



DEEP EXPLORATION TECHNOLOGIES **CRC**

Uncovering the future



DET CRC Background


- DET CRC will develop more cost-effective, safer and more environmentally-friendly methods for deep mineral exploration
- incorporated entity with independent board
- \$53M cash & \$62M in-kind support over 8 years from Australian government and participants
- participants include miners, research providers and service companies
- DET CRC head office is co-located with Boart Longyear's new Asia Pacific office in Adelaide
- 12 projects scoped by industry have commenced and are contracting over 100 researchers in 9 different organisations
- unique model of commercialisation of IP through the service sector
- participants: \$450k pa (~31x leverage)
- affiliates: \$10k pa with colleges for juniors, service providers and geological surveys



DET CRC will deliver revolutionary new technology such as coiled-tubing drilling systems with logging-while-drilling capability. Drilling and logging results will be fed real-time to remote geological modelling capability in order to plan immediate (within 24 hours) follow-up drilling.

DET CRC Progress: Oct 2012

- Anglo American joined DET CRC and Opportunity Fund created to fast track commercialisable outcomes and fund key new projects
- existing projects ongoing for 9-12 months as of end September 2011
- coiled tubing (CT) drilling operations reviewed in US and plans for DET CRC greenfields CT rig projects developed
- first sensors embedded in new carbon fibre drill rod
- test hole commenced at Brukunga Test Facility and
- circuitry completed for world's first logging-while-drilling (natural gamma) system for minex
- geochemical neutron logging tool manufactured
- first geophysical inversions undertaken 'on the cloud': key step to integrating real-time drilling data acquisition and decision making for greenfields drilling
- seismic survey undertaken at Hillside discovery
- game-changing results on calcrete sampling methodology (confidential to CRC sponsors)
- best practice developed for portable XRF analysis
- 16 PhD projects commenced



Coiled tubing drilling will permit cheaper, faster and safer drilling of more stable holes because pipe connections are not required. Logging-while-drilling will remove or greatly reduce need for core and lengthy core analysis. Combined with real-time geological modelling, these will permit follow-up drilling without rig de-mob and re-mob.



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