# CENT EXPLORATION

# **Tocantins Project**

Iron Ore

www.cme7.com.br



### SUMMARY

1 – Introduction	Page 3
2 – Logistics and Access	Page 4
2.1 – Railway Link	Page 5
2.2 – Railway Investment	Page 6
2.3 – Logistic	Page 7
3 – Drillings	Page 8
3.1 – Drilling Wells Map	Page 9
3.2 – Drilling Wells	Page 10
4 – Metallurgical Process	Page 11
5 – Mineralogy	Page 12
6 – Mine and Plant Equipments	Page 13
7 – Mine Investment	Page 14
8 – Dealing	Page 15

Page Z



# 1 – Introduction



This report aims to describe the work done in office and in field for geological and economic description of the area related to the Tocantins Project of Cone Mine Exploration. This work has as main goal to develop an assessment of the potential reserves of iron ore in the process area, quantifying and qualifying them accurately.

The process area is located in the northern Brazilian state of Tocantins, represented in red on the map above.

Page 3



# 2 – Logistics and Access



- Distance from the project to the port: 1,200 km.
- Railway with 650 km is ready, and the government is planning to conclude the remaining section to Belém – PA.
- Fluvial route supplementary with 750 km.





# 2.1 – Railway Link

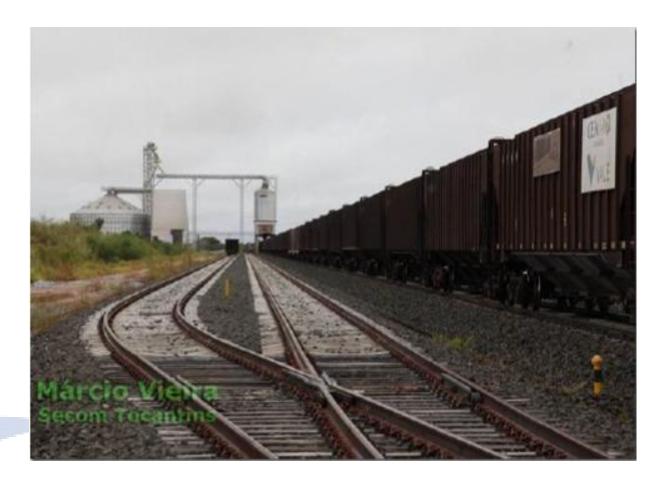


The railway cost is US\$ 1,364,000.00 per kilometer. The total cost is US\$ 68,200,000.00.

Page



### 2.2 – Railway Investment

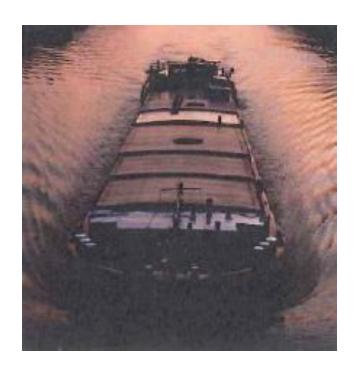


Railway siding = US\$ 85,000,000.00 Marshalling yard = US\$ 20,000,000.00 Train cost (composition) = evaluation





## 2.3 – Logistic



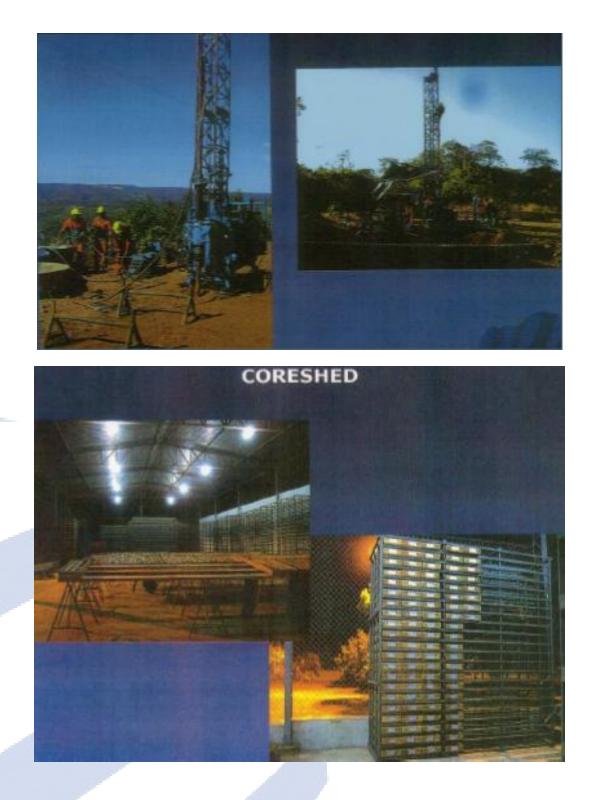


- 50,000,000 tons / year
- 140,000 tons / day
- 7 charges / day

Page 7



# 3 – Drillings



Page 8



Page **9** 

### 3.1 – Drilling Wells Map



75 km x 35 km



# 3.2 – Drilling Wells

- More than 300 wells;
- Many thousand meters searched;
- Hundreds of samples taken;

According to experts, the 3 billion tons of iron ore estimated can easily overcome 5-6 billion tons.





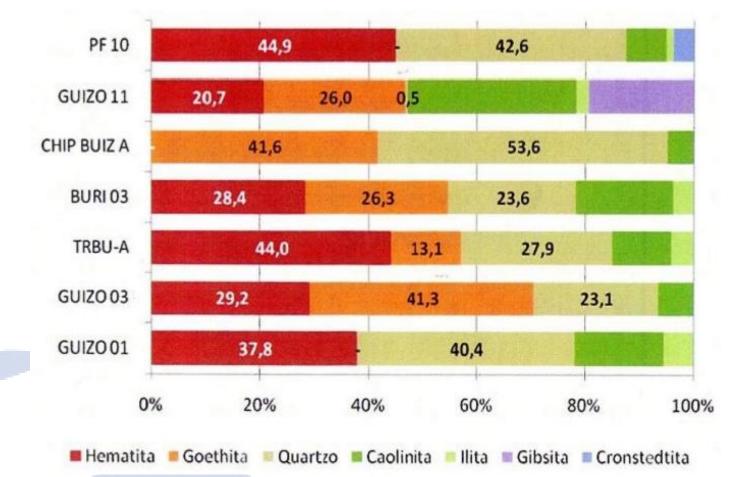
# 4 – Metallurgical Process



Page **11** 



# 5 – Mineralogy



X-Ray Diffraction Analysis:



# 6 – Mine and Plant Equipments

•Jaw Crusher (05)	US\$ 15,000,000.00
•Cone Re-crusher (05)	US\$ 15,000,000.00
<ul> <li>Screen of three decks</li> </ul>	US\$ 12,000,000.00
<ul> <li>Sets of conveyor belt</li> </ul>	US\$ 22,000,000.00
•Magnetic concentrator (3-5)	US\$ 55,000,000.00
<ul> <li>Excavators</li> </ul>	US\$ 15,000,000.00
•Loaders	US\$ 18,000,000.00
<ul> <li>Dump trucks</li> </ul>	US\$ 15,000,000.00
•Water trucks	US\$ 3,000,000.00
<ul> <li>Flotation cells</li> </ul>	under estimation
<ul> <li>Diverse material</li> </ul>	US\$ 12,000,000.00
Total :	US\$ 182,000,000.00

 $\mathsf{Page}\mathbf{13}$ 



## 7 – Mine Investment

The holder is looking for an investor to conclude the geological survey, the actual iron ore deposit of 3 billion tons, basically hematite and goethite, will grow many times and support any process plant's size for many decades, and a feasible target up to 50 million tons/year could be confirmed after concluding the logistic study.

The project will request an initial investment of US\$ 350,000,000 to start building the process plant (with flotation and magnetic concentrators), open pit mine, railway siding, machinery, loaders, feeders, trucks, buildings, etc.

This investment will be done in parcels according to the installation schedule, after concluding the step one and the iron ore production starts, the company will generate a gross income which will allow future steps to reach full mine capacity.



# 8 – Dealing

The holder is looking for investors to deal the project and build: mine, process plant and the whole logistics.

According to the iron ore reserve evaluation the Tocantins Project reaches US\$ 3,000,000,000 market value and it is offered participation for the investor which becomes a partner in the enterprise with the investment of US\$ 350,000,000, in parcels according to the installation chronogram.

The owners agree in sell the whole operation on parcels if it is the investor interest.

Page 15