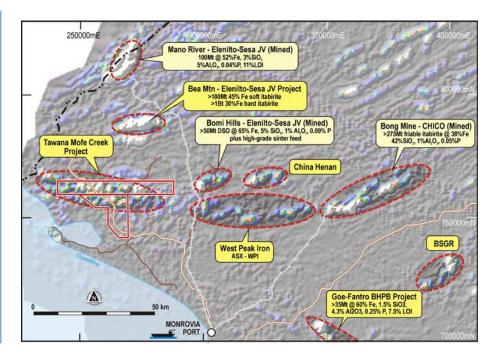


<sup>1.</sup> Refer ASX Release 8 July 2015. Tawana is not aware of any new information or data that materially affects the information included in the said announcement.

#### **About Liberia:**

- ✓ Historically largest exporter of iron ore in Africa;
  5th largest in the world in 1970's
- ✓ Modern mining code; English speaking.
- ✓ Iron Ore Royalty: 4.5%
- ✓ Corporate Tax: 30%
- √ 475km² Exploration licences granted (100% TAW)
- ✓ Strike continuity secured under new tenement acquisition
- Multiple iron ore projects operational or being developed





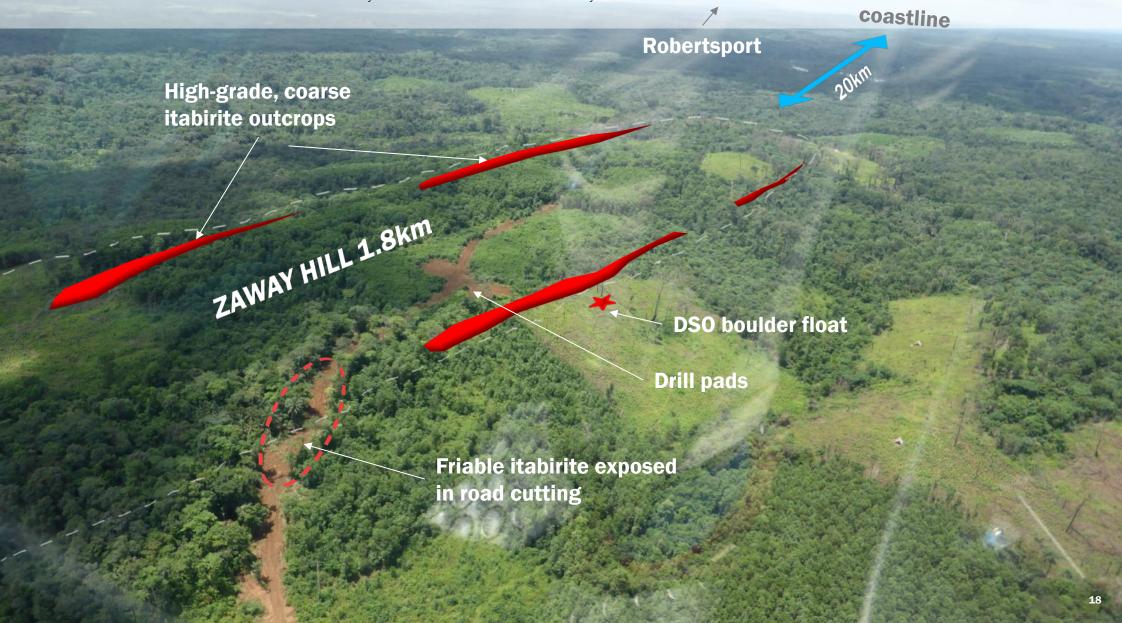
### **Projects Proximal to Mofe Creek:**

- WISCO CAD (formerly China Union) (Bong Mine): Mine, rail & port fully operational
- Vedanta (Western Cluster Bomi Hills, Mano River, Bea Mountain): Definitive Feasibility Study level
- Bao Chico Resources: (Bomi Hills East): Currently negotiating MDA & Scoping Study
- Arcelor Mittal (Nimba): Mine, rail & port fully operational
- Aureus Mining: Liberia's 1<sup>st</sup> commercial gold mine

100% of IV iron ore rights

- Maiden Resource Estimate of 6.3MT @ 33.7% Fe (Inferred) plus 6MT @ 33.4% Fe (Indicated) at Zaway Main Deposit 1
- One of 74 potential deposits on Exploration Licence

<sup>1</sup> Refer ASX release 31 March 2014. Tawana is not aware of any new information or data that materially affects the information included in the said announcement

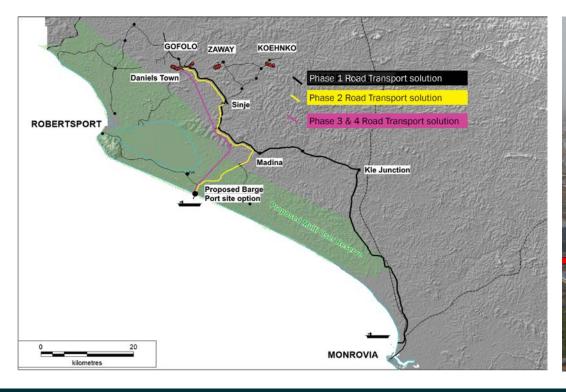




# LOGISTICS - Early Stage - Start-up Stages 1A/1B (up to 2 Mtpa)

- Initial production start-up has been designed to truck ore along the main sealed national road from the Gofolo Main mine site to the deep-water port of Freeport Monrovia (75-85 km dependent upon mine location)
- Trucking of ore into Monrovia will be conditional upon the Company developing an alternative infrastructure solution for the future increased production throughput.
- Contingent upon Port Cooperation Agreement being signed with WISCO CAD so that WISCO CAD's existing stockpiling, reclaimation and berthing facilities can be used for the export and sale of the Mofe Creek final product.





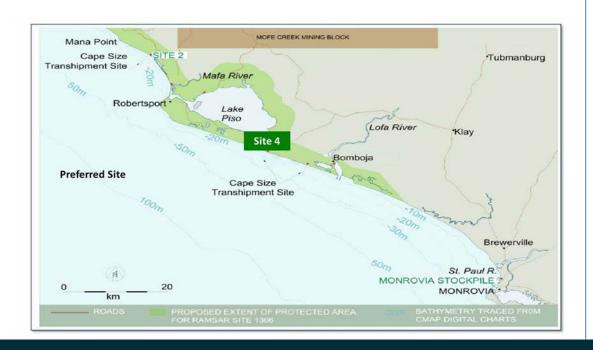


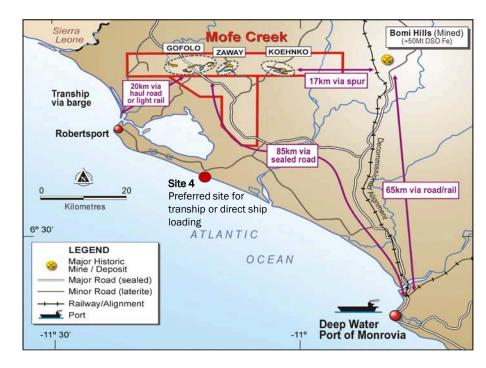
#### **New Port or Transhipment Facility - Options:**

- 1. Transhipment from Inner Harbour to OGV; or
- 2. Transhipment of ore from stockpile to OGV via jetty

#### **Ore Export from the New Port Facility:**

- For the expanded output of >2.5Mtpa the PFS will consider the design & construction of a stockpiling, reclamation and ship loading facility at the preferred new port site location
- Transhipment using self-unloading TSV's to Ocean-going vessels (OGV) moored off-shore is preferred option
- Cape Size vessels with a capacity of >150,000 dmt have been considered in the design





#### **Haul Road to New Coastal Port Location:**

- Construction of a dedicated haul road from mine(s) to coastal port location
- The PFS will consider road haulage vehicles with a capacity of 180-240t
- Such trucking systems have been successfully implemented in the neighbouring country of Sierra Leone by London Mining/African Minerals, and effectively commissioned and sustained by Australian producers such as BC Iron



# **Targeted Company Milestones for 2015/16**

### **2015/16 Targeted Company Milestones**

Complete MDA Approval Process - Pass as parliamentary bill.

Finalise ESIA Terms of Reference & Scoping Report for mine and formalise Mineral Licence application for Gofolo, Zaway and Goehn deposits

Design & execute a DSO drilling program post wet season to prove up DSO quality/quantity at Goehn deposit.

Undertake desktop study on an early start up DSO project.

Complete conceptual port infrastructure designs –in accordance with MDA approval – advance ownership models and off-take agreements – depending upon owner/financier model to be adopted.

Finalise trucking route and truck capacity/design and funding/ownership model.

Finalise land ownership agreements and employment/community agreements for future IR compliance and skill confirmation.

Confirm optimal design & construction and financing methodology – subject to: MDA approvals; Liberian legislative laws (third party access rights); ownership models and financing options available "in-market".

