

## Pajingo Gold Mine

### Innovation Submission

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QMI – Health & Safety Conference  
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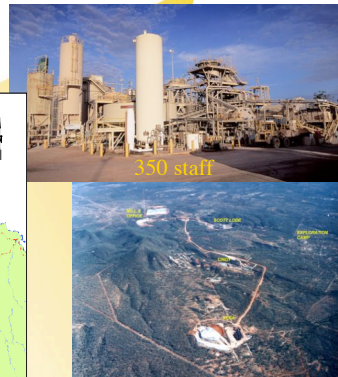
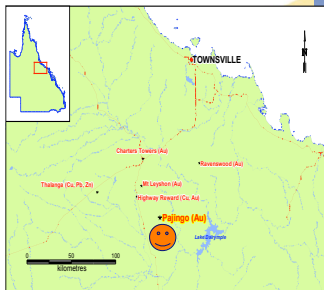
### Submission

**Accidental  
Locking of  
Isolator in “ON”  
position.**

**“Team based risk  
solving”**

### Pajingo Mine Site - hard rock u/g gold mine

186 kms SW of  
Townsville



### The PROBLEM

- During a crusher shutdown, an isolator in a MCC was accidentally locked in the “ON” position.
- The original design of the isolators as fitted in the 1980’s allowed these circuit breakers to be locked in the “ON” position
- ✓ We needed to prevent an occurrence of an electrical isolation incident.



## Investigation Team established



✓ It was recognised that this type of incident could have serious consequences.



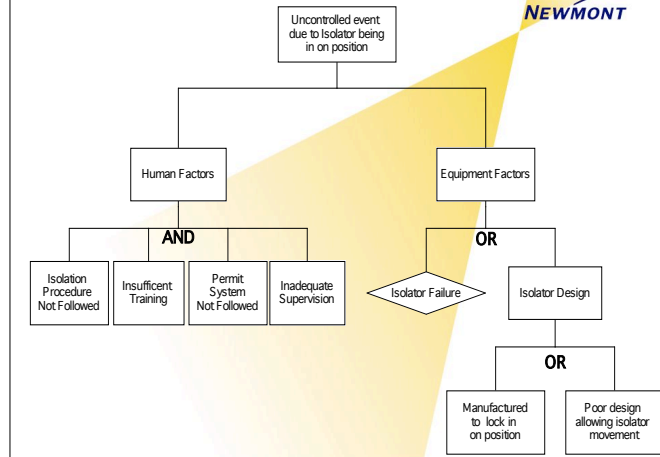
✓ An investigation team was set up with the aim of finding corrective actions that would effectively address the root causes.



✓ The incident investigation team used a **team based** risk assessment.



## FAULT TREE ANALYSIS



## Hazard Inventory Table



Hazards & Location	Degree of Uncertainty	Magnitude of Hazard	Nature of Consequence
Electrical and mechanical hazards associated with the Isolation of Plant and Equipment in the Mill area.	Incidents can occur at NPO, where Isolators are locked and tagged in the "ON" position during isolation activities.	Major isolation activities occur on a weekly basis in the crushing circuit and less frequently in the mill circuit.	High potential of Personal Injury and Equipment Damage.

## Risk Analysis Method

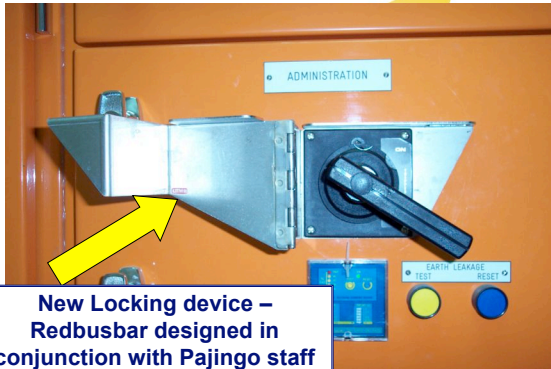


### Before Controls in place:-

Personal injury or equipment damage due to an isolator being locked in the "ON" position.

Likelihood	Consequence				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
5 Certain	High	High	Extreme	Extreme	Extreme
4 Likely	Medium	High	High	Extreme	Extreme
3 Possible	Low	Medium	High	Extreme	Extreme
2 Unlikely	Low	Low	Medium	High	Extreme
1 Rare	Low	Low	Medium	Medium	High

## What was needed?



**New Locking device – Redbusbar designed in conjunction with Pajingo staff**

## After Controls in place:-



- Plate gate locking system fitted
- Removal of existing pin latch mechanism

Likelihood	Consequence				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
5 Certain	High	High	Extreme	Extreme	Extreme
4 Likely	Medium	High	High	Extreme	Extreme
3 Possible	Low	Medium	High	Extreme	Extreme
2 Unlikely	Low	Low	Medium	High	Extreme
1 Rare	Low	Low	Medium	Medium	High

## Now safe – Can only be locked in OFF position!



**Swings shut and must be in OFF to close and lock.**

## Each Isolation switch has been upgraded. Over 200 switches have been retro-fitted!



**“CIRCUIT BREAKER”  
POSITIVE EQUIPMENT ISOLATION**

**NEWMONT**



**NEWMONT**  
*The Gold Company*

Brett Bishop & Alan Chester

QMI – Innovation Awards

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