GIS Application for Effective and Efficient Reporting and Information Media in Freeport Underground Mine

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Underground Survey - PT Freeport Indonesia

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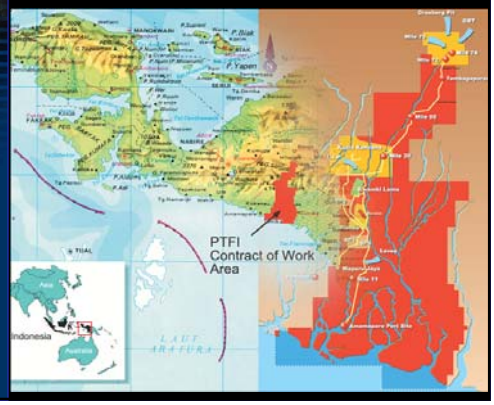
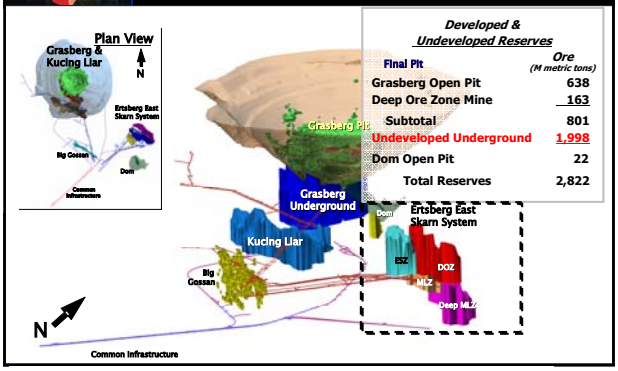
PT FREEPORT INDONESIA



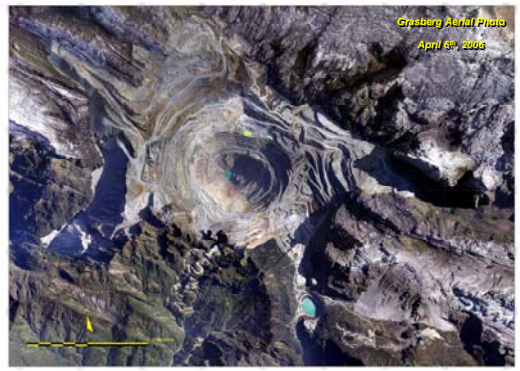
CURRENT & FUTURE OREBODIES



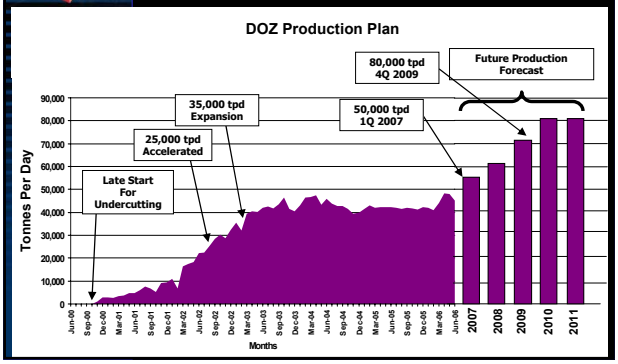
Developed & Undeveloped Reserves

Final Pit	Ore (M metric tons)
Grasberg Open Pit	638
Deep Ore Zone Mine	163
Subtotal	801
Undeveloped Underground	1,998
Dom Open Pit	22
Total Reserves	2,822

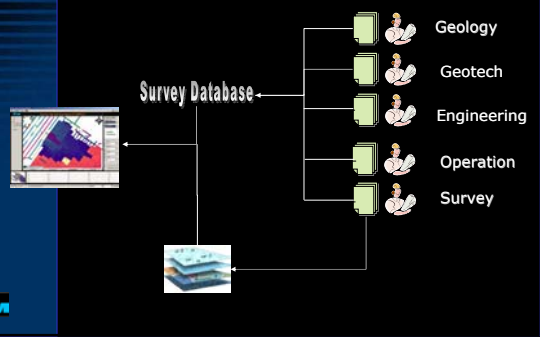
PT FREEPORT INDONESIA



DOZ PRODUCTION PLAN



UNDERGROUND GIS DATA FLOW



UNDERGROUND GIS

- Development Report
- Underground Utility
- GIS Analysis

DEVELOPMENT REPORT

- Showing of all UG developing heading map
- Advance heading report (Area /Time)
- Crew performance

UNDERGROUND UTILITY

- Showing water and air pipe network
- Showing electric cable network
- Showing heavy equipment map location

GIS ANALYSIS

- Summary of lack advance heading
- Estimate the material moved volume
- Routing shortest distance for heavy equipment movement
- Routing shortest distance for emergency exit

CONCLUSION

- **Faster reporting and easier to create thematic map**
- **UG management can monitor the development status and decide which areas need to be improved to catch up the goal**
- **With the complexity of UG tunnels and fix facilities installed, GIS will help the engineer in guiding design new tunnel or new facilities.**