

# Ansongo Manganese

## Our First Development

**Callabonna Resources Ltd (CUU:ASX)**  
Investor update February 2015  
Jeff Williams Director

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This presentation contains a number of summaries of complex agreements and contractual arrangements which do not reflect the agreements in their entirety. Potential investors are cautioned against using the content of this presentation, in isolation, for making investment decisions. This presentation is only an overview of the Company. Before making an investment in the Company, research and the counsel of a qualified financial adviser or accountant are strongly recommended.

The information in this report that relates to Exploration Results is based on information compiled by Michael Raetz. Mr Raetz is a director and employee of the Company. He is member of the Australian Institute of Geoscientists 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’. Mr Raetz consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The information in this report that relates to mining is based on information compiled by Jeffrey Williams. Mr Williams is a director of the Company. He is a member of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to open pit mining, processing and logistics in West Africa and the type of deposit under consideration and to the activity which he is undertaking. Mr Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Reference to exploration results were included in ASX announcements on 6 May, 10 June, 28 July, 1 August, 15 September and 21 October 2014. The Company is not aware of any new information or data that would materially affect the information included in previous announcements, referenced herein.

**The Company is earning a 51% controlling interest in Ansongo Limited. Ansongo Limited is the majority (70.4%) shareholder in the Project. The material terms of the agreement were announced to the ASX on 6 May 2014 and 21 October. The Project interest is subject to the mining convention that provides the state a 10% free entitlement.**



# Ansongo Manganese

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The Company is earning 51%\* of Ansongo Limited and seeking ways to earn more

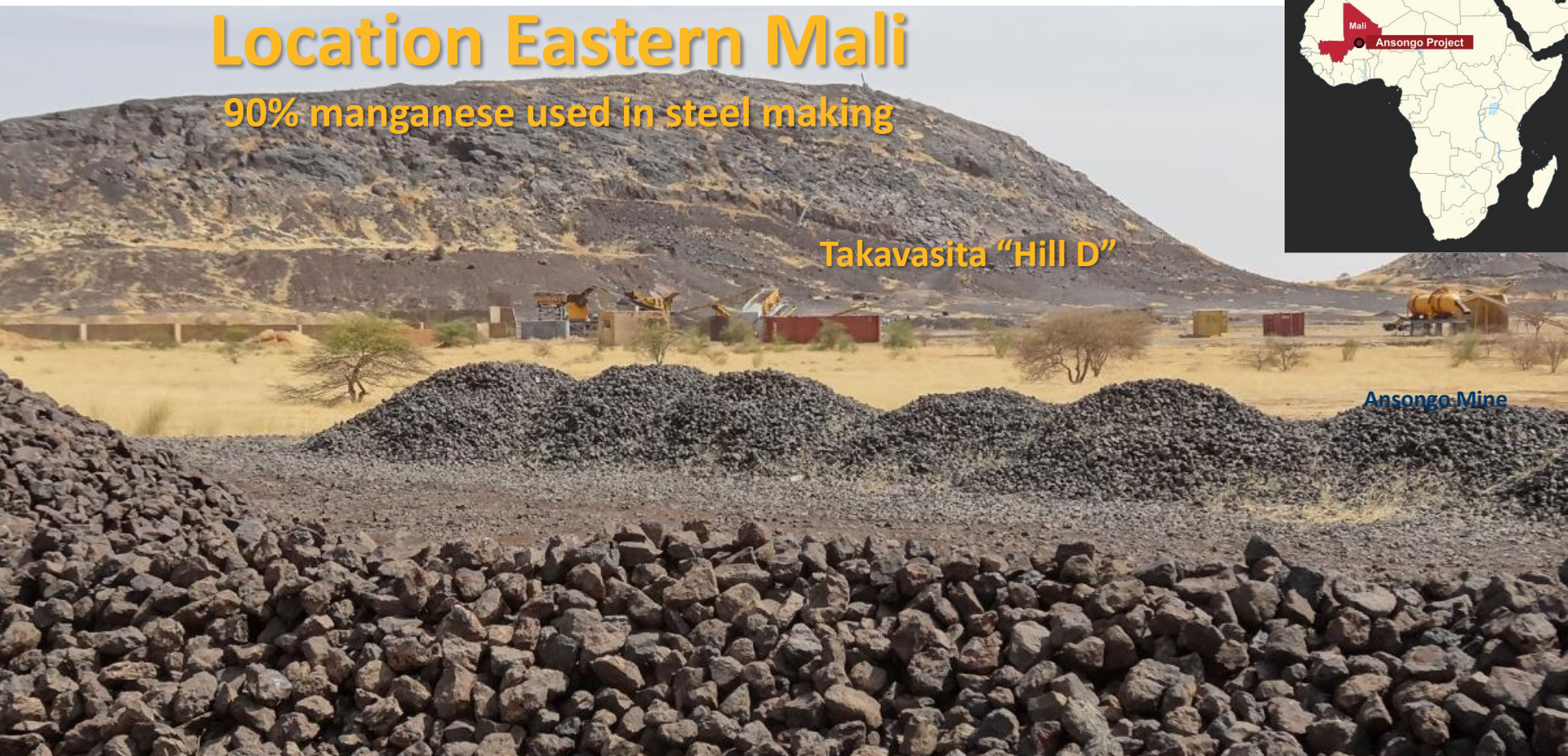
## Location Eastern Mali

90% manganese used in steel making

Takavasita "Hill D"



Ansongo Mine



*\* details in ASX announcements 6 May & 21 Oct 2014– note a direct interest of 51% in Ansongo Limited equates with a 36% indirect interest in the "Project". The Company is buying Ansongo Limited shares through expenditure on the Project.*



# Callabonna - The Company ASX:CUU

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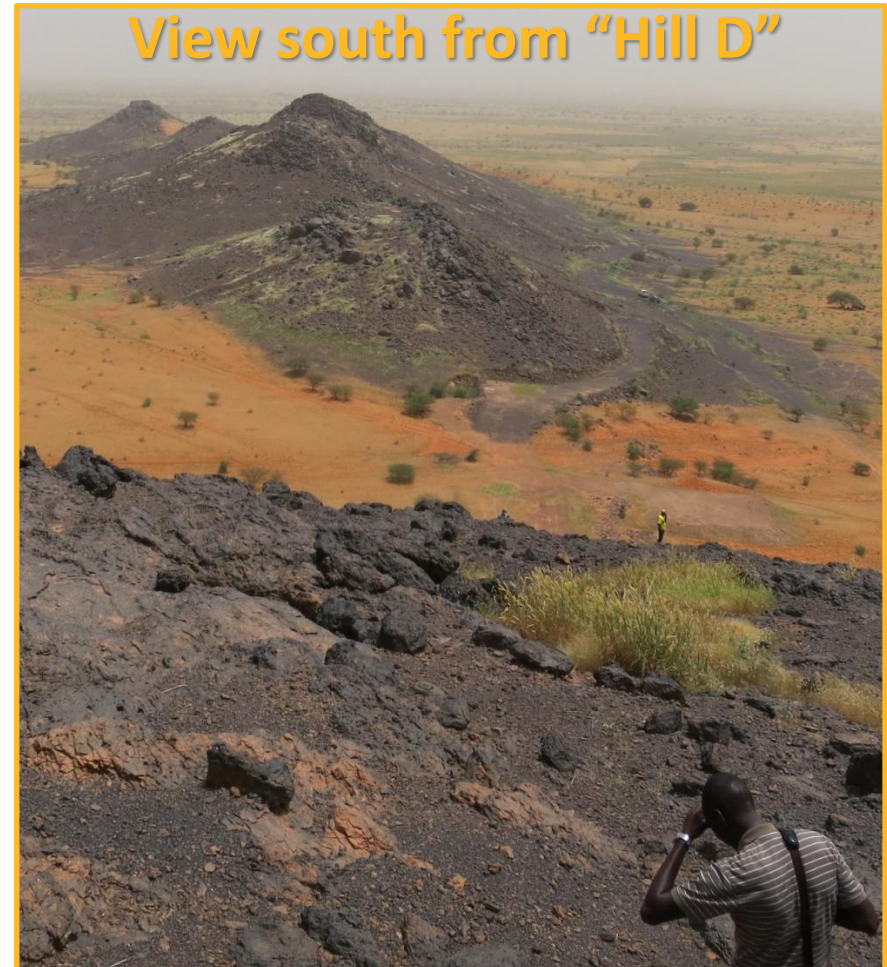
**Shares;** 184.5 million, 33.6 m 3c options  
Top 20 hold >70%  
Share price; 1.4 c, Market Capitalisation;  
\$2.5m

## Directors

Jeff Williams - Mining Engineer  
Phillip Harman – Ex BHP Geophysicist  
Mike Raetz - Ex BHP Geologist

## Consultants

Mining Plus – Australia  
M – Consult - Mali



## Geological Formation

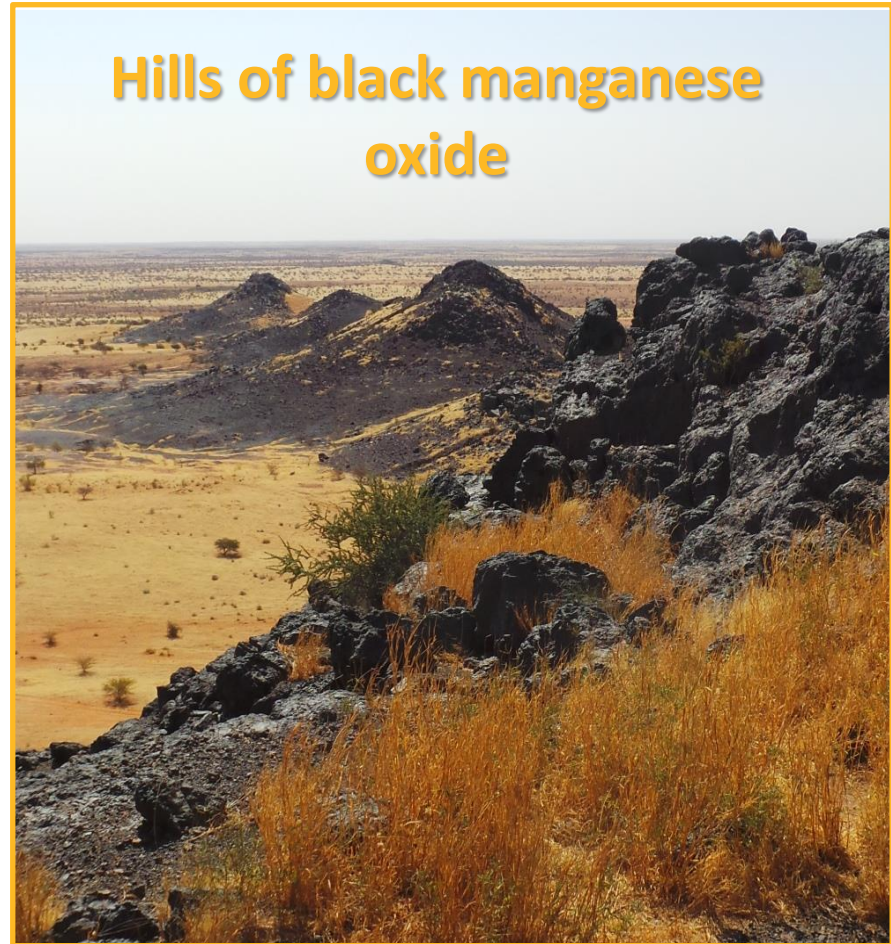
Hills of manganese formed 20million years ago by weathering of a manganese carbonate formation

## Mine Scoping Study 2015

To include:

- Resource drilling
- Mining and processing
- Transport and marketing

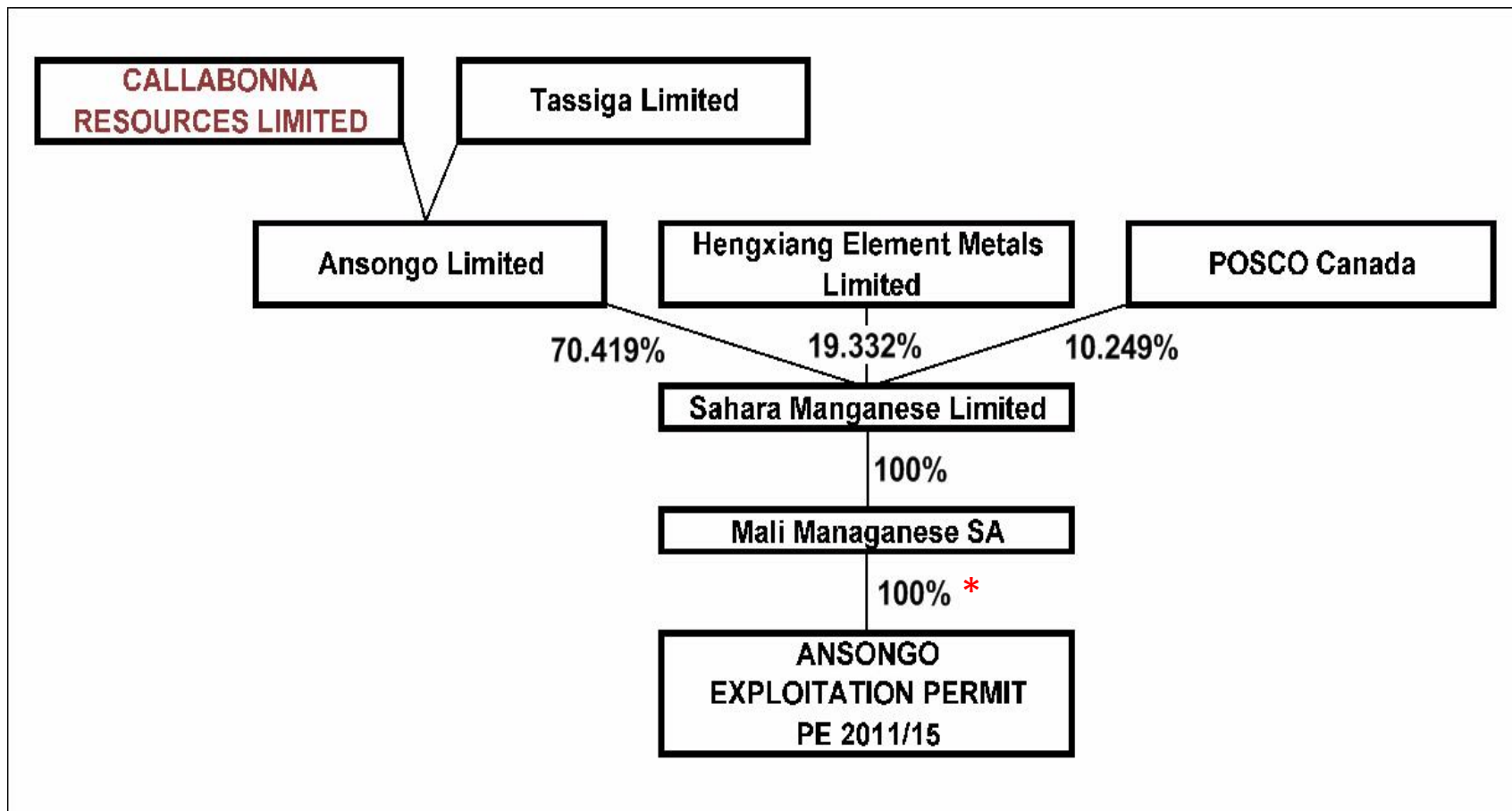
## Hills of black manganese oxide



# Ansongo Project Ownership Structure

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The Company's interest will be held via a shareholding in Ansongo Limited



Note: \* subject to the Mining Convention of Mali which provides the State to a 10% entitlement



# Ansongo Manganese – Secure

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The project has government support and the region is secure.

- *In the Liptako-Gourma Authority development region of Mali, Burkina Faso and Niger.*
- *Covers mineral, hydropower and agriculture developments.*

# Ansongo linked to coastal ports

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**Good roads,  
with back load  
option and  
planned new  
rail  
infrastructure**



# Focus on Early Production

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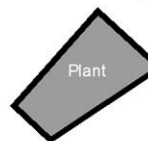


- Mine Lease near a bitumen road and water
- Satellite photo shows manganese extends over 20km

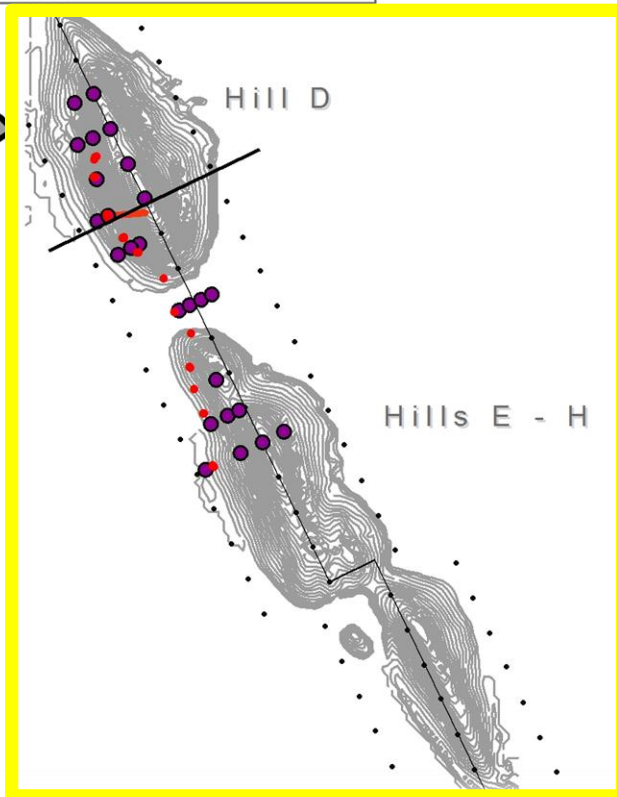
# Focus on Early Production

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Initial Exploration Target



**“Exploration Target”**  
estimated at 5 – 15 million  
tonnes @ 35- 45% Mn  
(ASX 15 Sept 2014)



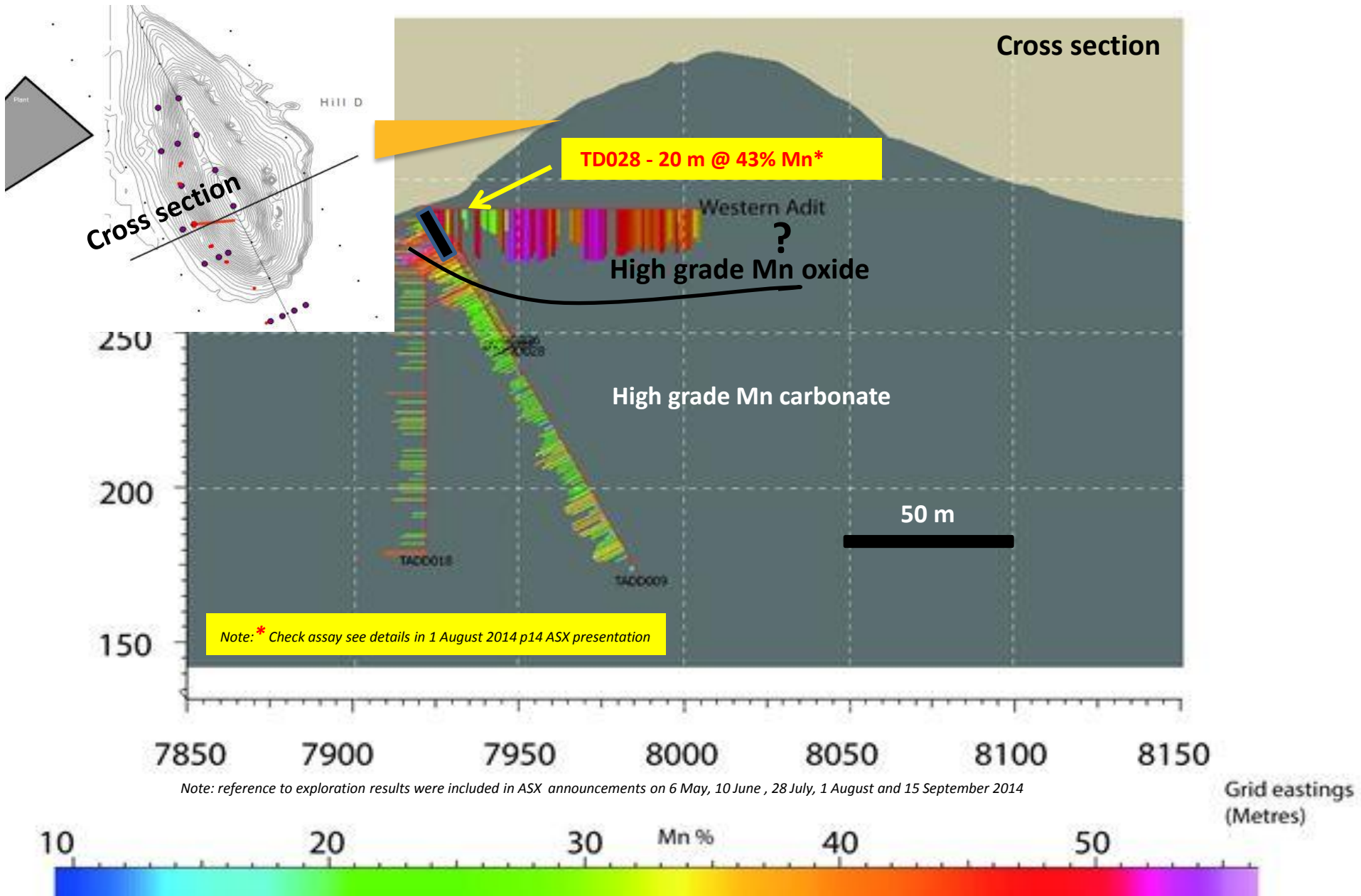
**Scoping to focus on a 2km  
portion of a much longer  
trend**

- Outcropping Manganese suggests a very low to non existent stripping ratio
- Bulk 280 tonne sample showed good product for customers
- Capable of producing plus 40% Mn lump suggesting premium selling price
- Project partners HEM and POSCO have existing smelters
- 100km from worlds richest Manganese project at Tambao

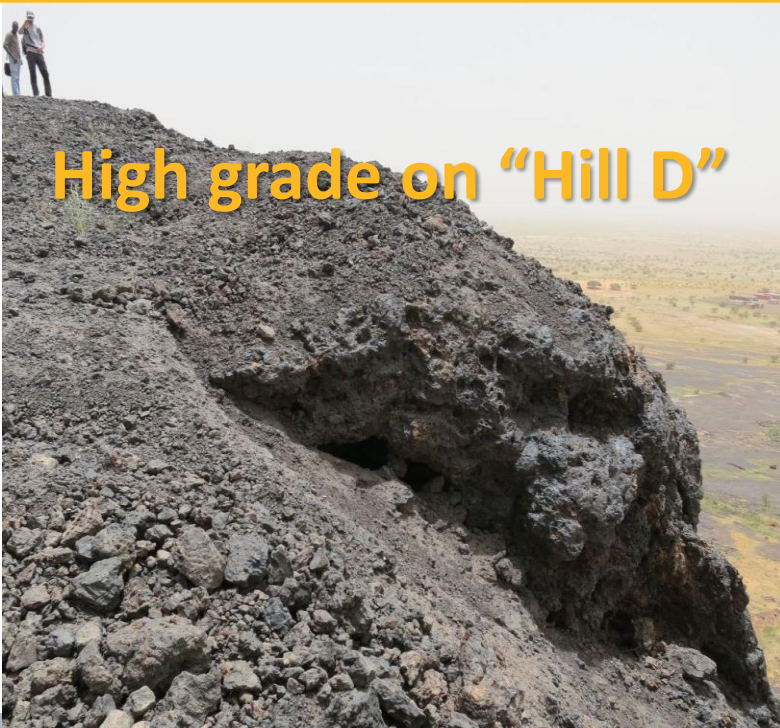


# High Grade Manganese Oxide confirmed at “Hill D” above Manganese Carbonate

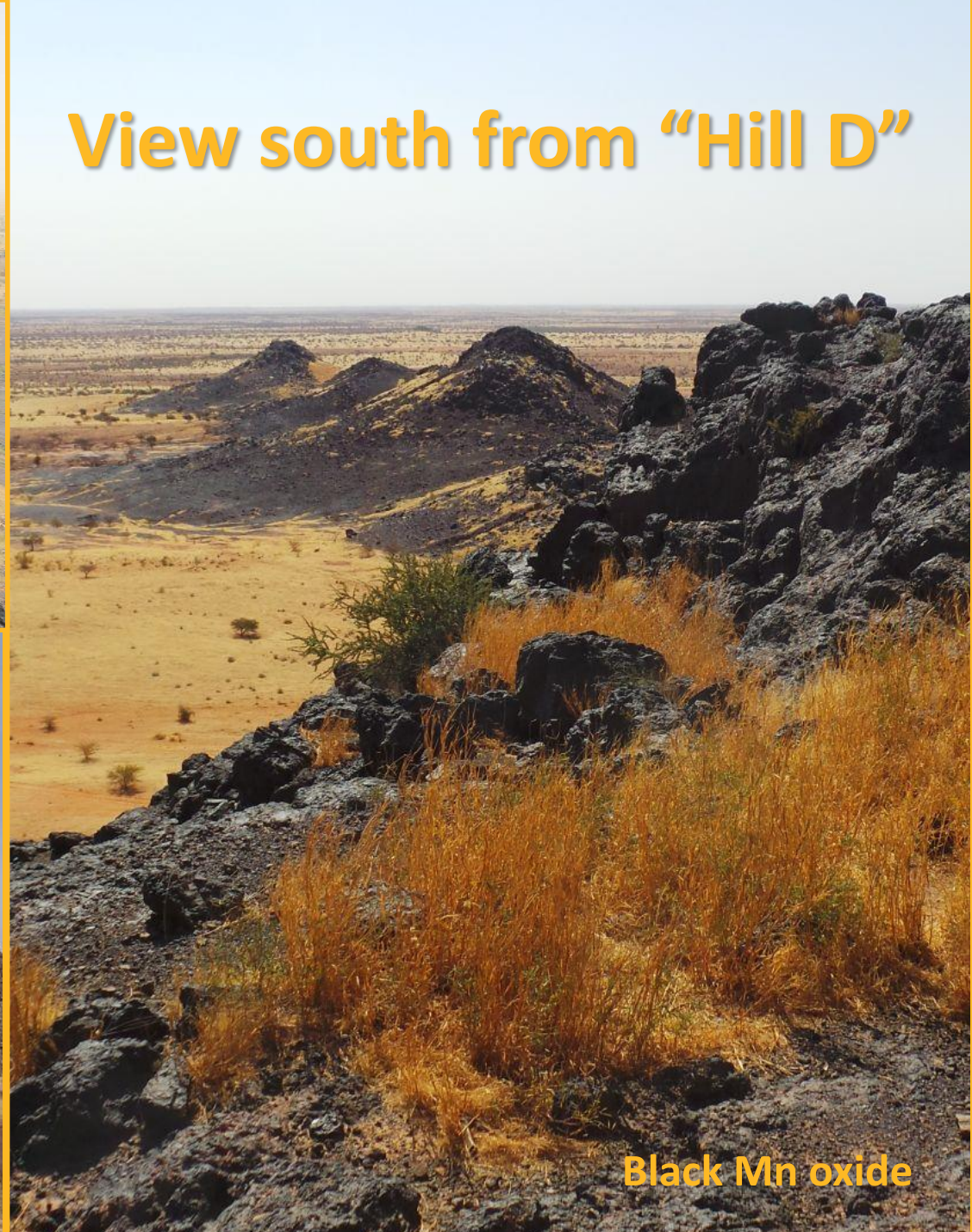
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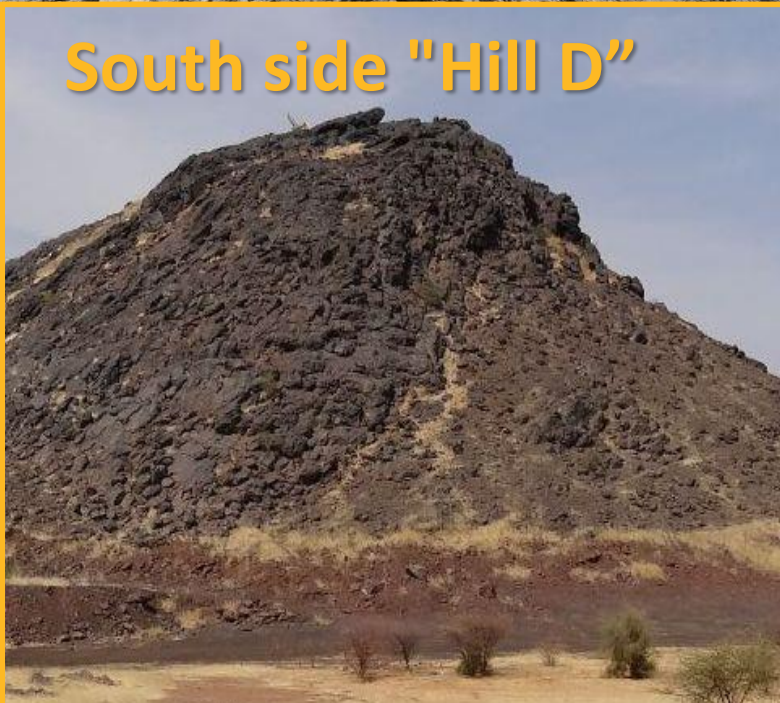




High grade on "Hill D"



View south from "Hill D"



South side "Hill D"

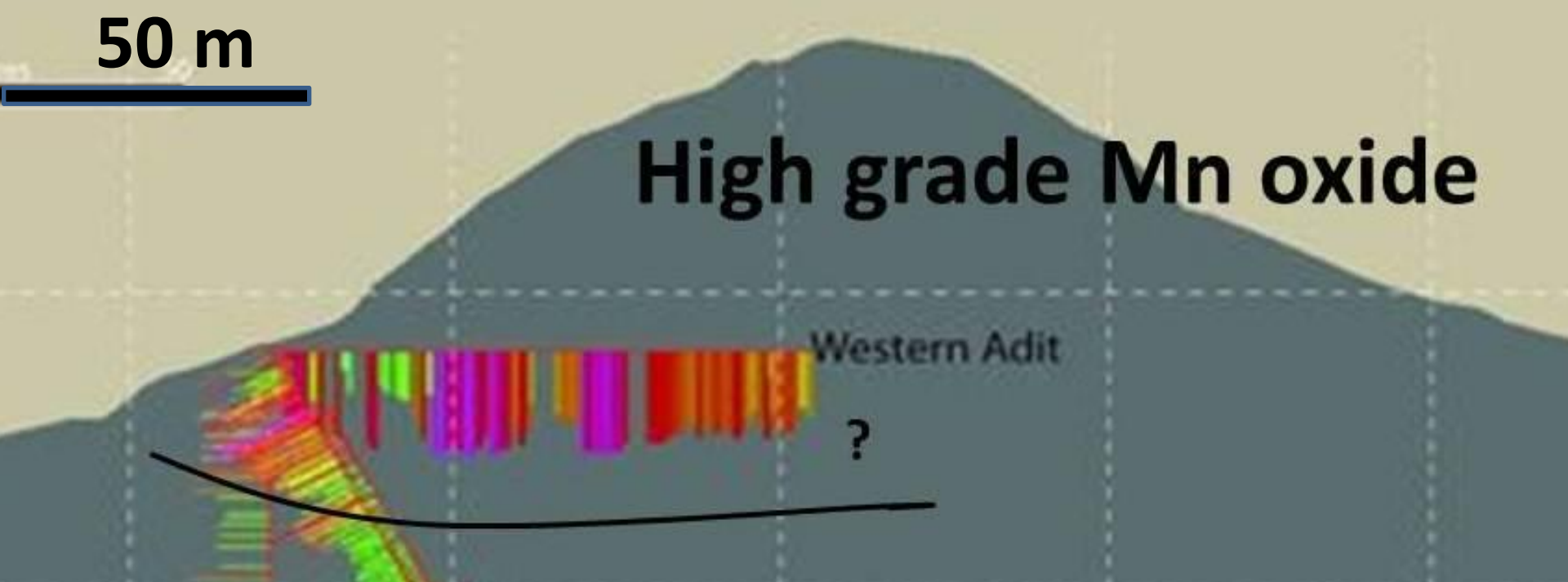
Black Mn oxide





**Simple mining**

**50 m**



**High grade Mn oxide**

Western Adit

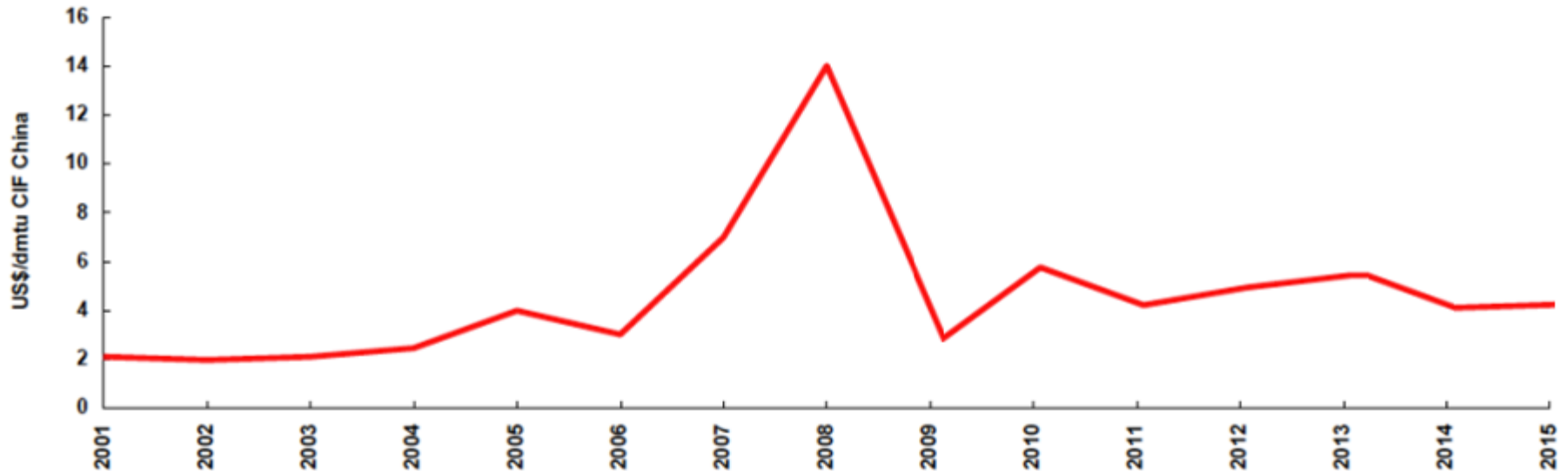
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# Manganese Prices

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High grade Mn ore basis USD/dmtu CIF China

Source of historic and forecasted manganese prices: CRU,  
Macquarie Research, [www.ferro-alloys.com](http://www.ferro-alloys.com)



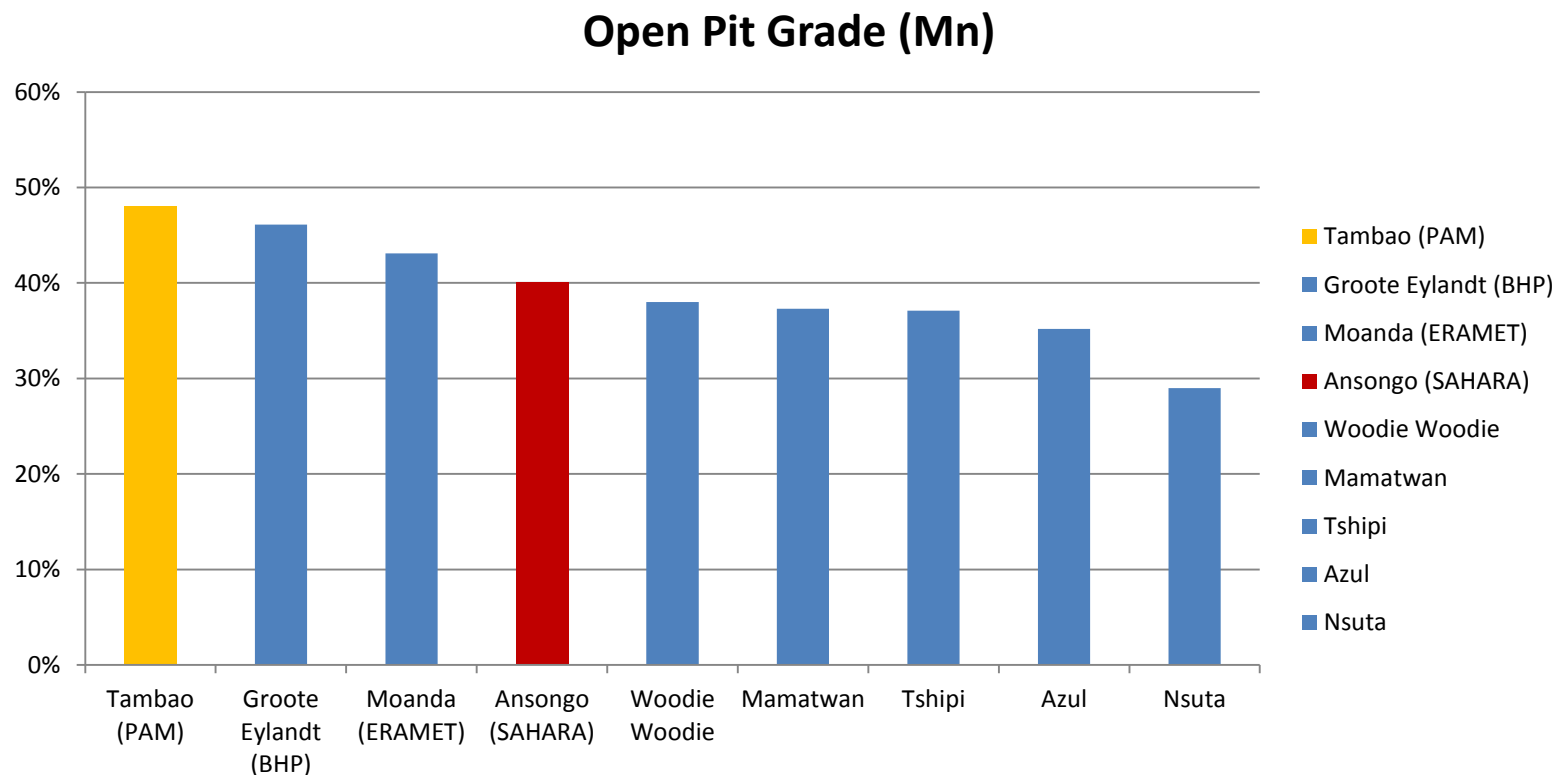
Example: Current comparable Mn ore ( Australian 44% lump) price = 4.80 USD /DMTU CIF China  
(source: [www.ferro-alloys.com](http://www.ferro-alloys.com) 19.Sept. 2014)

$\$4.8/\text{DMTU} \times 44\% \text{ Mn} \times 100 = \text{USD } 211.20/\text{tonne}$



# Ansongo – Mn target grade v Producers

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- **Ansongo target grade is above the mid range of open pit producers**
- **Tambao is the highest grade in the world (Pan African Minerals)**

Ansongo target grade is based on the mid range of the Exploration Target announced 15 September. An Exploration Target is an estimate of mineralisation where the potential quantity and grade is conceptual in nature, because 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

# World Manganese Producers

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Name	Location	Owner	Mn Ore (mt)	Grade (Mn)	Mining
Tambao	Burkina Faso	PAM	36	48%	OP
Groote Eylandt	Australia	BHP, Anglo American	75.6	46%	OP
Wessels	South Africa	BHP, Anglo American, Ntsimbintle	64	44%	UG
Moanda	Gabon	Eramet, Gabon Gvt	100	43%	OP
Nchwaning/ Gloria	South Africa	African Rainbow Minerals , Assore	165	42%	UG
Gravenhage	South Africa	Aquila Resources, Tawana Resources	13	40%	UG/OP
Woodie Woodie	Australia	Private Group	16.7	38%	OP
Mamatwan	South Africa	BHP, Anglo American, Ntsimbintle	46	37%	OP
Tshipi	South Africa	JMS, Ntsimbintle	60.5	37%	OP
Azul	Brazil	Vale	15	35%	OP
Nsuta	Ghana	Privat Group	24.4	29%	OP
Zhairem	Kazakhstan	Eurasian Natural Resources	54.2	24%	OP



## Ansongo – The existing plant will be upgraded

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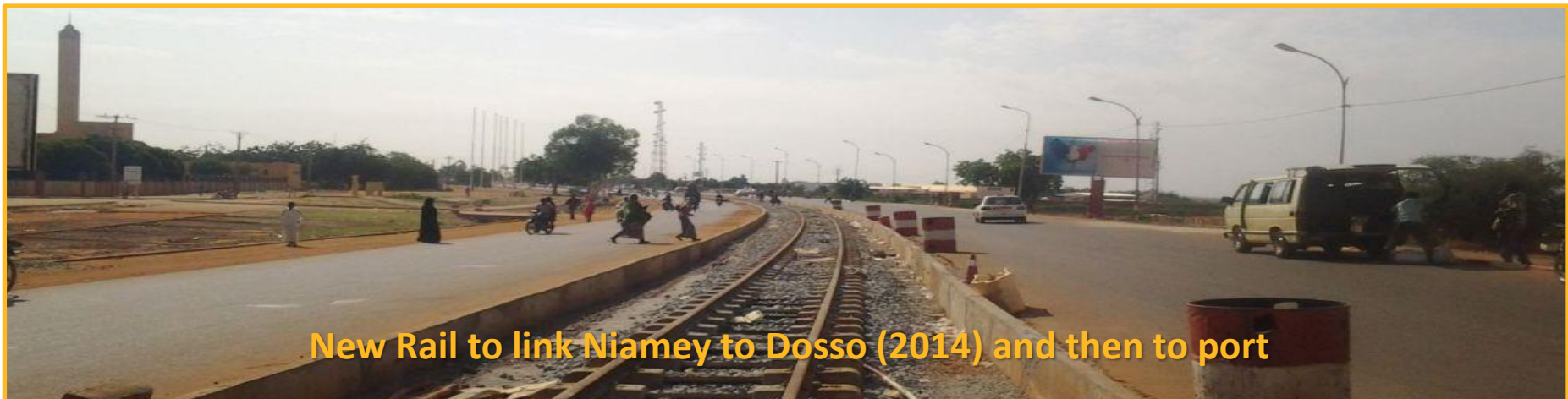
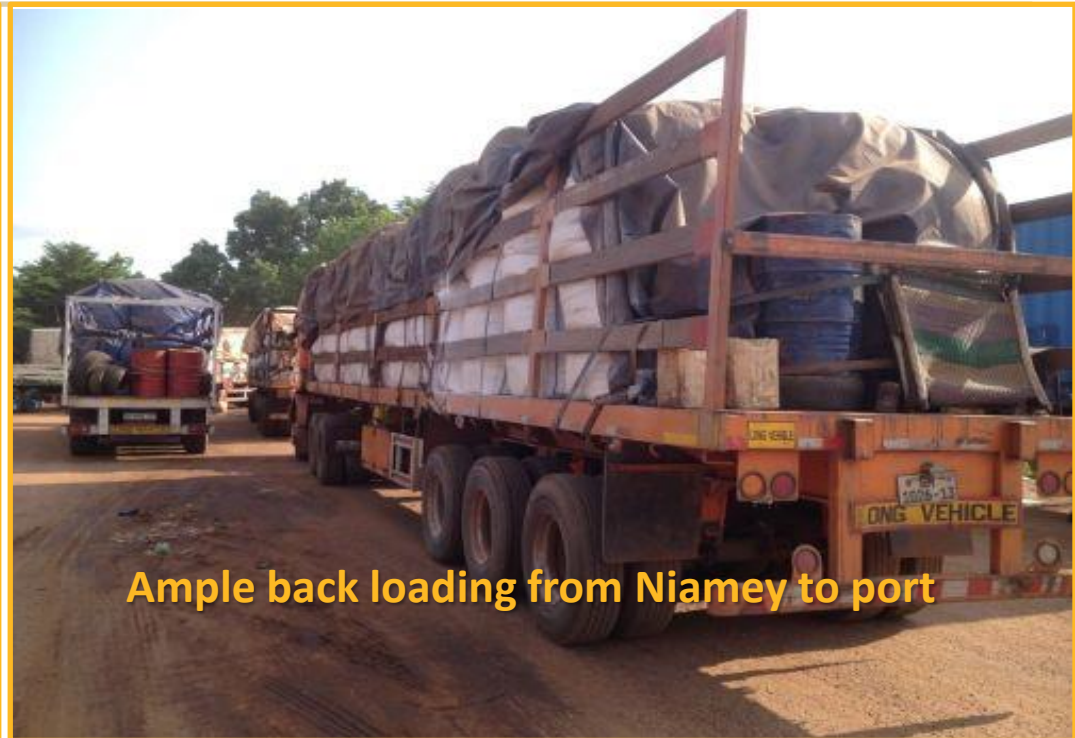
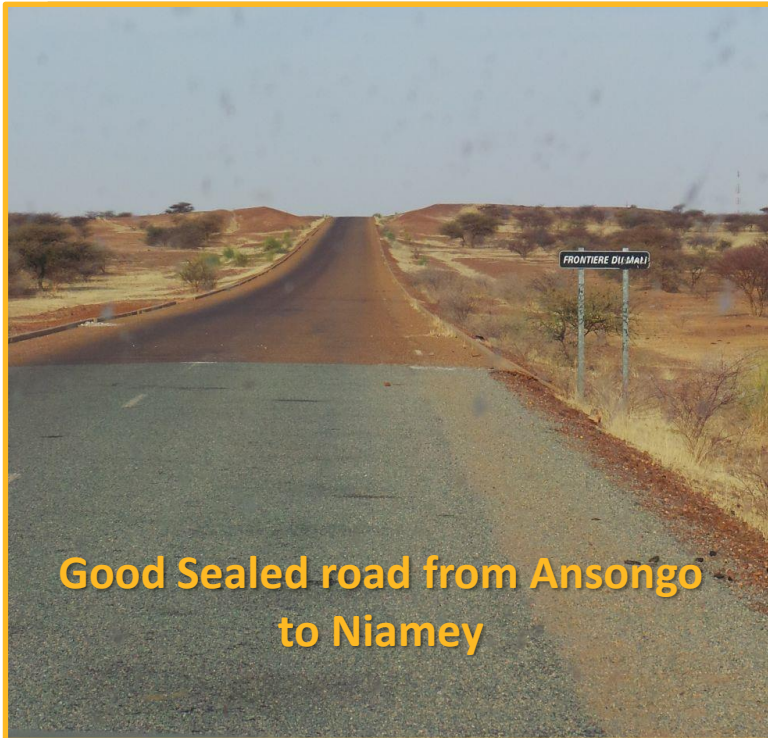
Crushing and screening plant

- **NEXT STEPS TO MINING**
- Mine Scoping to include resource definition drilling - 2015
- Heavy media test on 5 tonne sample
- Shipping crushed Mn lump to test logistics and markets



## Ansongo – has good road links and future rail to port

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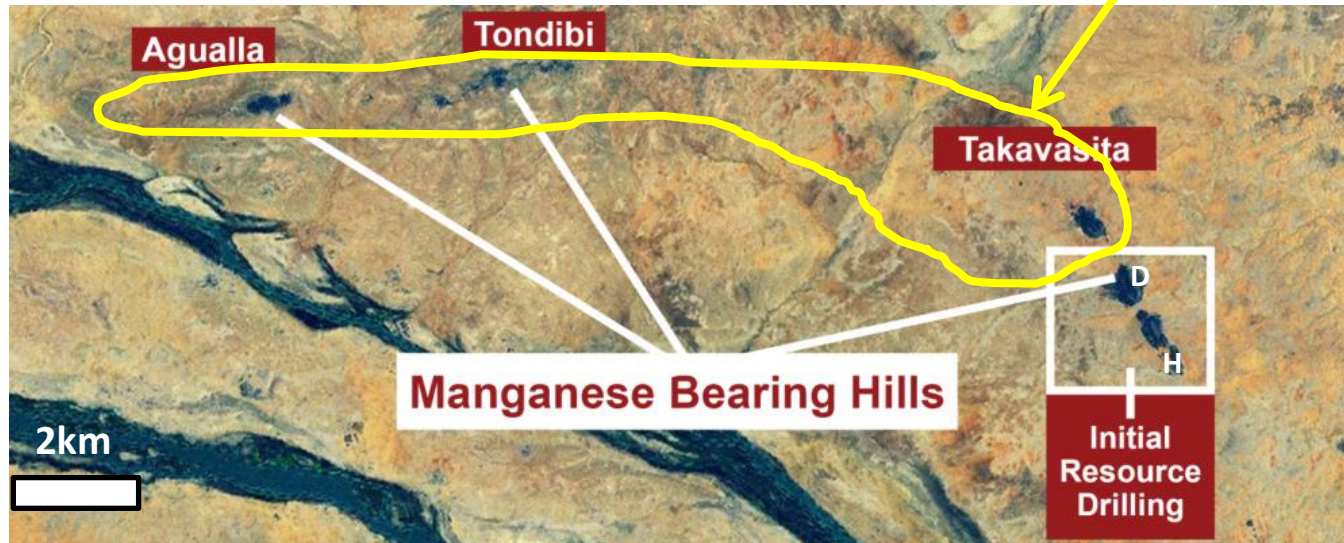
# Ansongo - has upside resource potential

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Agualla - High Grade Manganese Outcrops



The western exploration area



West of "Hill D"



Explore western area with mapping, geophysics and drilling



# Ansongo Manganese



**ASX Code: CUU**  
**[www.callabonna.com.au](http://www.callabonna.com.au)**

**29/08/2014**