

Identifying Challenges and Delivering Solutions

A look at Magellan Metals

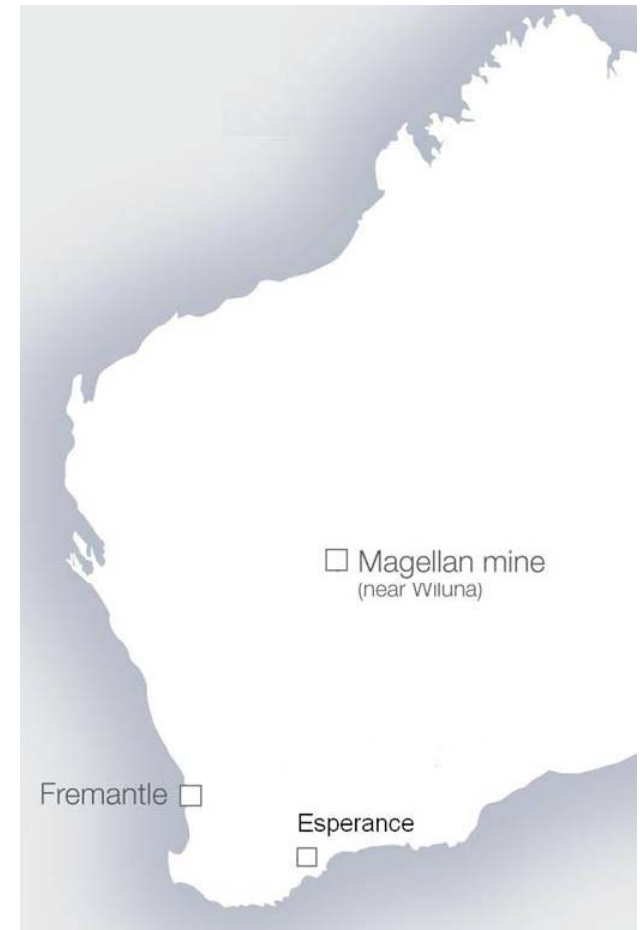
WA OSH Conference
2009



Presenter: Kane Blackman, OHS&E Manager

Company and Project

- Magellan Metals and Ivernia relationship.
- Magellan project location.
- Small, open cut lead carbonate mine and processing (concentrate) facility.
- Commissioned 2005.
- Export to customers in Asia.
- Product end uses.



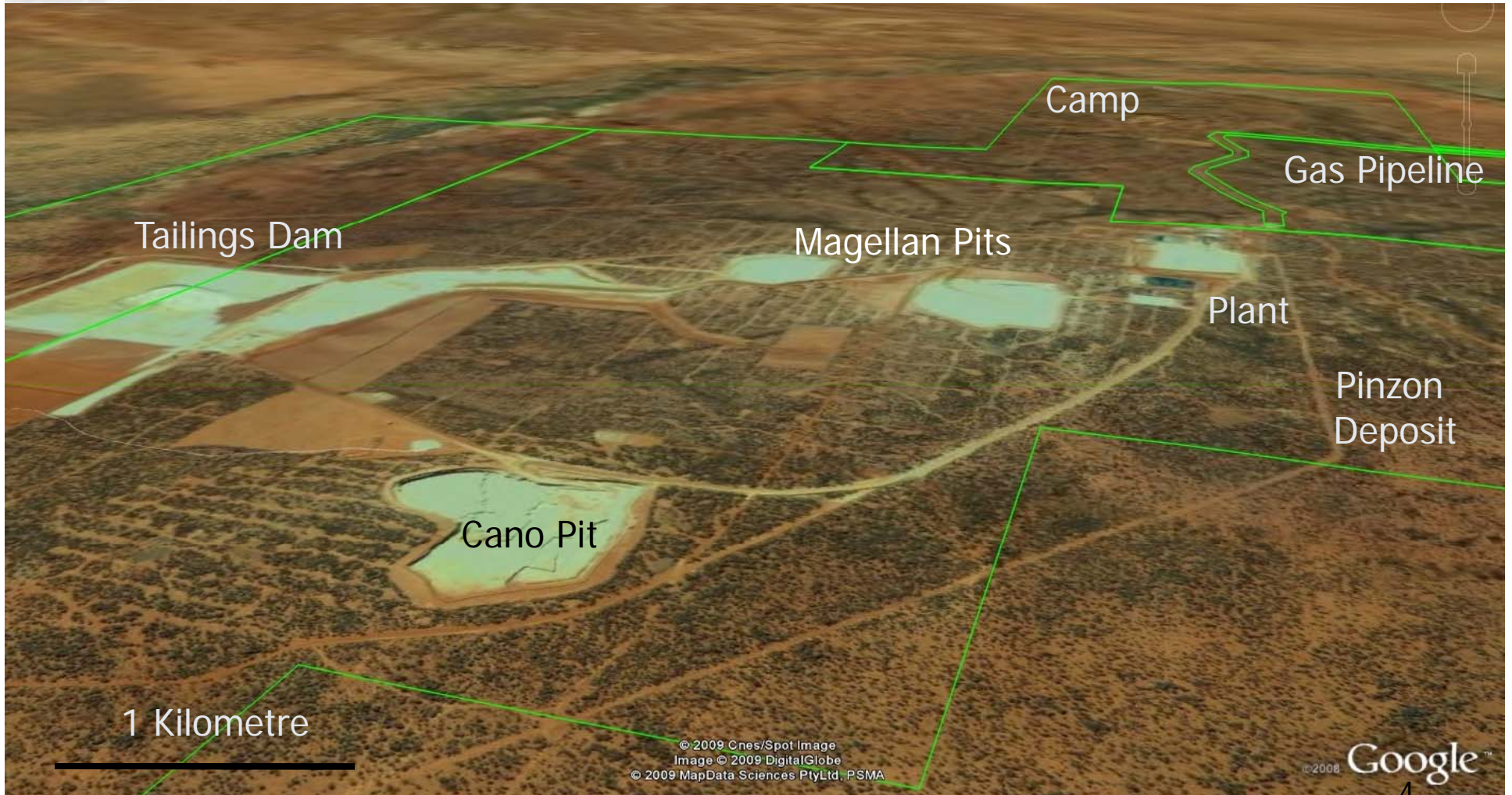
Company and Project (cont'd)

- Only significant pure lead mine in the world.
- Significant by scale and purity.
- Responsible for ~2% of world supply.
- At full production:
 - One of the world's top 10 lead mines.
 - ~85,000 tonnes of lead in carbonate concentrate per year.



Company and Project (cont'd)

Magellan Hill Looking East



Product

Lead Carbonate Concentrate



'Dark grey to light grey-brown soil-like solid. Amorphous solid ore consisting predominantly of lead mainly in the form of cerussite and anglesite.'

- United Nations (UN) Number: 2291
- Class: 6.1 (Toxic substances)
- Shipping name: Lead Compound Soluble N.O.S.
- Packing Group: III (low danger)
- HAZCHEM code: 2Z

Previous Operations

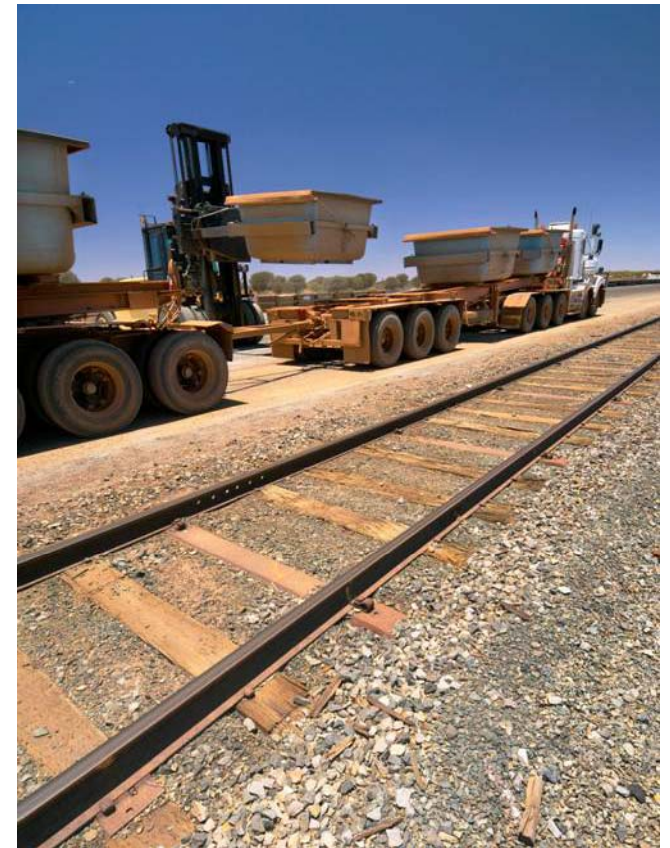
- Initially transported in 'bulk' through the Port of Esperance.



- Lead carbonate concentrate produced and placed in covered kibbles at the mine.
- Kibbles loaded onto trucks at the mine and transported to Leonora.

Previous Operations (cont'd)

- Kibbles loaded onto rail wagons at Leonora.
- Rail wagons transported to the Port of Esperance.



Previous Operations (cont'd)

- Kibbles unloaded from trains at the Port.
- Kibbles emptied at the Port and concentrate stockpiled inside storage shed.
- Concentrate transport to ship via conveyor.



Port Activities

- First concentrate vessel – 1st April 2005.
- Last concentrate vessel – 8th March 2007.
- Total number of vessels – 28.
- Total amount of concentrate – 165,997 WMT or 154,246 DMT).



What happened?

Reports of bird fatalities in early 2007.

Event 1 – December 2006

- 220 birds found dead within Esperance close to the Port.
- 8 birds tested and found to have died from lead poisoning.
- Of the 8, 6 were confirmed with lead from Magellan.

Event 2 – March 2007

- 200 birds found dead.
- 5 birds tested.
- Of the 5, 4 were confirmed with lead from Magellan.

What happened? (cont'd)

- Determined that lead dust had escaped during bulk loading.
- Port issued a Prevention Notice, preventing export of lead carbonate.
- A Parliamentary Inquiry (Education and Health Standing Committee)
 - 192 Findings.
 - 46 Recommendations.

What this meant?

- Magellan mine placed on care and maintenance.
- 75% of the workforce laid off.
- No approval for suitable export Port.
- Community anger and mistrust.
- Inability to generate revenue.

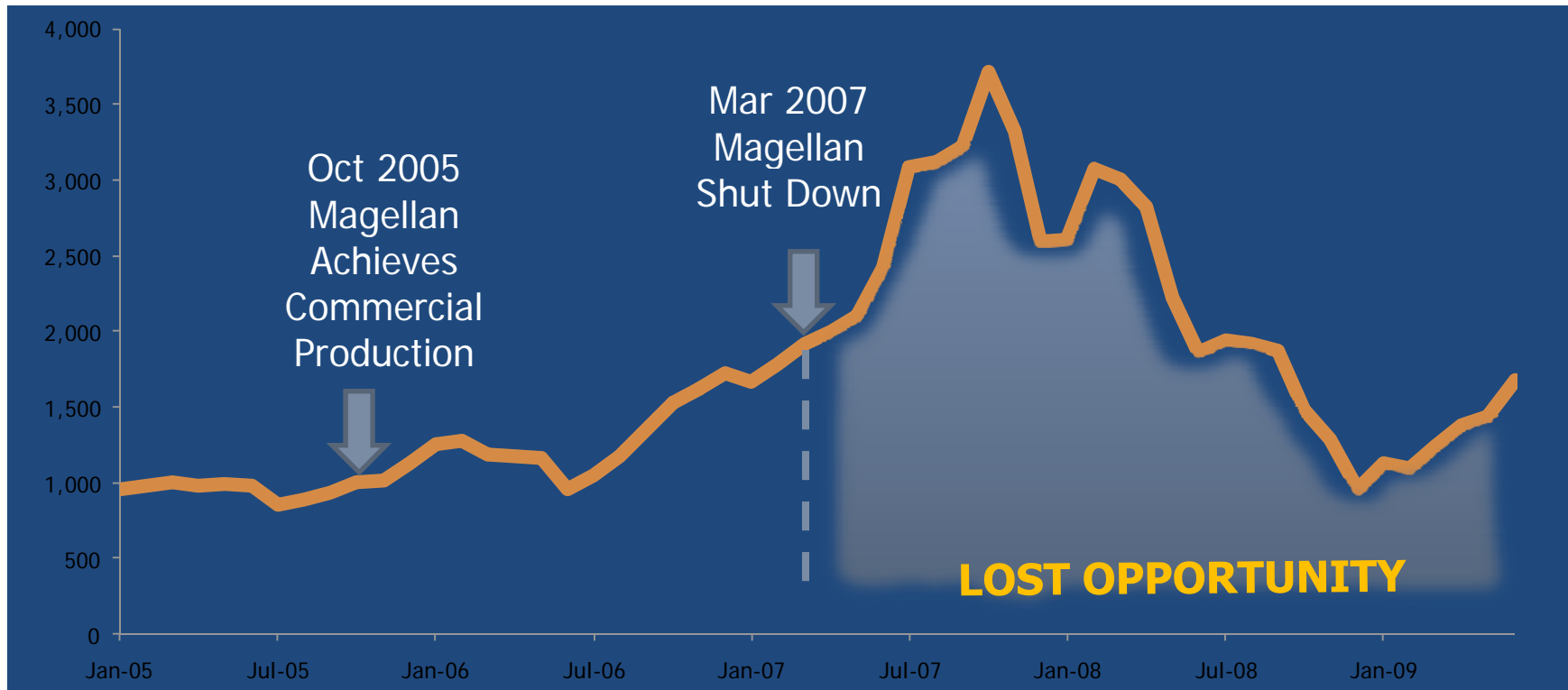


What this cost?

- Direct costs.
 - Inability to generate revenue.
 - Costs of more than \$50 million (including: care and maintenance expenses, legal and consulting fees, interest expenses, hedging losses, settlement costs and bagging trials).
 - Other?
- Indirect costs.
 - Damage to corporate reputation.
 - Team morale (uncertainty, fear and doubt).
 - Loss of trust from community, industry and Government.
 - Management focus.

Lost Opportunity

*Lead Price – January 2005 through June 2009
US dollars per tonne*



A global supplier of lead concentrate



WHERE TO FROM HERE....

The Way Forward

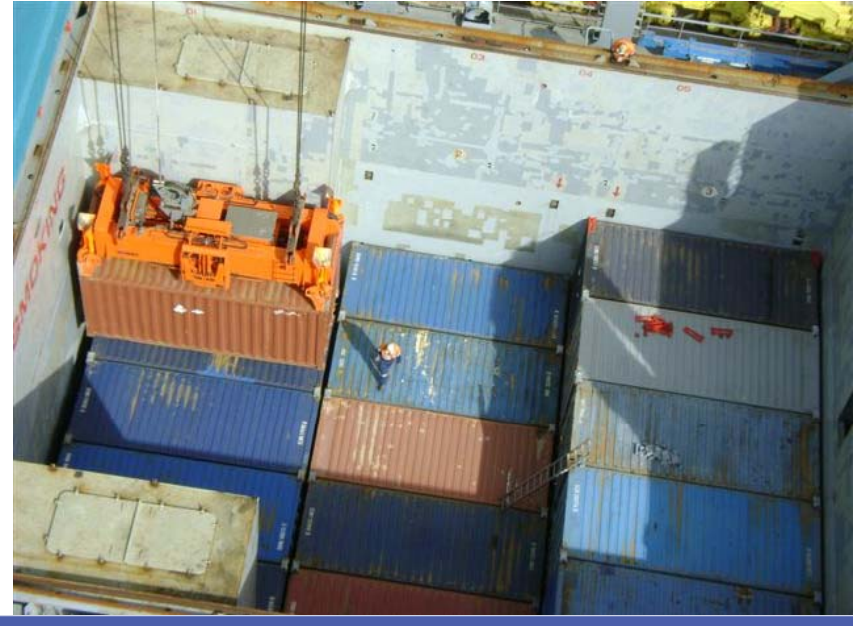
- Improved product stewardship required.
- Product containment.
- A sealed transport method.
- Approved Feb 2009.



Tried and Tested



Tried and Tested (cont'd)



Lead Removal Operation

- 1st shipment – 26 containers – March 2009.
- 2nd shipment – 329 containers – May 2009.
- Last of 8,000 DMT stockpile at the Port.
- Independent Auditor oversaw entire operation.
- All stringent health, safety and environmental conditions put in place by DEC were met.
- Demonstrates sealed shipment process is safe and environmentally sound.

Community Fund

- Magellan Community Fund: A\$1 million for community-fund based projects over three years in Esperance.
- Fund administered by the Shire of Esperance.
- Assessment Committee comprised representatives of community, Shire and Magellan.
- Seeking projects that would provide a sustainable and tangible benefit to the broader Esperance community.
- Ten Esperance based community organisations chosen to receive \$298,273 in financial support for 1st Year.

Magellan METALS
Community Fund



Community Fund (cont'd)

- Friends of Esperance Jetty.
 - Restore Hope Foundation.
 - Volunteer Sea Search and Rescue Group.
 - Bush Fire Brigade.
 - Historical Society.
 - Adventureland Park.
 - South East Runners Club.
 - St John Ambulance.
 - Surf Lifesaving Club.
 - Esperance Bras Band.
- Next funding round announced towards the end of 2009.



LOOKING TO THE FUTURE

New Components

- Lead packaged within approved bags.
- Bags are vacuumed.
- Loaded inside shipping containers.
- Containers locked.
- Containers/trucks washed.
- Containers not opened until overseas.



Signage

- All bags have an EIP.
- All bags and containers have a marine pollutant label.



- All containers have a dangerous goods placard.



Compliance and Reporting

- Independent inspection for every bag and container.
- Independent auditing of entire process.
- Independent reporting to Government.
- Public compliance reporting.
- Performance reviews.
- Compliance reports.
- Community Group liaison.
- New website developed.



Monitoring

- Baseline monitoring along the transport route from mine to Fremantle, and at the Port of Fremantle.
- Operational monitoring of the transport route and at the Port Fremantle.
- Monitoring includes soil, water, benthic sediment, dust deposition and air quality monitoring during container arrival, handling and loading.
- Use of NATA accredited laboratories for all analyses.



Emergency Response Plan

- ERP developed in consultation with FESA, DEC, DMP, DoH, local Government authorities, rail contractor, port logistics operator, Fremantle Ports and stevedores.
- ERP includes the following:
 - Roles and responsibilities.
 - Resources.
 - Emergency response procedures.
 - Clean-up procedures.
 - Post clean-up sampling.
 - Post-incident management.
 - Preparedness.

Implications for Industry

- WA Government review of all Ports.
- Changes to compliance reporting.
- Increased transparency.
- Improved inspections.
- Shift from open to closed transport.



Achievements

Created and will implement a new worldwide safety standard for the transport of lead, which goes beyond best practice for concentrate transport.

- Avoid re-handling of product.
- No potential for product escape.
- Greater stewardship.
- Improved corporate and social responsibility.

Lessons Learnt

- Accountability and responsibility does not end at mine gate.
- Understand and do not underestimate all business risks and manage them proactively.
- Transparency and stakeholder engagement important.
- Must earn social operating licence.



Questions?