



TSHEPONG MINE



AMRE SHAFT SAFETY SEMINAR
Rustenburg - 8 March 2007



- **Background**
- **Description of incident**
- **Activities prior to the incident**
- **Immediate causes identified**
- **Basic causes**
- **Production losses**
- **Management failure**
- **System failure**
- **Remedial action taken**
- **Conclusion**



Background

- **Location**
- **Hoisted tons**
- **Rock hoist**
- **Skips**
- **Series system**
- **Mud press**



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Description of incident

A mud rush occurred on 29 November 2005 in the shaft headgear, when ore contaminated with mud, was discharged into the headgear bin during rock hoisting.

An estimated (100)hundred tons of rock and mud flooded the surface belt for +/- 25 meters. Ore that flowed from the stairway destroyed the roof of the banksman assistant's cabin and flooded the east bank.



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Activities prior to the incident

- **Planned rope replacement**
- **Rock hoisting**
- **Mud pressing**



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Immediate causes identified

- **Very high percentage of slurry in the ore**
- **Water that were discharged into ore system**

Basic causes

- **Badly corroded steel pipe elbow**
- **Mud press discharge chute were not properly in place**

Production losses

- **Disruption of rock hoisting**
- **M² - 2356 m²**
- **Meters – 70 meters**
- **Tons – 4711 reef tons**
- **Loss in profit – R861 000**

Management failure

- **Design**
- **Maintenance program**

System failure

- **Insufficient inspection**
- **Operator failed to report**

Remedial action - Short term

- **Stopped all rock hoisting**
- **Clean belt with production crews**
- **Repair leaking pipe & chute**
- **Re-adjust skip factor**

Remedial Action - Long term

- **Install knife gate door on bin**
- **Ensure additional settler is on line during back ends/rope change**
- **Revise the rope change procedure**



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Conclusion

Never think that something that never happened on your shaft, will not happen, it can and does happen.



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QUESTIONS