



**FIRST QUANTUM**  
MINERALS LTD.



**Mauritanian Copper Mines SA**



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MINERALS LTD.

# SUMMARY

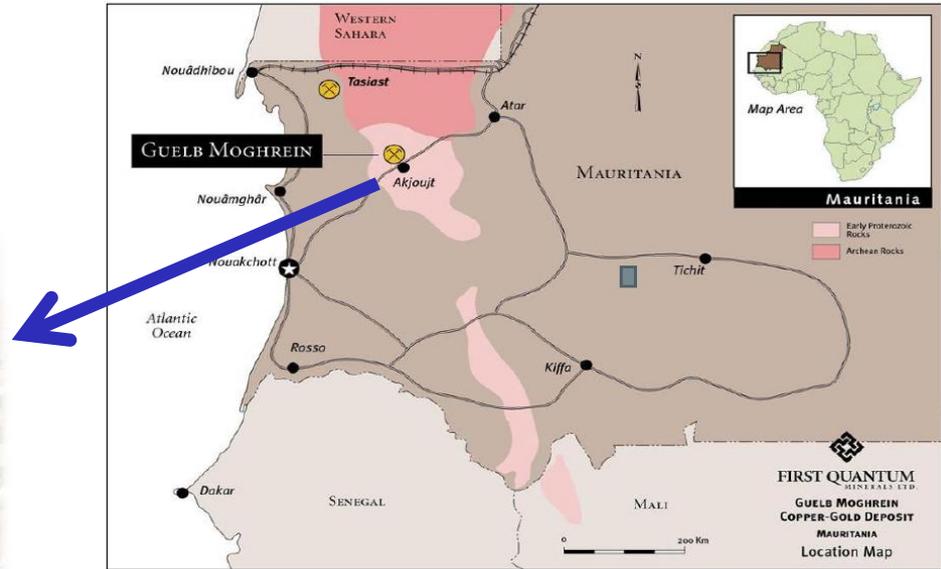
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- ❖ **LOCATION**
- ❖ **MCM HISTORY**
- ❖ **ORE TYPE**
- ❖ **PROCESS FLOW – COPPER CONCENTRATE**
- ❖ **MINING PRODUCTION OVERVIEW 2013**
- ❖ **PLANT PRODUCTION OVERVIEW 2013**
- ❖ **MCM, A COMPANY THAT INVESTS IN MAURITANIA**
- ❖ **PEOPLE – FQM WAYS**



# Location

- ✓ 255km NE of Nouakchott
- ✓ 3km W Akjoujt



# MCM history

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November 2004	FQML purchased Guelb Moghrein Mine
March 2005	Construction commenced
2nd Qtr 2006	Commissioning
4th Qtr 2006	Commercial Production
2009	Process Plant upgraded to 3.8 Mtpa



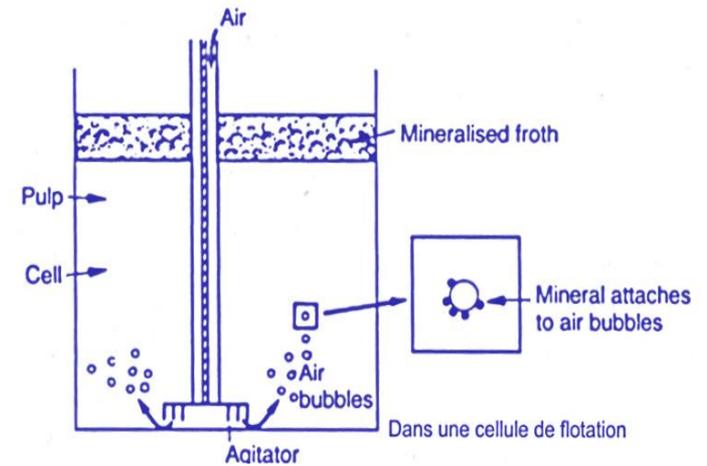
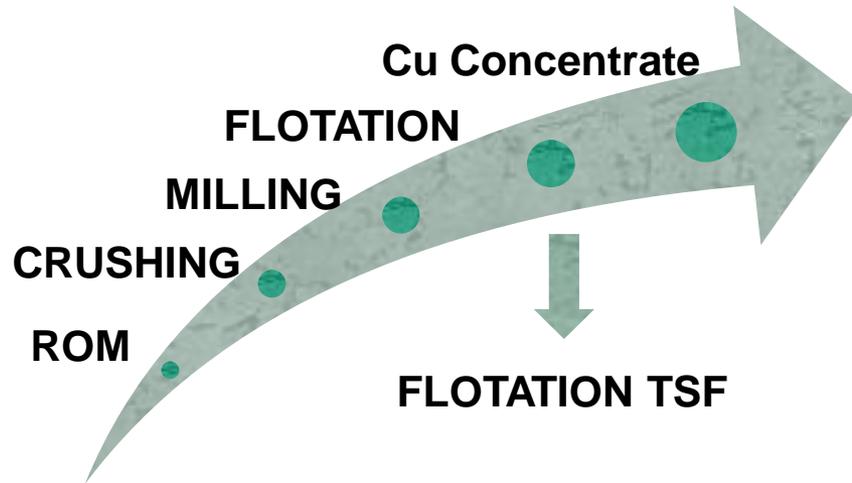
# Ore type

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- ✓ Copper sulfides: Chalcopyrite ,Cubanite,
- ✓ Gangue: Iron oxides and carbonates, pyrrhotite, arsenopyrite, ...



# Process Flow – Copper concentrate



# Mining production overview 2013

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<b>Tonnes mined</b>	<b>25 M</b>
<b>Crushed</b>	<b>3 M</b>
<b>Head grade T.Cu (%)</b>	<b>1.42</b>
<b>Head grade Au (g/t)</b>	<b>1.13</b>
<b>As (ppm)</b>	<b>1099</b>



# Plant production overview 2013

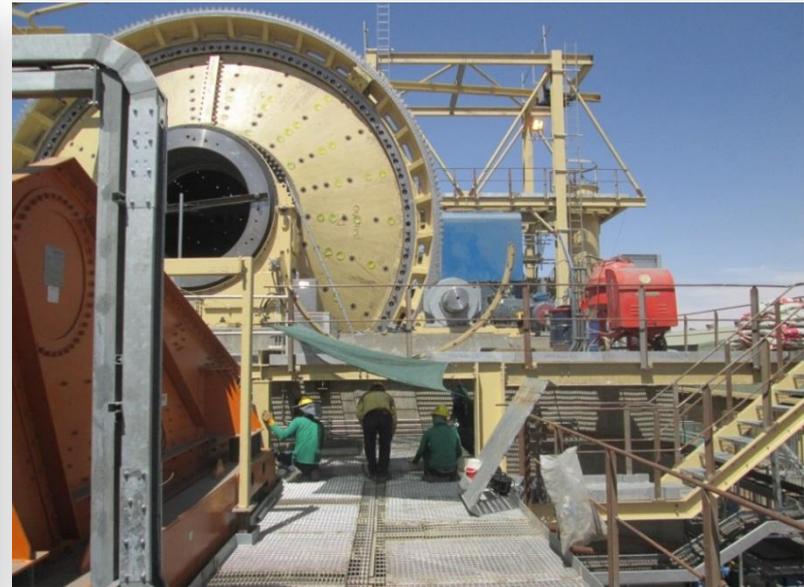
<b>Milled throughput (dt)</b>	<b>2.85 M</b>
<b>Milling rate (tph)</b>	<b>390</b>
<b>Copper recovery %</b>	<b>93.6</b>
<b>Overall Gold recovery %</b>	<b>53.7</b>
<b>Cu grade in cons %</b>	<b>22.16</b>
<b>Au grade in cons g/t</b>	<b>10.55</b>
<b>Copper produced t</b>	<b>37,872</b>
<b>Gold produced oz</b>	<b>57,952</b>



# MCM, a company which invests in Mauritania

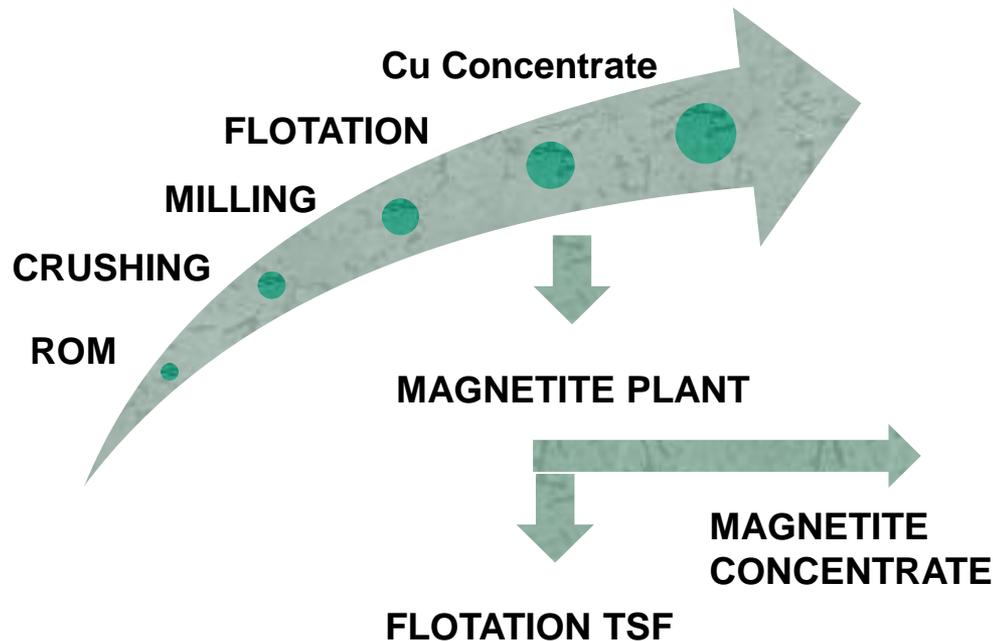
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Magnetite, SAG, new mining equipment PC 2000, new flotation equipment..



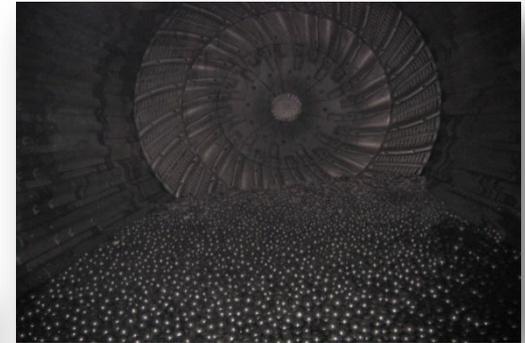
# Magnetite

- ✓ Represents 20 to 30% of our ore
- ✓ Separated from the flotation tails at little operating cost by using magnets
- ✓ Projected to produce 900,000 tonnes per year of concentrate
- ✓ Shipped by the new port in NKC through an MCM by-pass road to avoid traffic in Nouakchott.



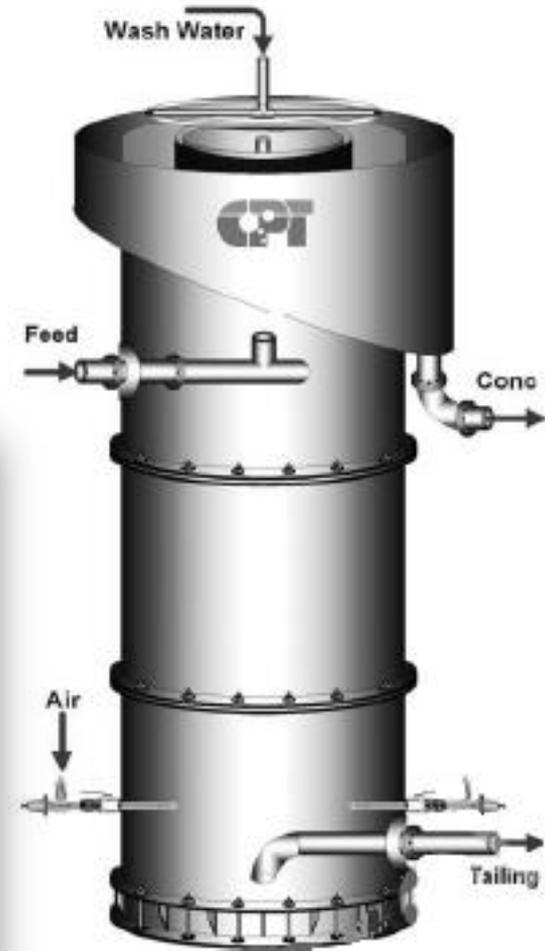
# SAG (Semi-Autogenous) MILL

- ✓ Stabilize mill throughput and grind
- ✓ Higher throughputs - 500 tph
- ✓ Less affected by the changes in ore
- ✓ Ideal for low-value high-throughput ore



# New flotation equipment (column cell)

- ✓ Different technology
- ✓ Improved concentrate grade
- ✓ First site to trial it for the whole FQM group back in 2012 and the first of its kind in Mauritania



# New mine equipment PC 2000 and HD 785

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- ✓ PC 2000 mines waste more efficiently
- ✓ Larger HD 785 fleet to retire the smaller and more costly HD 465 trucks



# People – FQM ways

BOLDER, SMARTER and DRIVEN



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# QUESTIONS?

