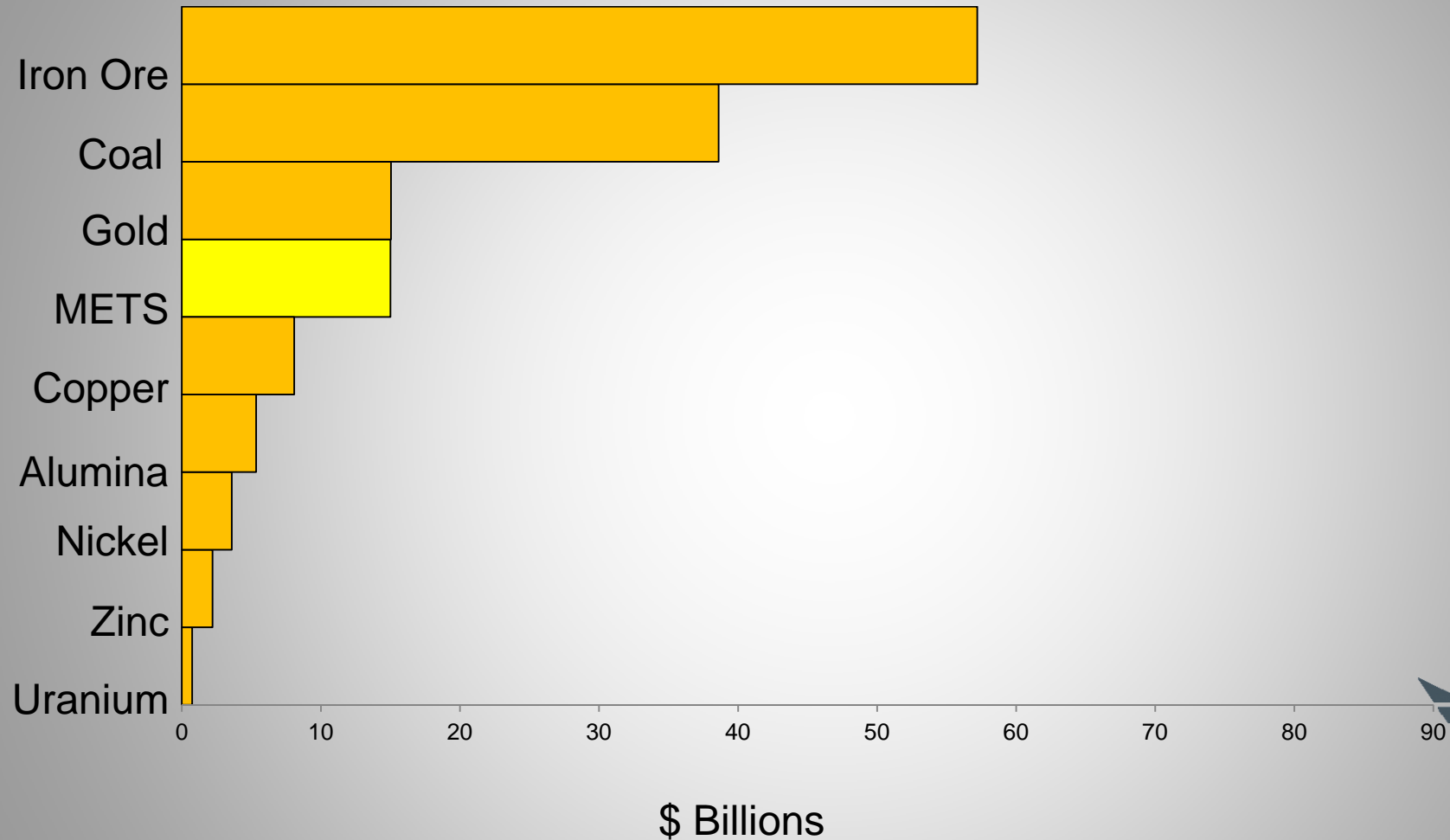


Panel Session: The Other Resources Boom and Australia's Technology Edge



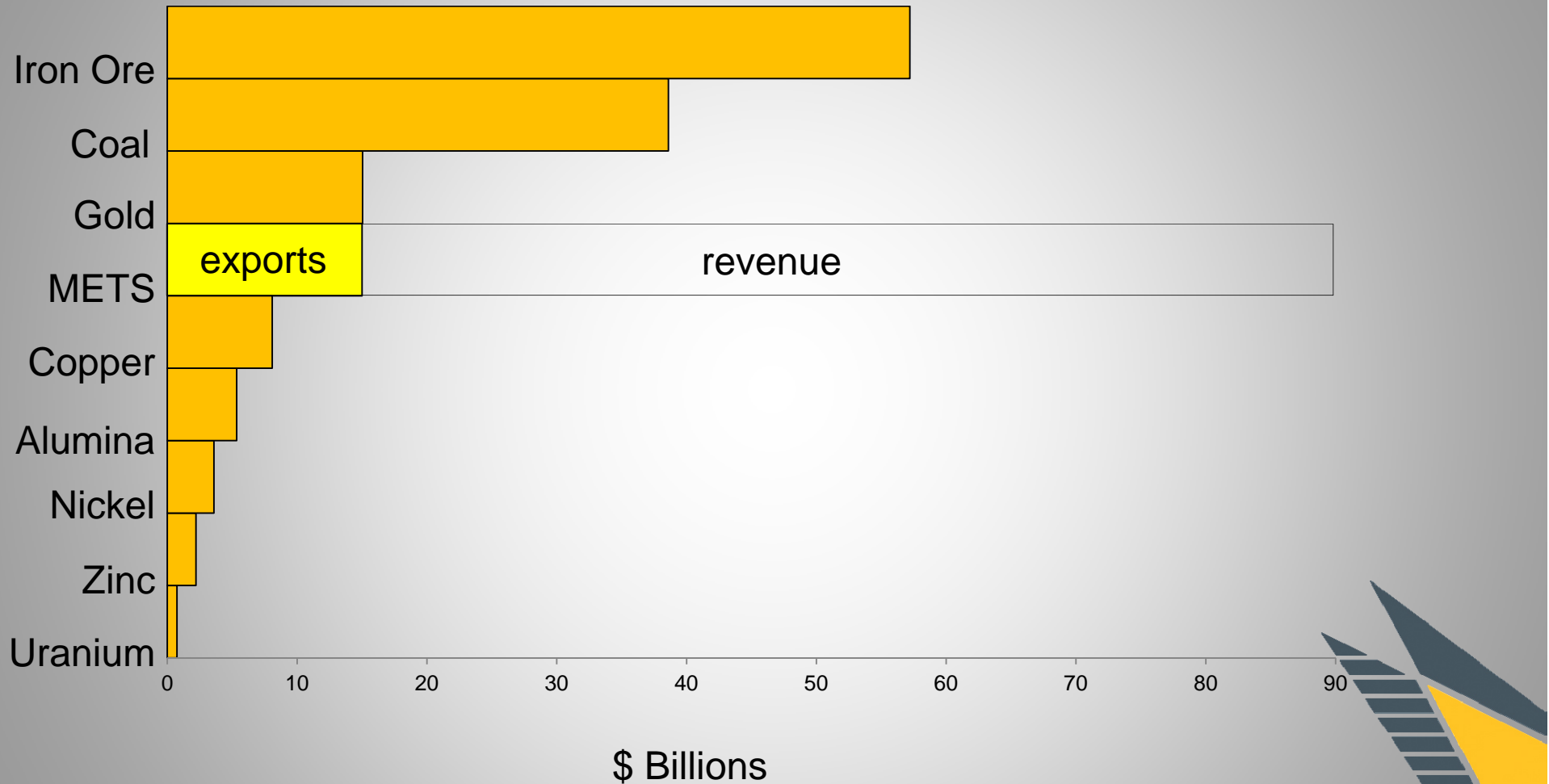
Richard Hillis, CEO, DET CRC
CRCA Conference, Perth
Wednesday 21 May

Australian Mineral Exports 2012-2013



Sources: BREE Resources and Energy Quarterly Sep 2013
& Austmine 'Australia's New Driver for Growth' Report 2013

Australian Mineral Exports 2012-2013



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& Austmine 'Australia's New Driver for Growth' Report 2013



An Australian Government Initiative



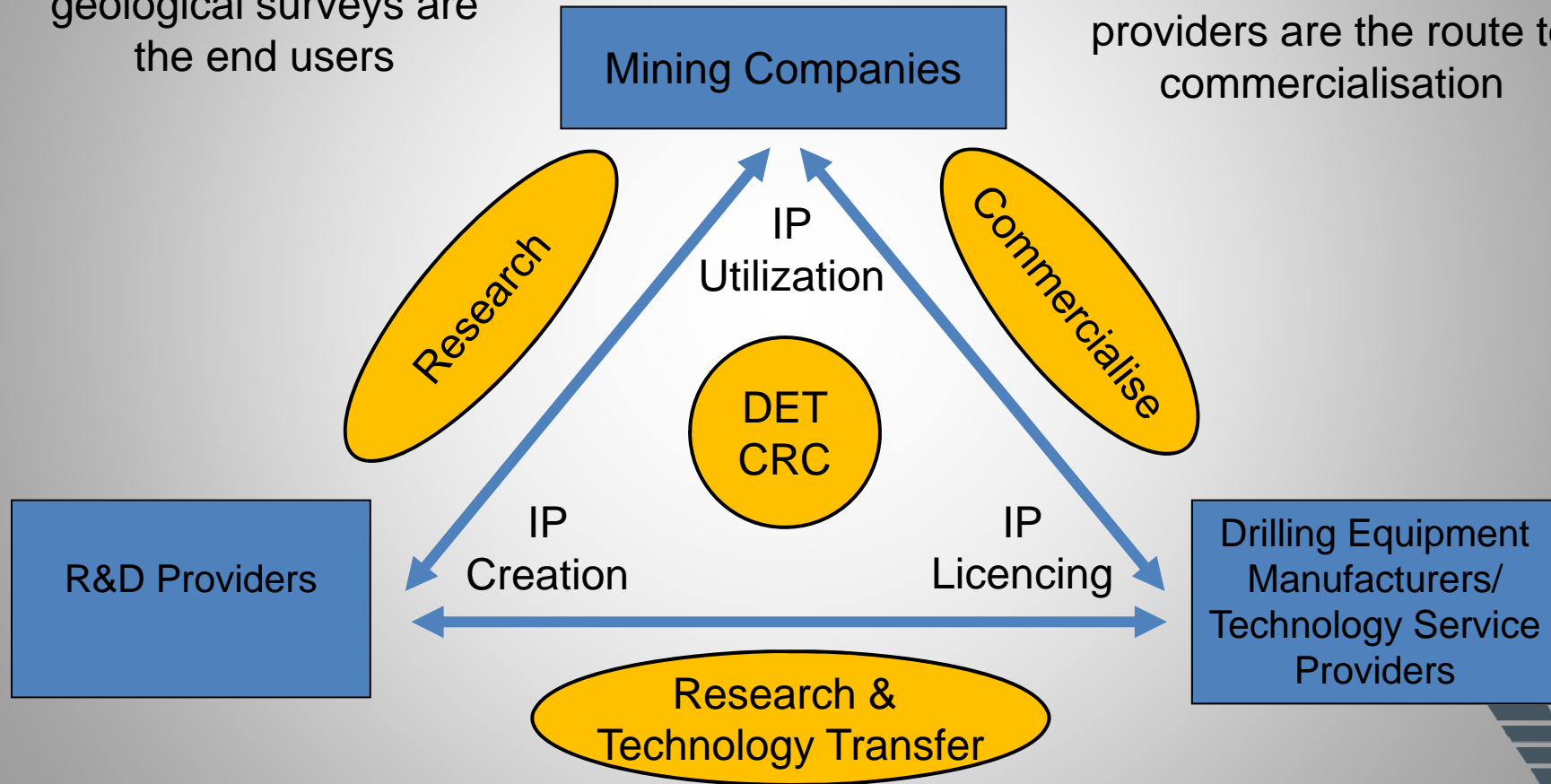




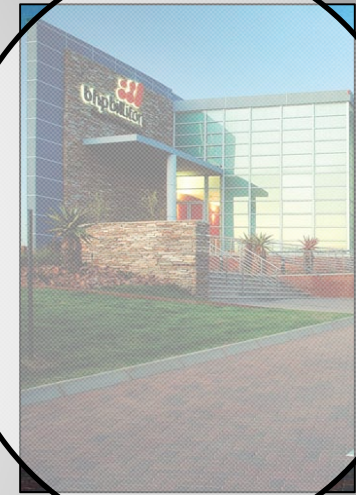
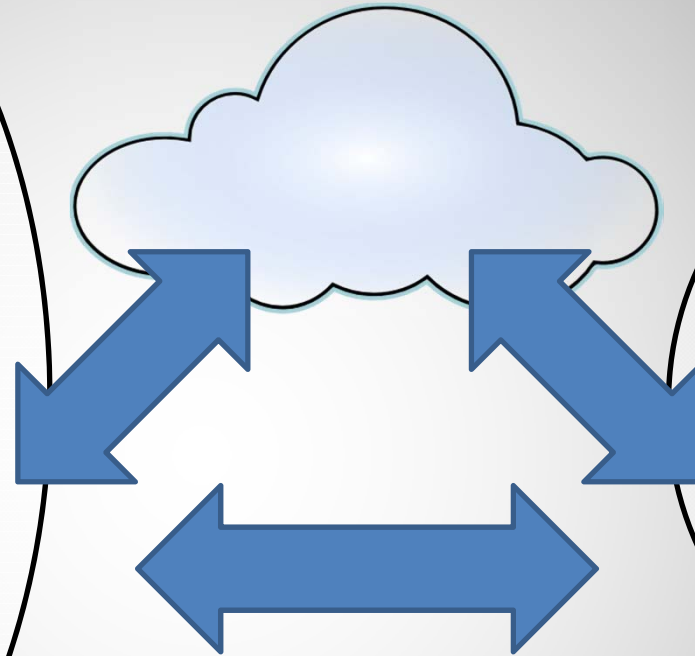
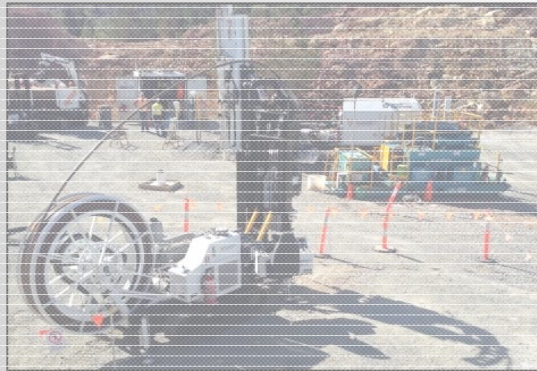
IP and Role of Service Providers

Mining companies and geological surveys are the end users

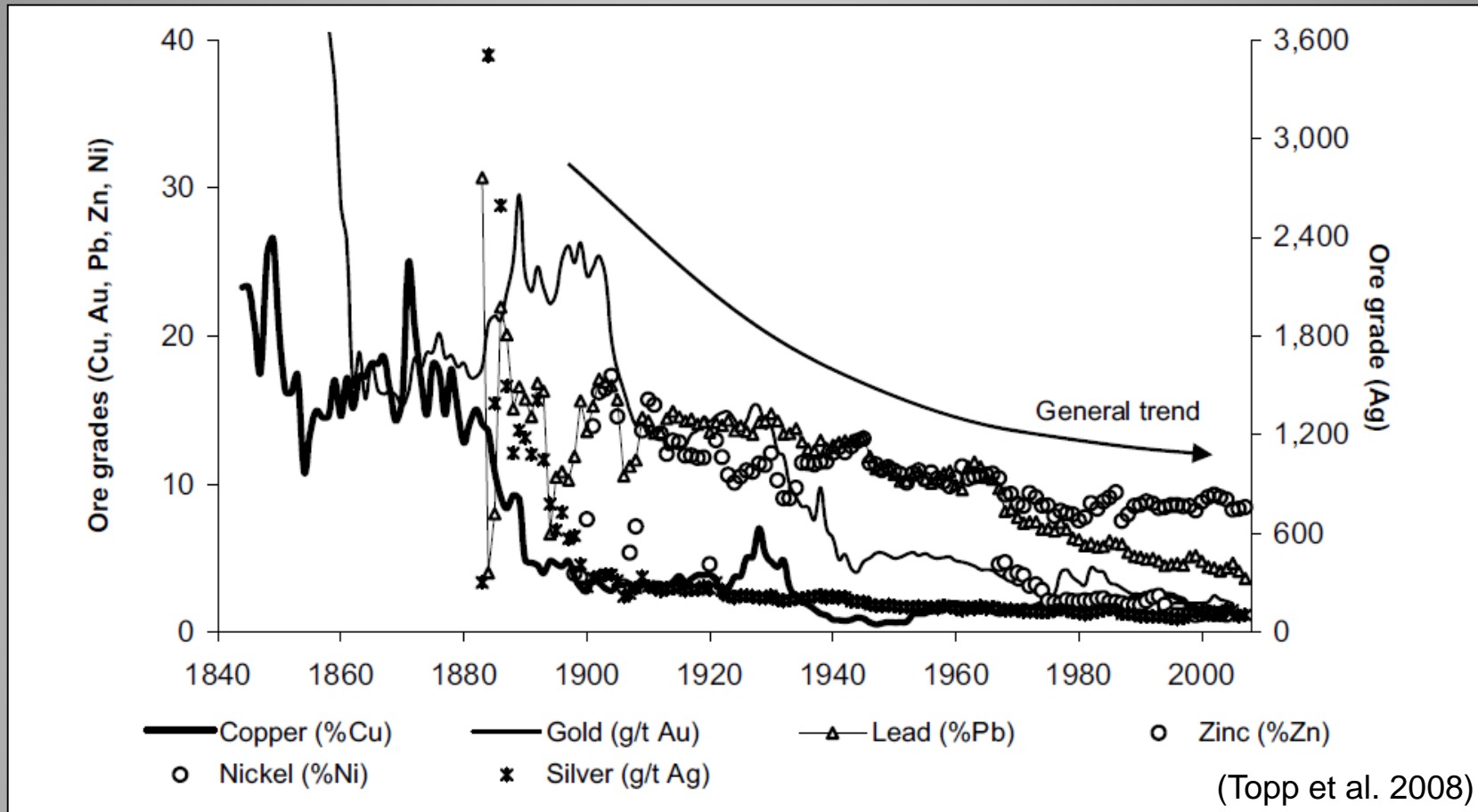
Drilling equipment manufacturers & service providers are the route to commercialisation





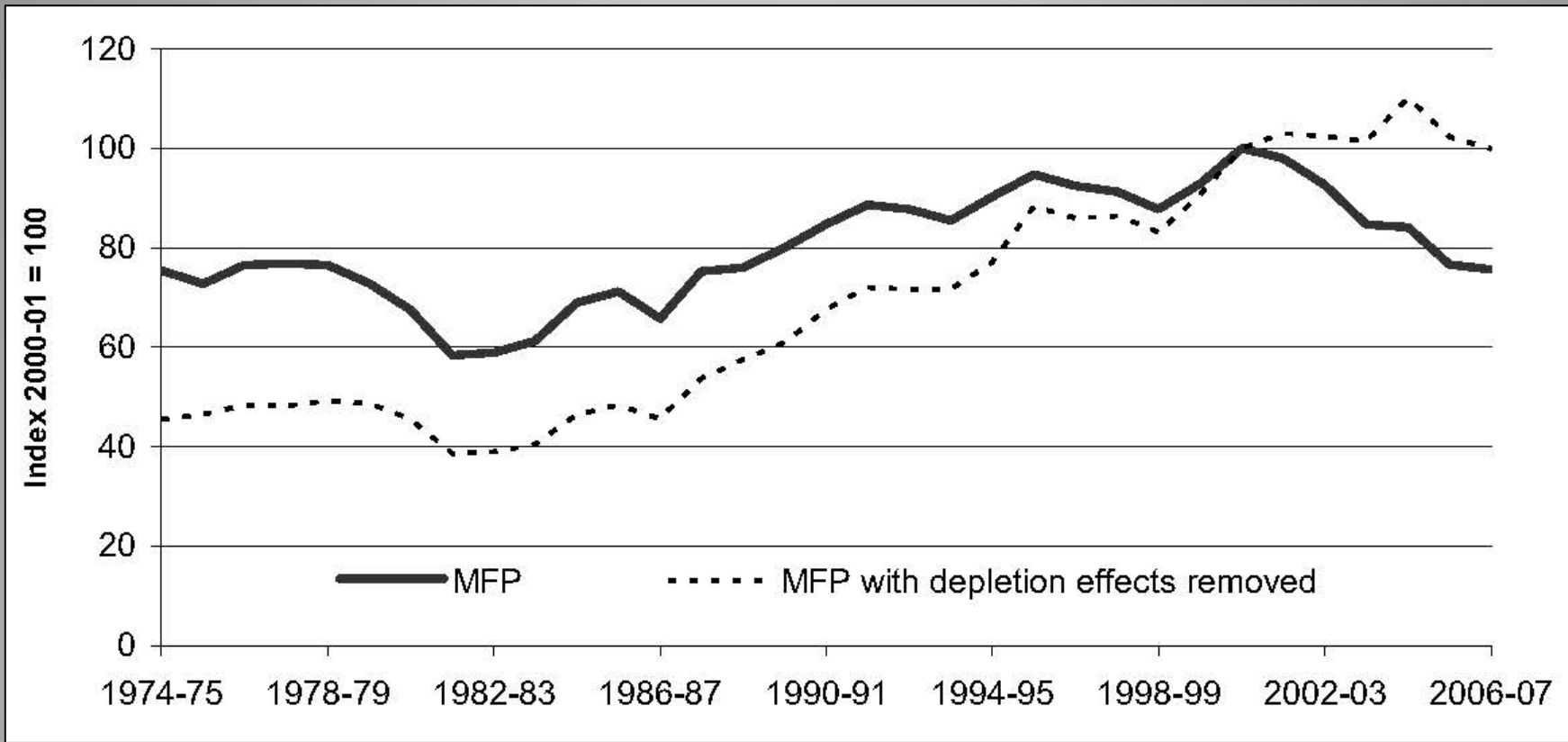


Technologies will enable
'Prospecting Drilling'

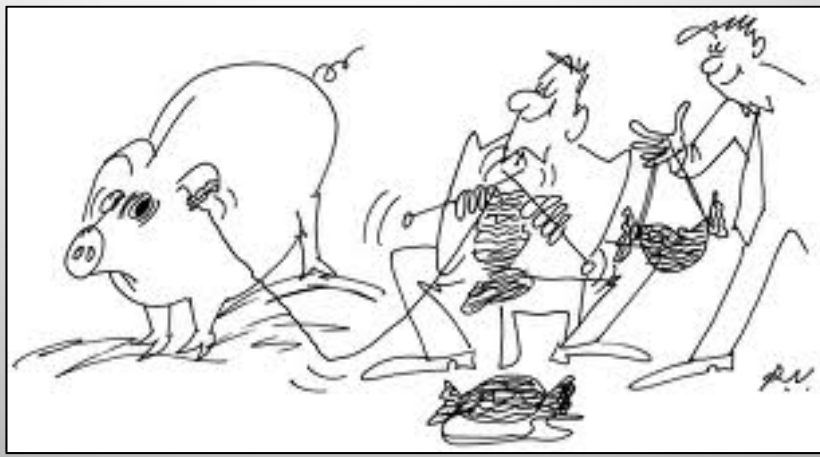


Average gold grade (US, Canada, Australia & SA)

- > 10g/t in 1970
- ~7 g/t in 1980
- < 3 g/t in 2000
- ~1 g/t currently

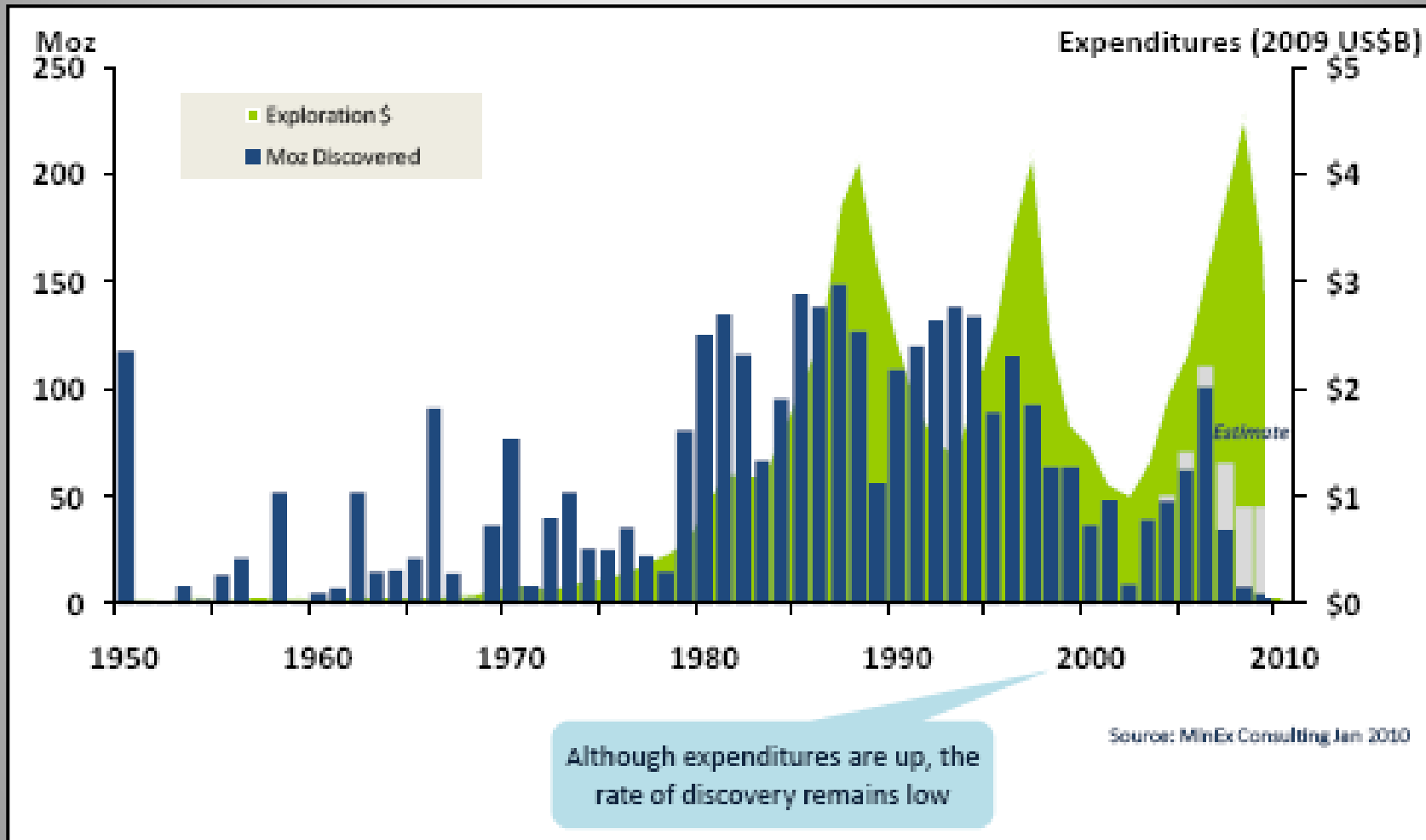


(Topp et al. 2008)

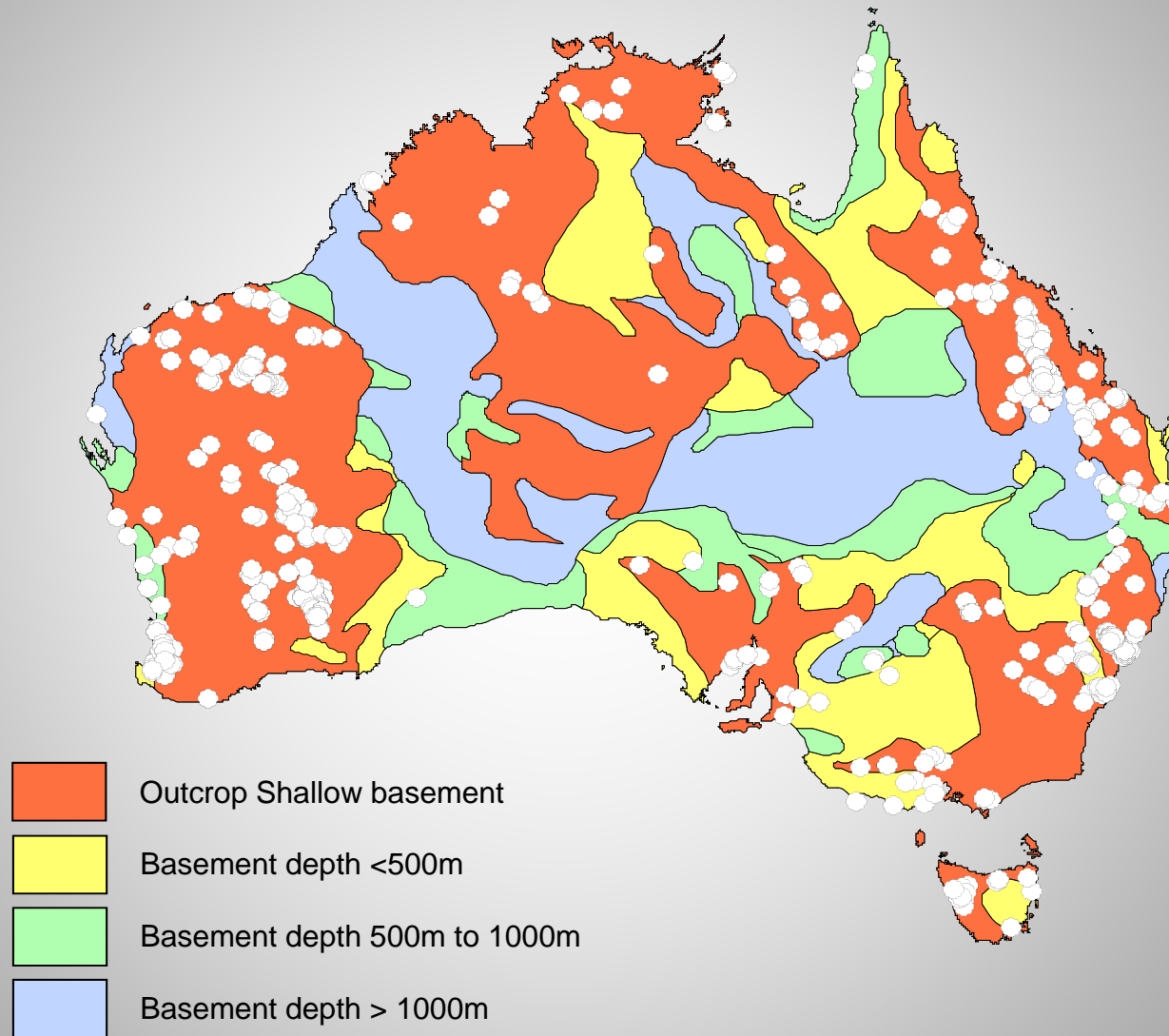


Gold Exploration

Primary gold deposits found in western world: 1950-2009



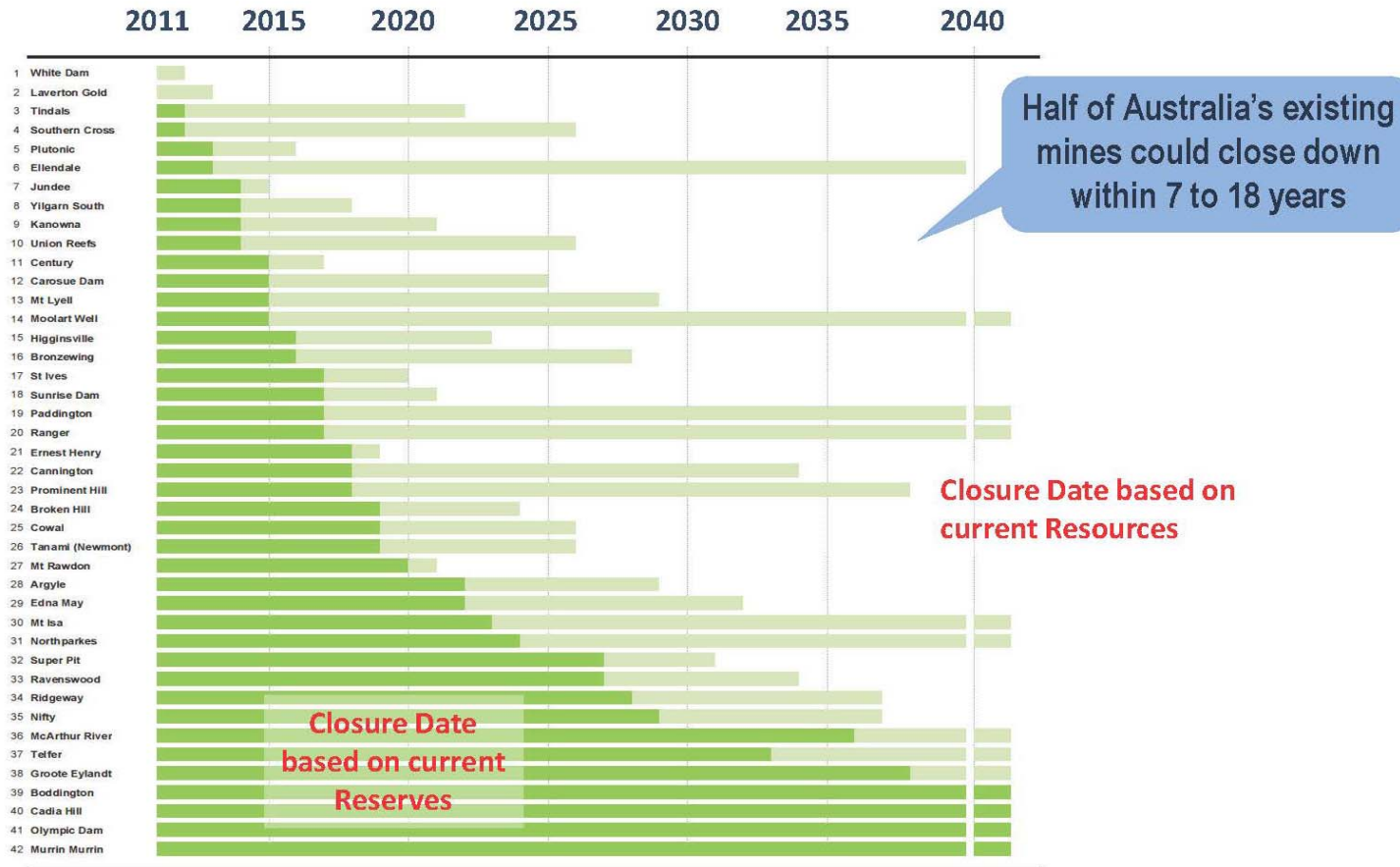
Mines in Outcropping or Shallow Basement



Australia's Long-Term Mining Future at Risk

Estimated Remaining life for Major Australian Mines

(based on all operations mining >1 Mt ore in 2010. Excludes Bulk Minerals)



Estimated Mine Lives are approximate only and are based on dividing the current Reserves and MI&I Resources by the production rate reported for 2011

Source: MinEx Consulting © August 2012

Example Drilling Program

- remote 5,000m Australian greenfield mineral exploration drilling program in covered environment to 250m depth
- test cover sequences and target basement

	Metres Drilled	Metre Rate Cost	Addtnl. Costs	Total Drill Program Cost	Time (Days)
Diamond	5,000	\$2M	\$1.25M	\$3.25M	100
RC	5,000	\$0.75M	\$1M	\$1.75M	25
Coiled Tubing	5,000	\$0.25M	\$0.25M	\$0.5M	20

DD \$650/m total program costs*: RC \$350/total program costs*

CT \$50/m metre rate, \$100/m total program costs*

DD 50m/day; RC 200m/day; CT 250m/day

*total program costs include: metre rate, failed holes, mob/demob, drill pads, rehab, surveying, supervision/field salaries and analytical costs (assay, mineralogy & petrophysics)

