

Parliament of Victoria
Economic Development and Infrastructure Committee

Inquiry into Greenfield Mineral Exploration and Project Development in Victoria

Submission by: Richard Schodde
Managing Director, MinEx Consulting

Melbourne: 22 August 2011

Overview

- Background info on MinEx Consulting
- This submission focuses on:
 - The current “Hot Spots” for Exploration in the World
 - Recent level of exploration activity in Victoria
 - Victoria’s perceived endowment
 - Business risks for exploring in Victoria
 - Why you need to nurture greenfield exploration
 - it’s the front-end of the mining industry, with huge economic multipliers !

MinEx Consulting

- Richard Schodde founded MinEx Consulting in 2008
 - Focus is on providing strategic advice to the mining and exploration sectors
- Richard has 30 years of experience in the resources industry
 - 15 years with WMC + 4 years with BHPB
 - Member of the AusIMM, SEG, SME and PDAC
 - Internationally recognised as a leader in mineral economics
- MinEx client list includes:
 - 20+ mining companies (local & international)
 - MCA and AMEC
 - 3 State Governments + 1 Asian Government
 - World Bank, UNDP

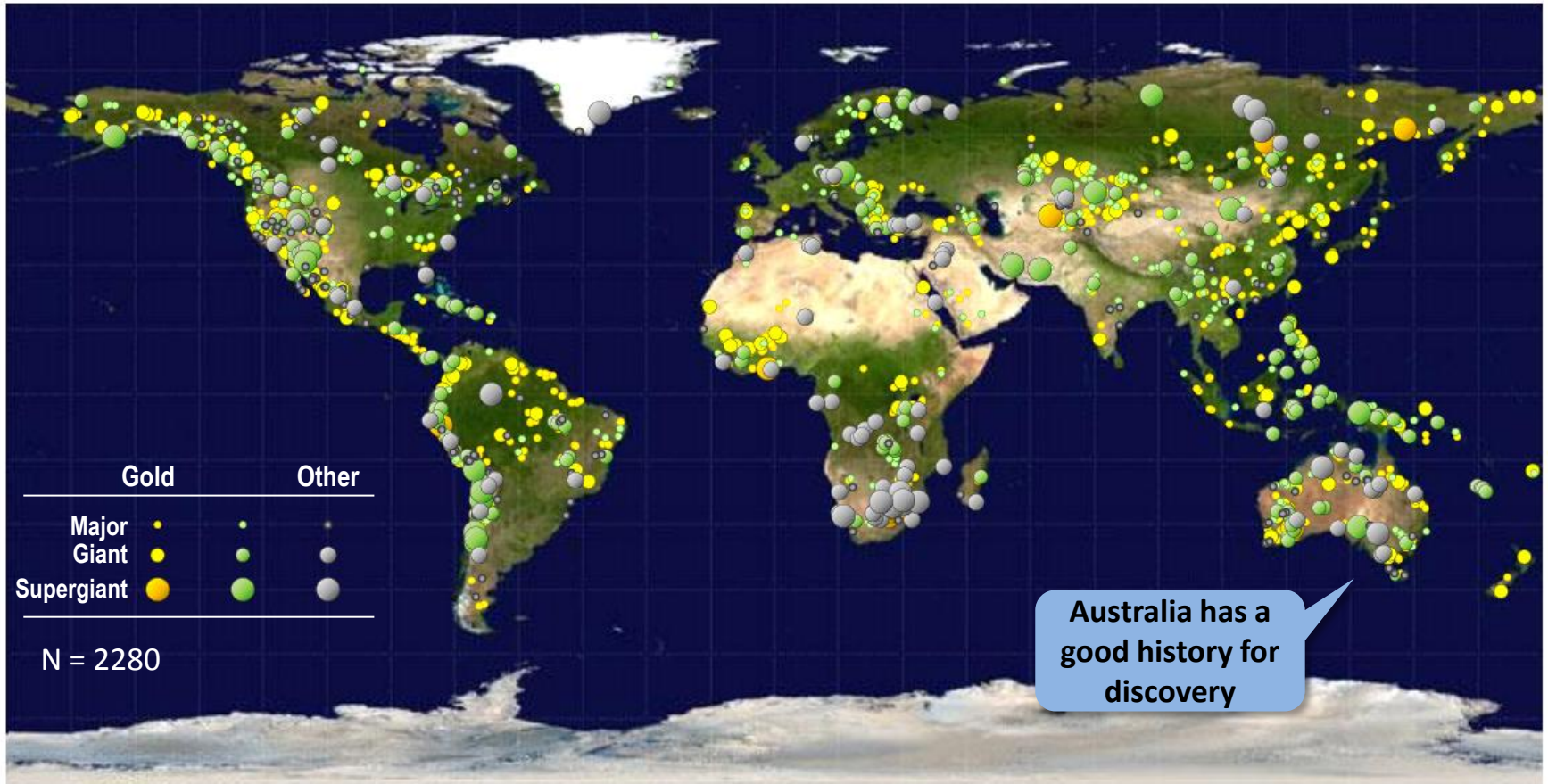
For more information go to : www.MinExConsulting.com

Global view of the exploration & mining industry

RECENT DISCOVERIES AROUND THE WORLD

Significant mineral deposits: World

All years



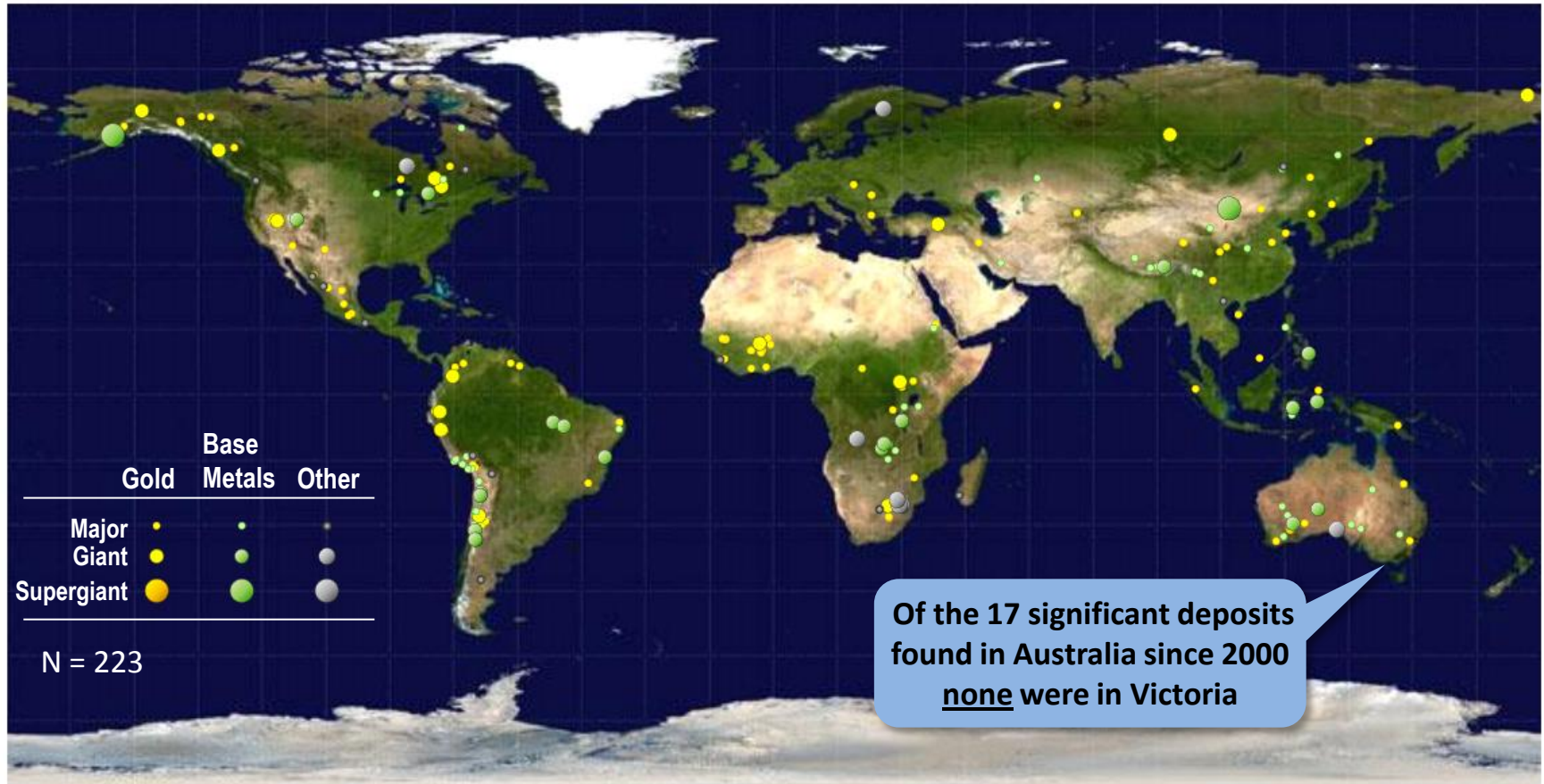
Note: Supergiant >60Moz Au, >10Mt Ni, >25Mt Cu equiv
 Giant >6Moz Au, >1Mt Ni, >5Mt Cu equiv
 Major >1Moz Au, > 100Kt Ni, >1Mt Cu equiv

Note: Excludes bulk mineral deposits

Source: MinEx Consulting Aug 2011

Significant mineral deposits: World

Discovered since 2000



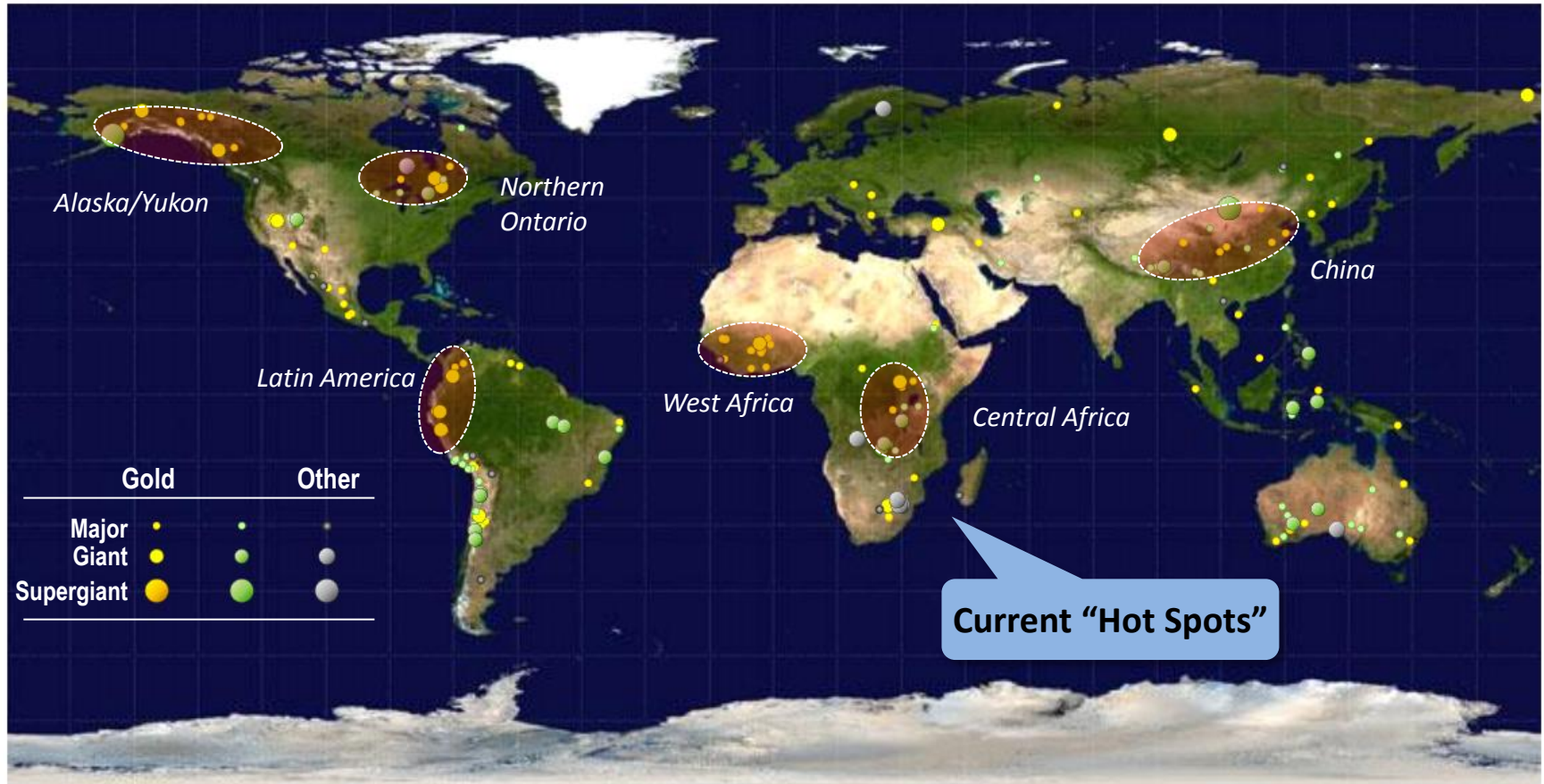
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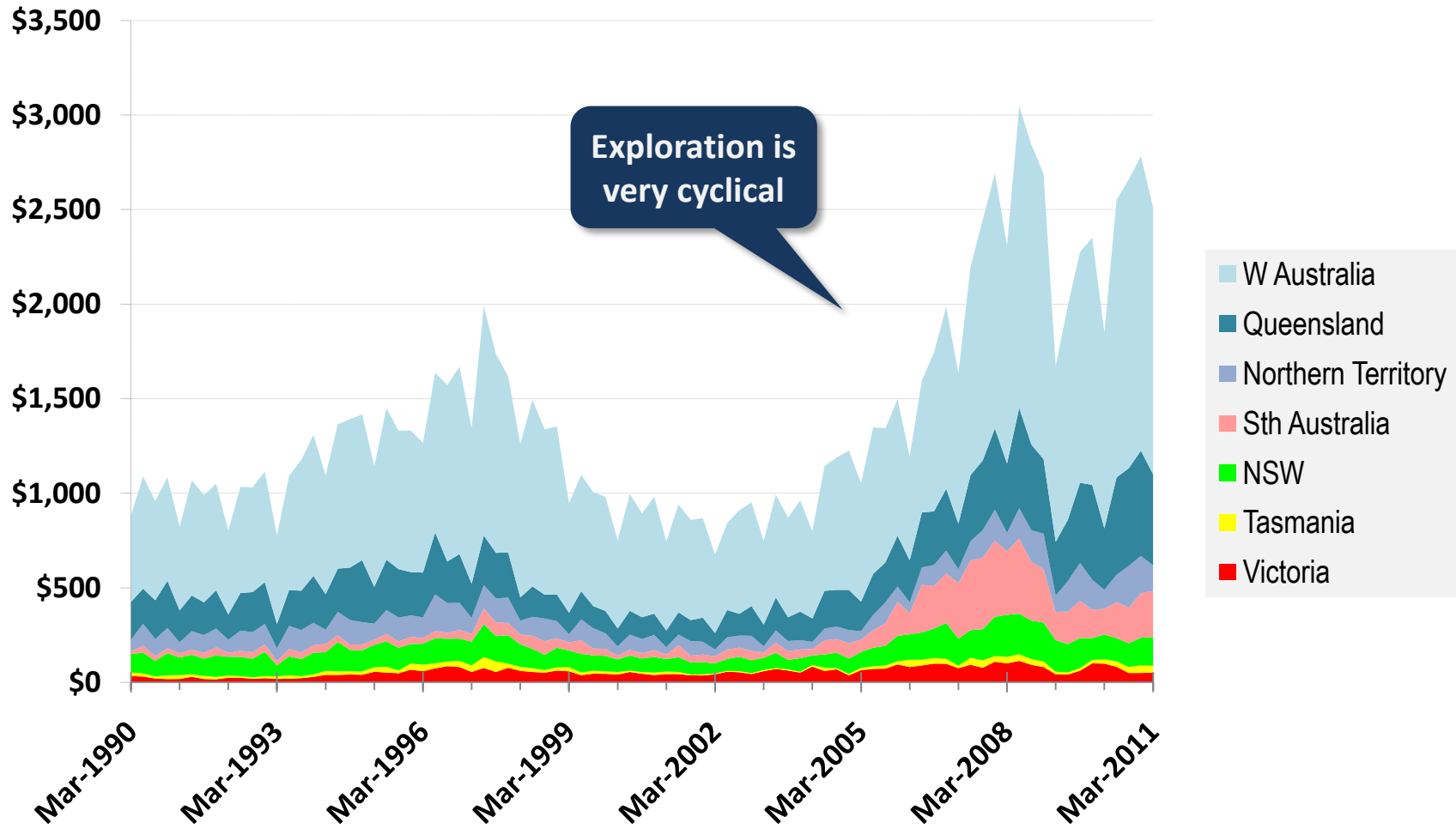
Comparison between Victoria and other states over the last 2 decades

VICTORIA'S EXPLORATION ACTIVITIES

Total exploration spend in Australia by State

March 1990- March 2011

Total Spend (June 2010 A\$m)

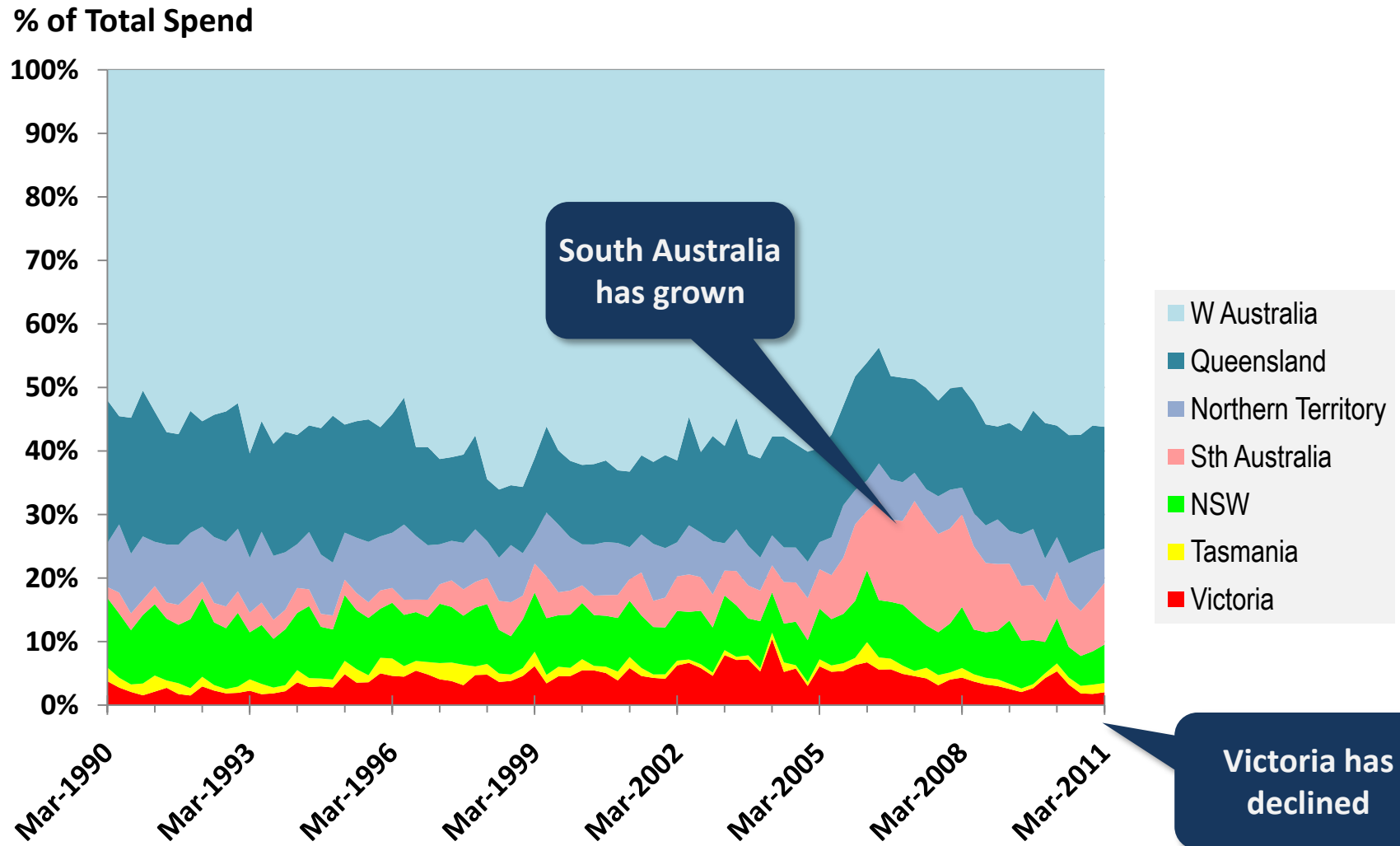


Note: Quarterly spend data is reported on an annualised basis

Source: ABS 8412

Share of total exploration spend in Australia by State

March 1990- March 2011



Source: ABS 8412

Challenge for Victoria

- Is the poor discovery record due to:
 - Lack of spend ?
 - Lack of mineral potential ?
 - Business Risk issues ?

What do exploration companies think of Victoria's mineral potential ?

VICTORIA'S PERCIEVED ENDOWMENT

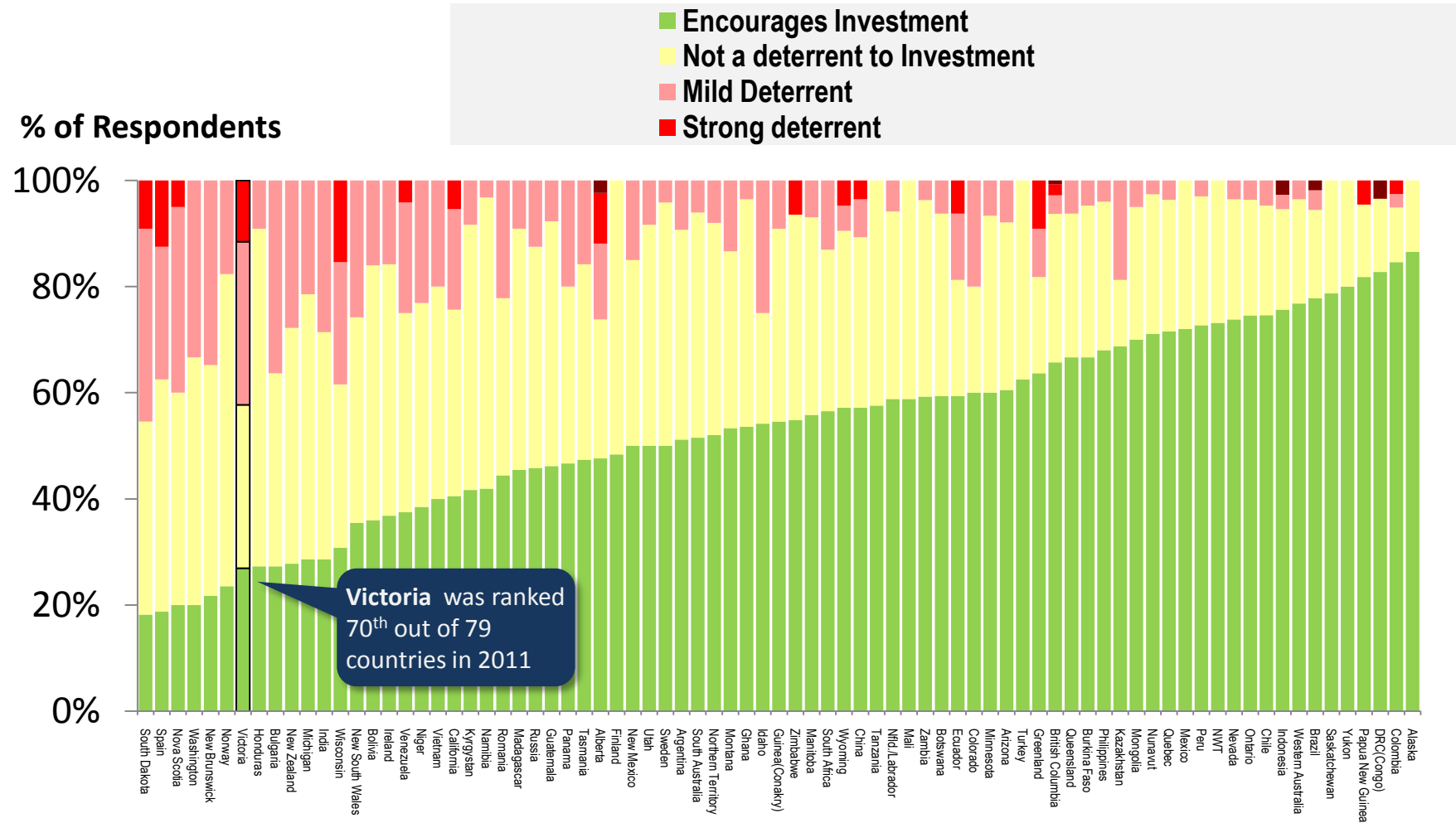
Fraser Institute Annual Survey of Mining Companies

- Every year since 1997, the Fraser Institute has surveyed mining companies on their views regarding the mineral potential (ie *“the attractiveness of the rocks”*) and policy potential (ie the *“ability to do business”*) in a range of countries
- The results of the 2010/11 Survey[#] (carried out in late 2010) was released in March 2011. It covers 79 jurisdictions and is based on the opinions (and biases) of 494 companies

[#] Fred McMahon and Miguel Cervantes, “Fraser Institute Annual Survey of Mining Companies: 2010/2011”, Fraser Institute. Weblink: www.fraserinstitute.org

Mineral Potential in 2011

(ie the “attractiveness of the rocks”)

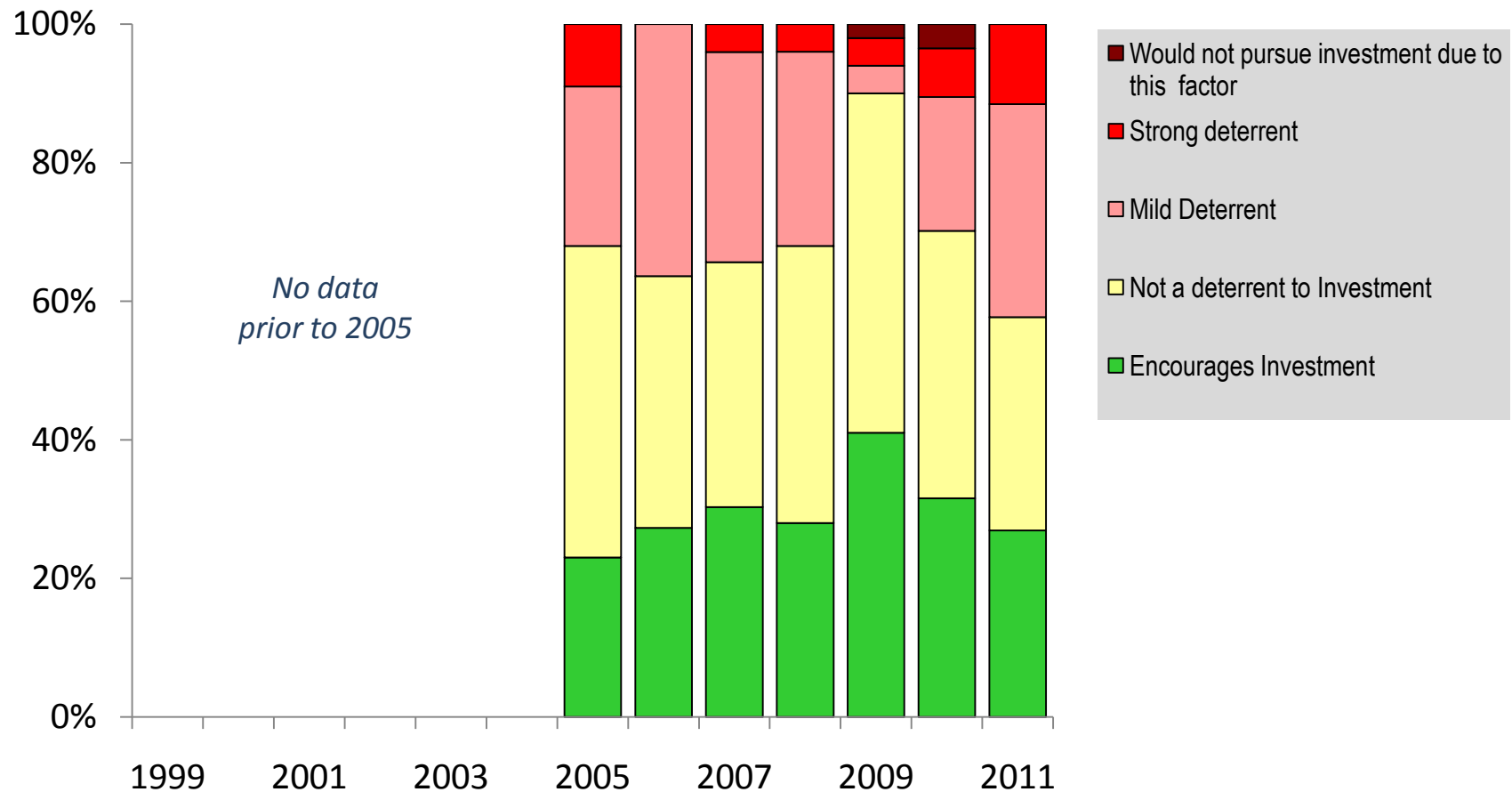


Note: Assumes full access to land, and best practice by industry

Source: Fraser Institute March 2011

... and Victoria's perceived Mineral Potential hasn't changed in recent years

% of Respondents

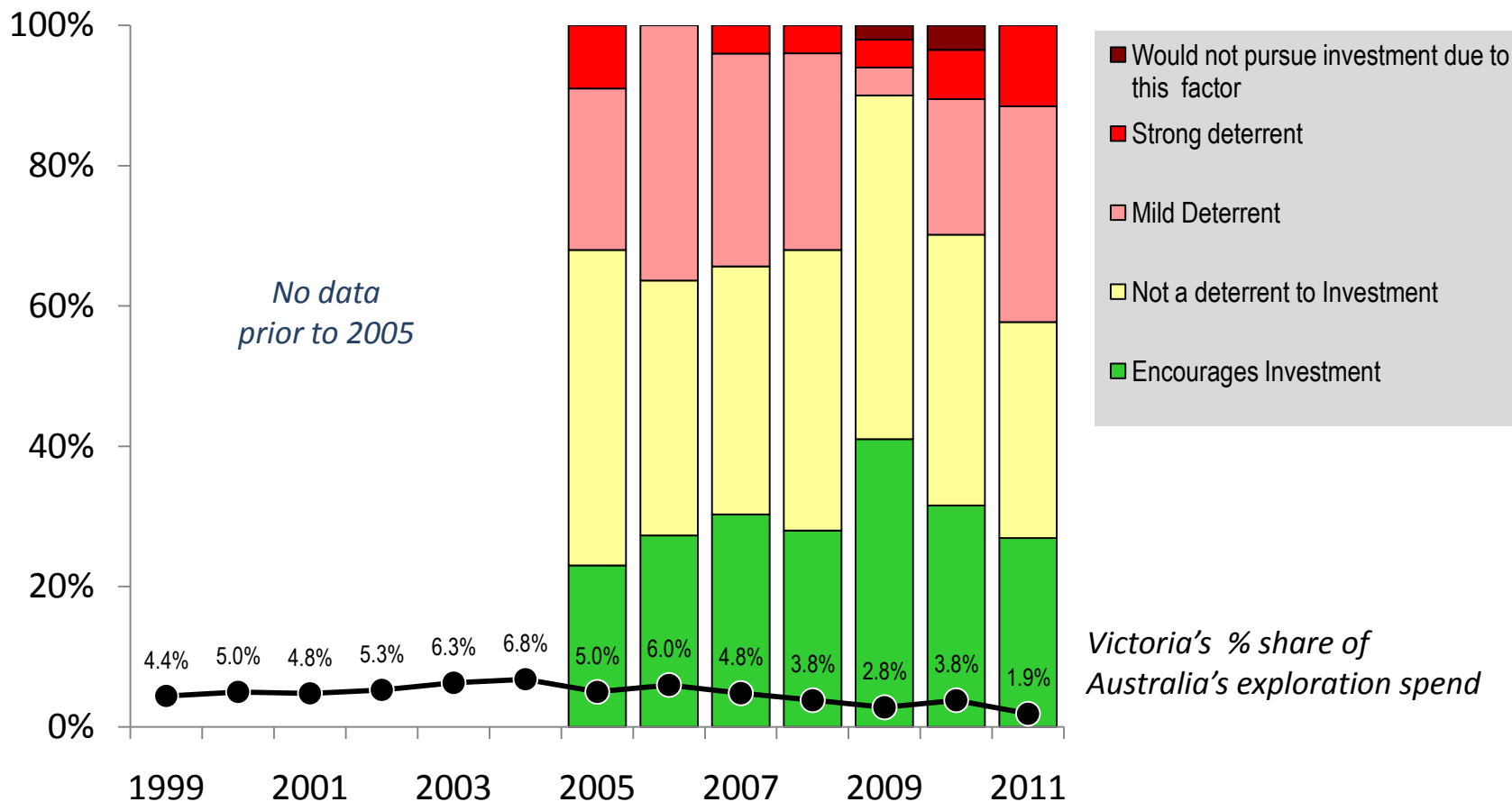


Note: Assumes full access to land, and best practice by industry

Source: Fraser Institute annual surveys

... and Victoria's share of Australia's exploration spend has declined

% of Respondents

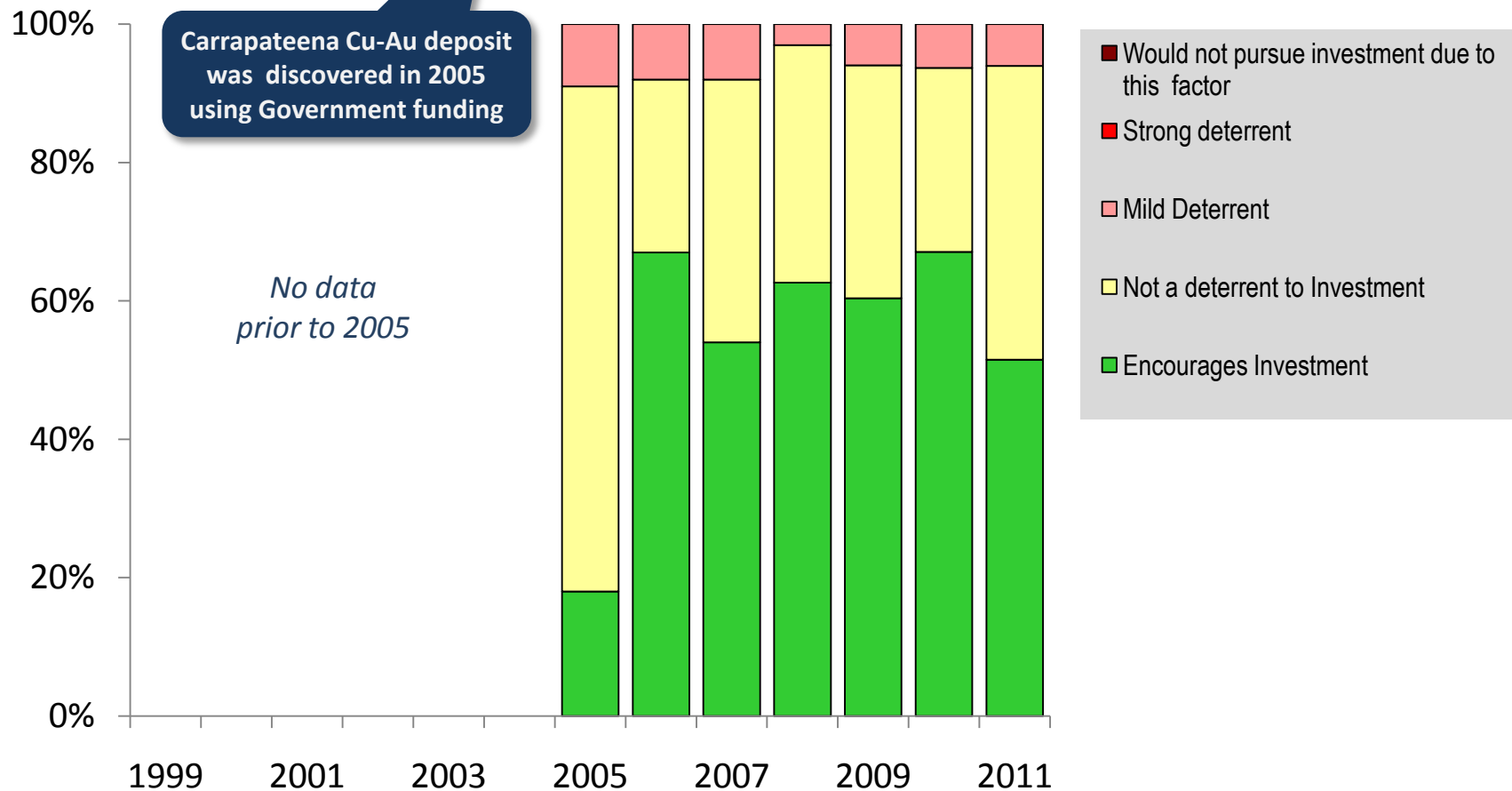


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Sources: Fraser Institute annual surveys
ABS (as reported on FY basis)

South Australia's perceived Mineral Potential took a step increase in 2006

% of Respondents

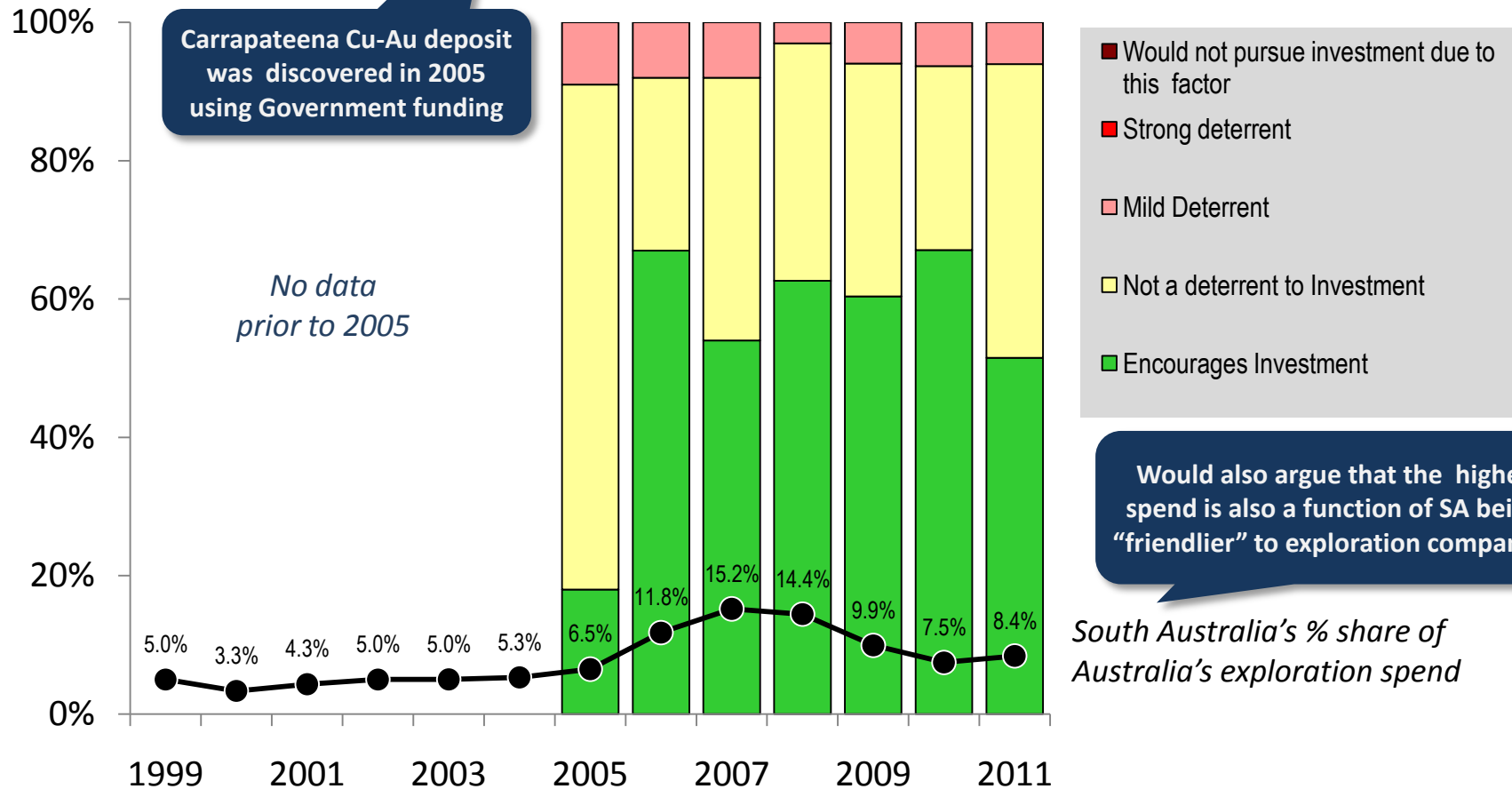


Note: Assumes full access to land, and best practice by industry

Sources: Fraser Institute annual surveys
ABS (as reported on FY basis)

South Australia's perceived Mineral Potential took a step increase in 2006 ... and its Explorn share went up!

% of Respondents



Note: Assumes full access to land, and best practice by industry

Sources: Fraser Institute annual surveys
ABS (as reported on FY basis)

Challenges for Victoria

The current poor perception of Victoria's mineral endowment can be changed

– This requires investing in fresh data, fresh ideas and a willingness to drill targets that could lead to giant discoveries

- Not going to get this through incremental brownfields exploration

The best indicator of prospectivity is a recent success !!

– Victoria needs to develop incentives for greenfield exploration

- Pre-competitive data
- New exploration models / search techniques
- Support drilling programs to test new concepts

What do exploration companies think of Victoria's policies for supporting the mining industry ?

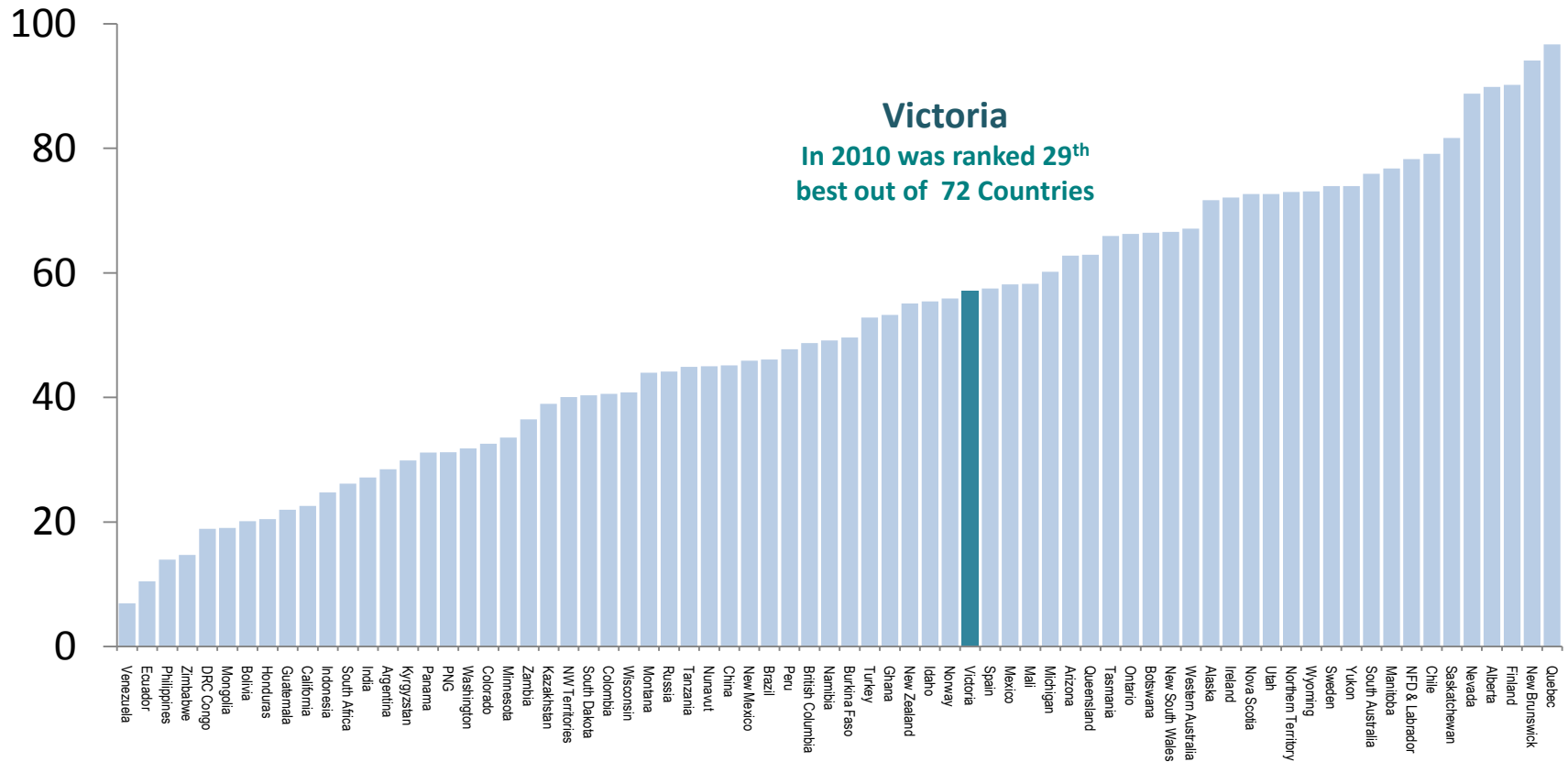
VICTORIA'S PERCEIVED BUSINESS RISK

Policy Potential Index in 2010

(Measures the “ability to do business” there)

PPI Score

Note: Higher the Score, the better



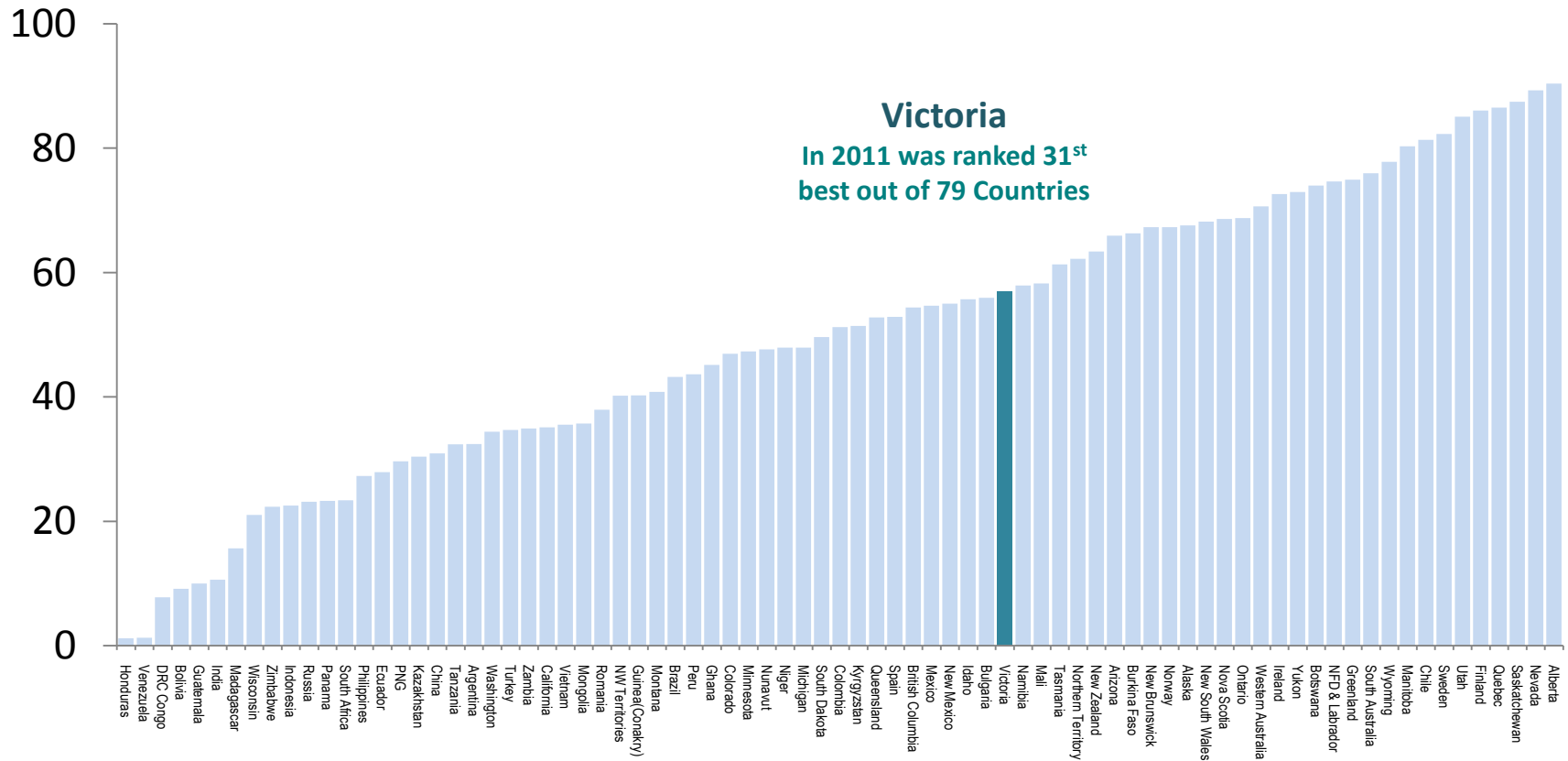
Source: Fraser Institute April 2010

Policy Potential Index in 2011

(Measures the “ability to do business” there)

PPI Score

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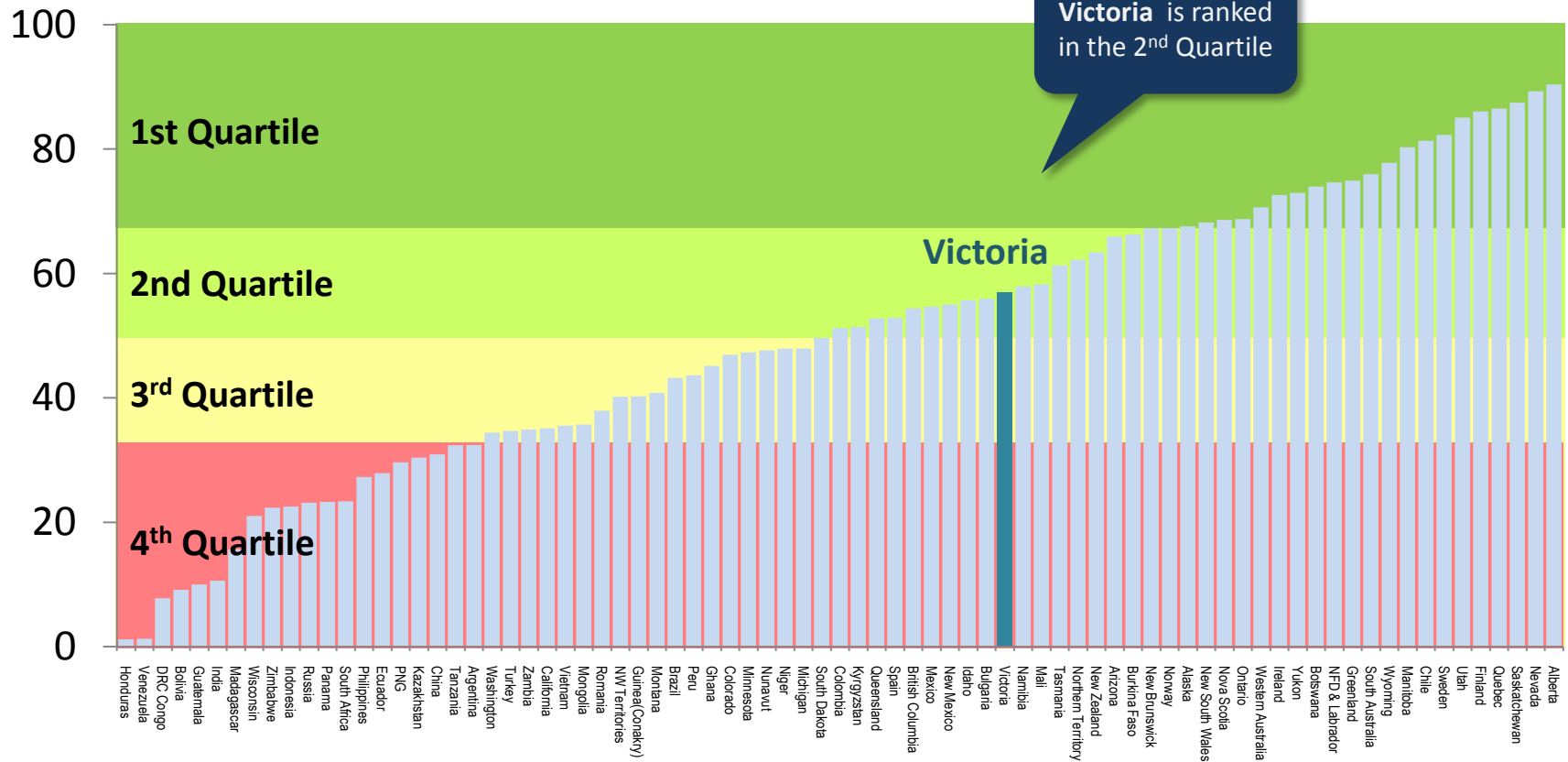
Source: Fraser Institute March 2011

Policy Potential Index in 2011

(Measures the “ability to do business” there)

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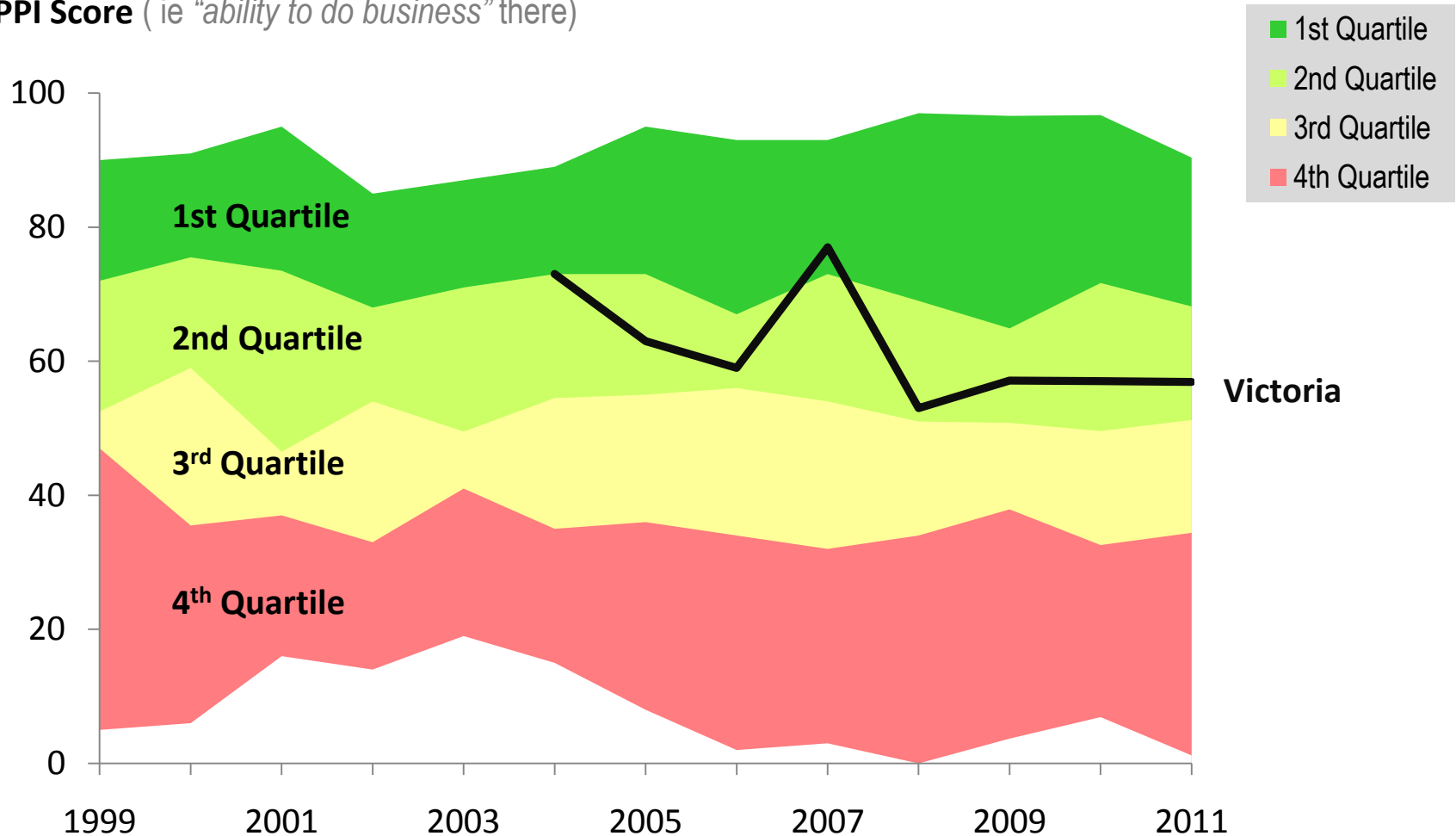


Victoria is ranked in the 2nd Quartile

Source: Fraser Institute March 2011

Victoria's business risk ranking hasn't changed in recent years

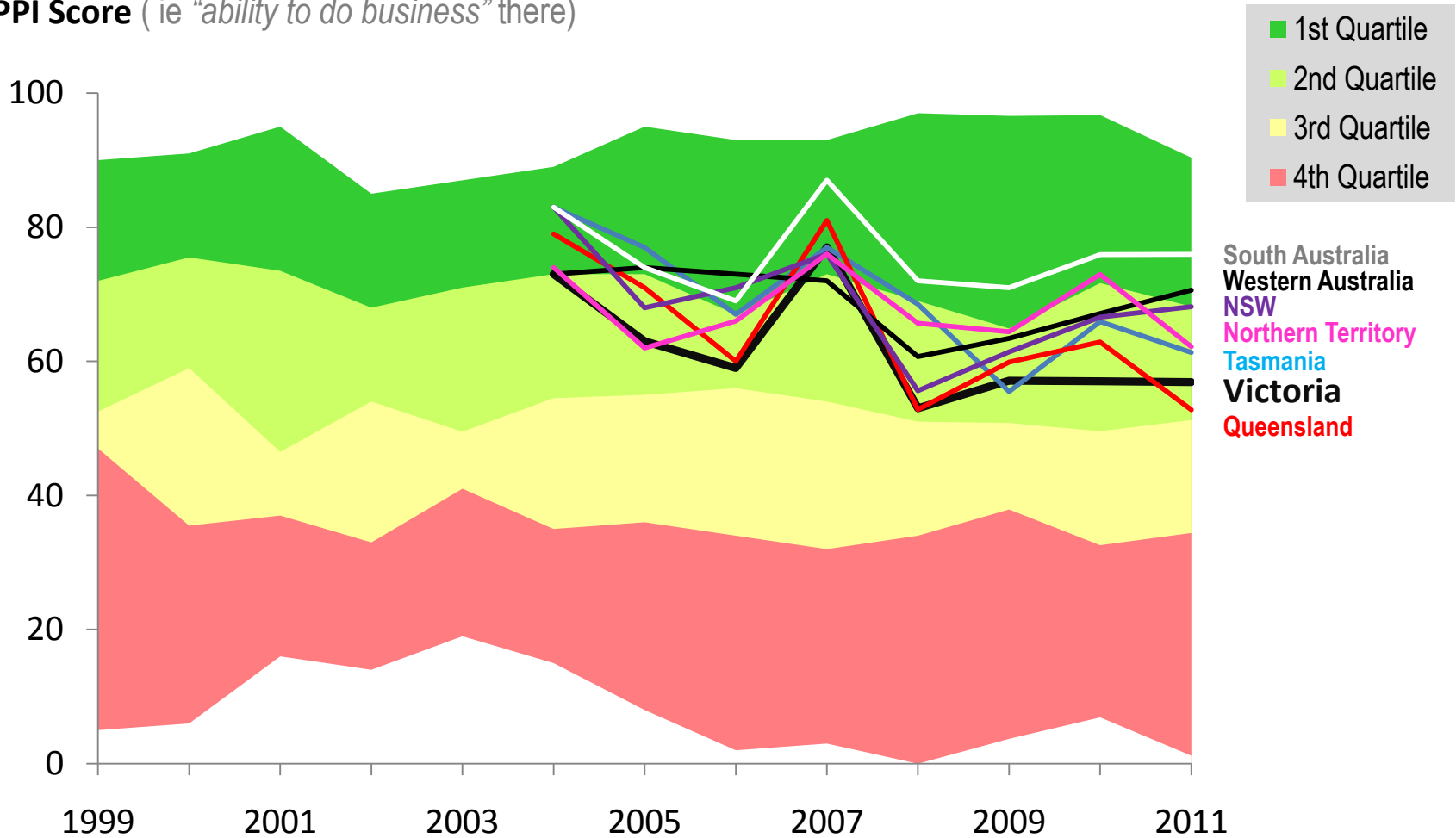
PPI Score (ie "ability to do business" there)



Source: MinEx Consulting analysis of Fraser Institute annual surveys

... but it is worse than most other Australian States

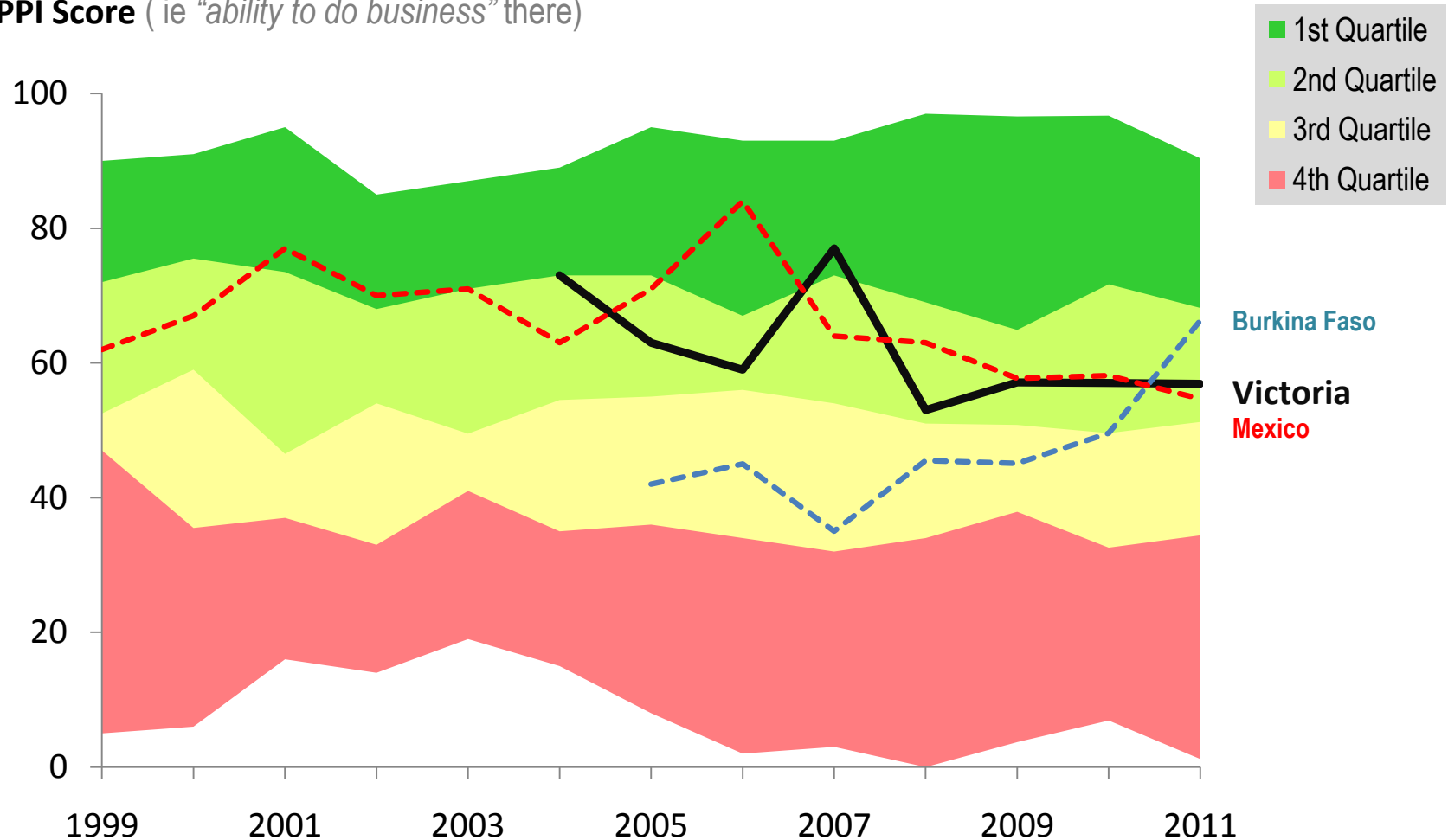
PPI Score (ie "ability to do business" there)



Source: MinEx Consulting analysis of Fraser Institute annual surveys

... and Victoria's business risks are comparable to Mexico and worse than Burkina Faso

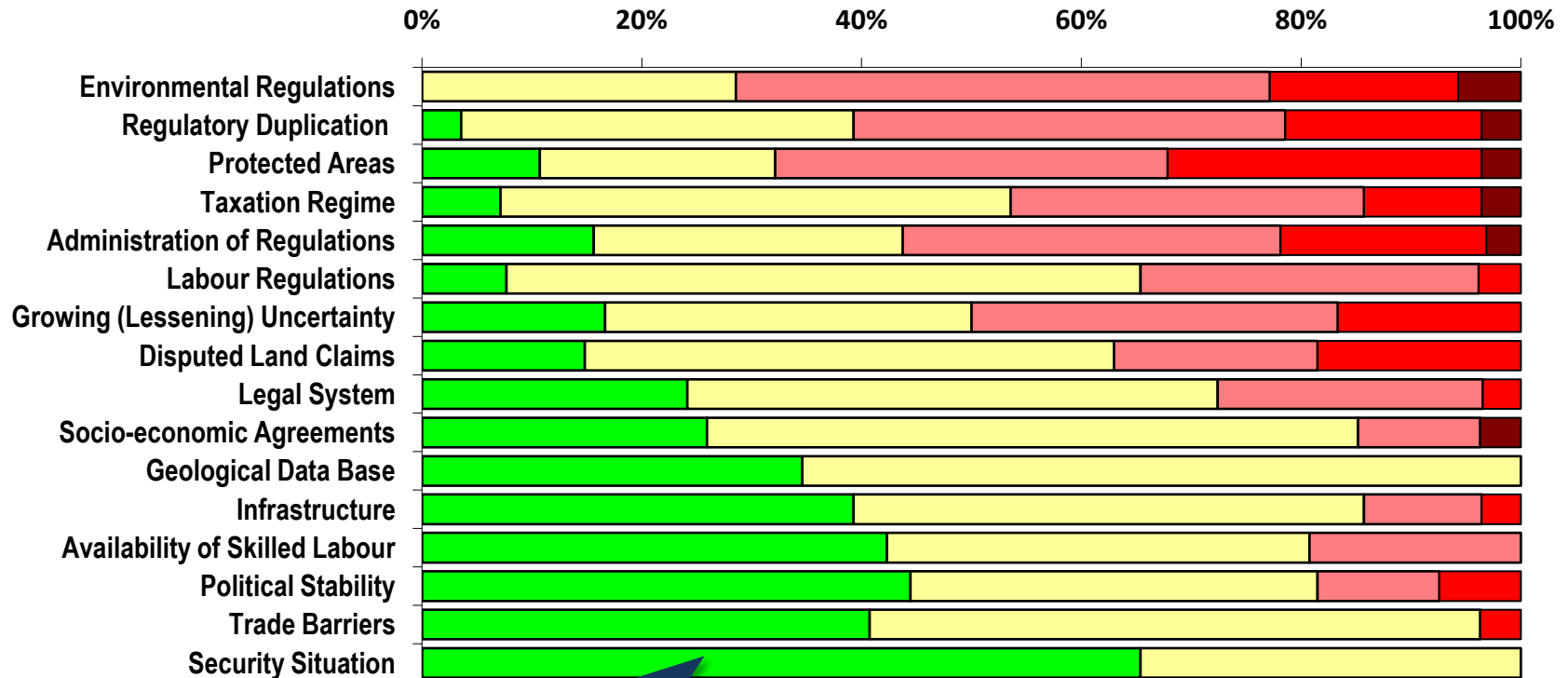
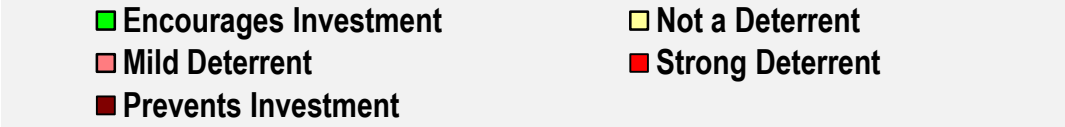
PPI Score (ie "ability to do business" there)



Source: MinEx Consulting analysis of Fraser Institute annual surveys

The Policy Potential Index is Based on 16 factors

**March 2011
Survey Results for
Victoria**



Victoria performs well in some categories ... but not others !

Data: MinEx Consulting analysis of 2011 Fraser Institute survey

Challenges for Victoria

- Need to change industry perceptions on the level of taxation, bureaucracy and environmental regulations
 - Corporate tax is a Federal issue
 - State Royalty rate is actually quite reasonable (just need to get the message out !)
 - Need to streamline the Government Agencies
 - Clear and quick process for granting Environmental Permits
 - Quick dispute resolution practices with local parties (good land access is vital to exploration)
 - One-Stop shop ?

What is the impact on mining & exploration in Victoria from changes in Government Policies ?

WHAT ARE THE BENEFITS FROM FIXING THE PROBLEM?

Average Income for Major Mining Companies

Based on survey of 170 Gold, Base Metal and Diversified companies operating in the Western World between 2000-08

	Item	2010 US\$m	
A	Revenue	4266	
B	Cash Costs	3115	Includes royalties
	Exploration	48	Included as part of Opex
C	Depreciation & Amortisation	297	
D	Pre-Tax Profit	856	Net of Financing Costs
E	Tax Paid	291	
F	Profit After Tax	565	
G	Capital Expenditures	490	
H	Net Cash Flow After-Tax	372	$H = F + C - G$
	Total Assets Employed	6691	Written down basis

Source: MinEx Consulting 2010

Performance Ratios for Major Mining Companies

Based on survey of 170 Gold, Base Metal and Diversified companies operating in the Western World between 2000-08

On average, every ONE dollar spent on EXPLORATION resulted in ...

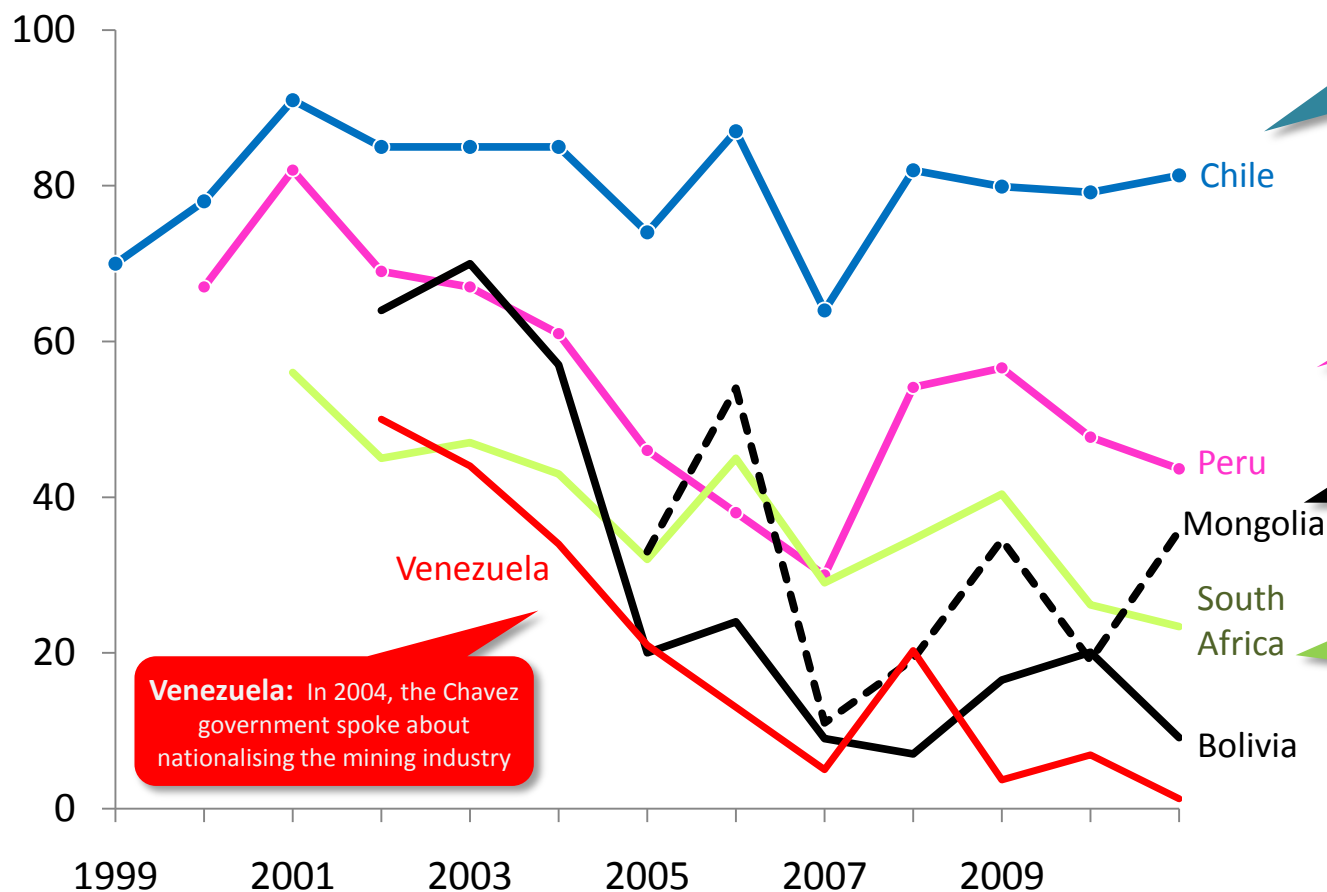
\$10	Invested in new Capital Projects	~10% of this would be on Feasibility Studies
\$88	Sales Revenues	Will vary depending on the commodity and the business cycle
\$65	Operating Costs	~10% to 20% of this is labour-related
\$18	Pre-Tax Profits	
\$6	Taxes Paid	
\$1.80-2.70	Royalties Paid	Based on 2-3% Ad Valorem Royalty

CAUTION: Figures will vary by commodity, company and jurisdiction
Analysis assumes the industry is at equilibrium, and
excludes exploration spend by Junior Companies

Source: MinEx Consulting 2010

Examples of adverse changes in fiscal and investment policy changes on Country Risk

PPI Score (ie "ability to do business" there)



Chile: In 2007 increased royalty rate from zero to 5%. First discussed in 2004

Peru: In June 2004, increased royalty rate from zero to 3%. Continued talk of higher rates

Mongolia: In 2006, changed investment rules and increased royalty rate from 2.5% to 5%

South Africa: In 2004 introduced BEE rules and increased royalty rate from zero to 3%

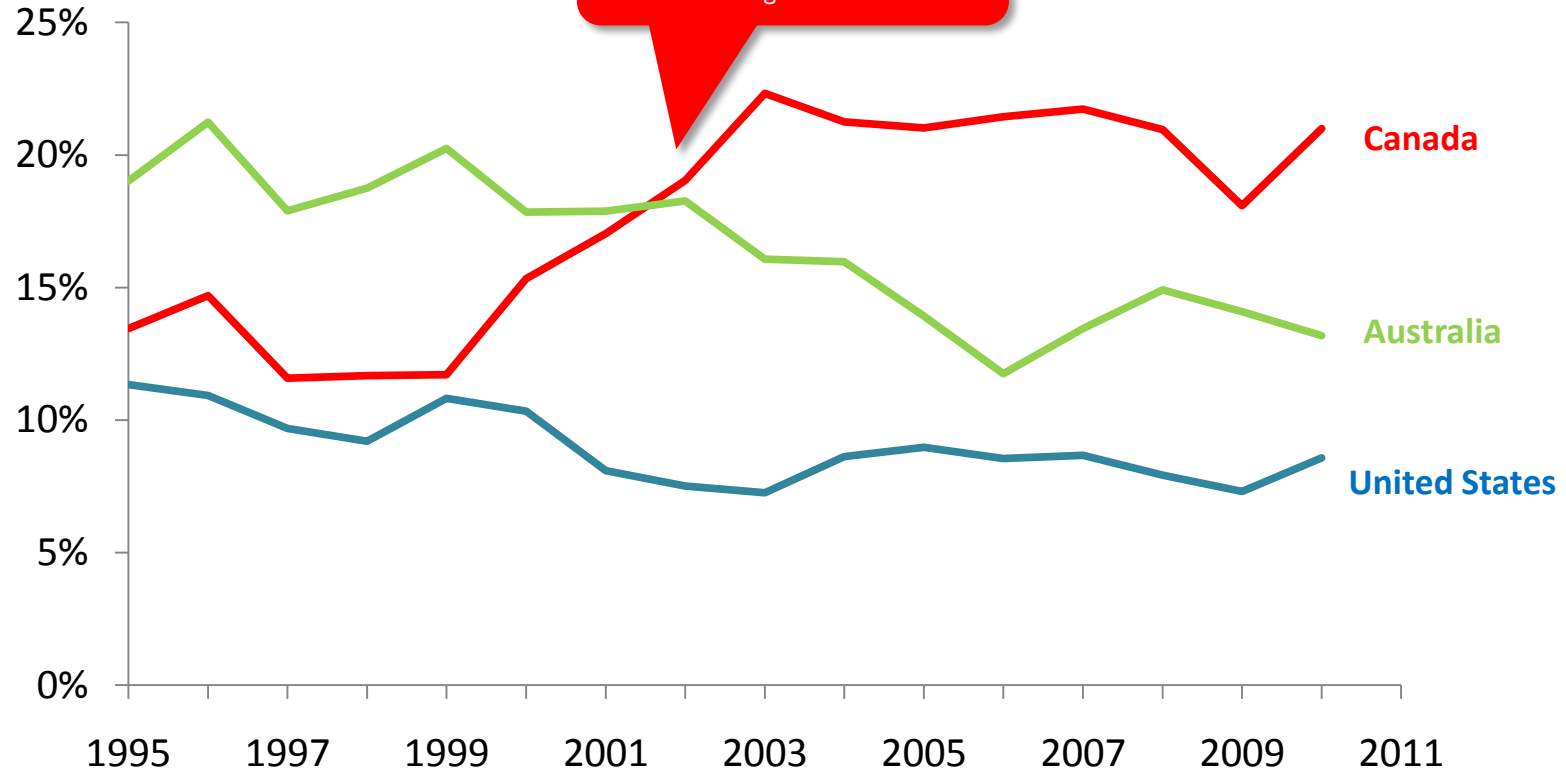
Bolivia: In 2005 the President repeated his vow to nationalise the mining industry

Venezuela: In 2004, the Chavez government spoke about nationalising the mining industry

Source: Derived from Fraser Institute annual surveys

... And conversely, improvements in fiscal policy can significantly stimulate exploration

Share of World exploration spend (%)



Data: Metals Economic Group © 2011

Challenge for Victoria

- There is a 10-15 year lead time between discovery and development. To ensure we have a good pipeline of projects, and keep the critical mass of skills here in Victoria, we need to start exploring now !
 - Government needs to be very mindful that any adverse statements will scare away investors
 - Trust is hard to earn and easy to lose

The future for Greenfields Exploration in Victoria

SUMMARY

Summary

- Victoria's share of Australia's exploration spend has shrunk from 6.8% in 2004 to 1.9% in 2011
 - Decline is due to poor exploration success to date and adverse Government policies and regulations
 - Better opportunities exist interstate and overseas
- Exploration is the front-end of the mining industry. As such it needs to be nurtured
 - On average, \$1 spent on exploration leads to \$10 worth of capex, \$88 worth of revenues, \$6-13 worth of wages and \$2-3 worth of royalties in the future
- Its urgent that we re-invigorate the industry
 - Especially given the 10-15 year lead between discovery and development
- The best way to change perceptions on endowment is to find something big!
 - Need to simulate the process with fresh data, fresh ideas and risk capital
- It takes time to attract new explorers to Victoria. In the interim it is critical that Government send out the right signals to industry

Contact details

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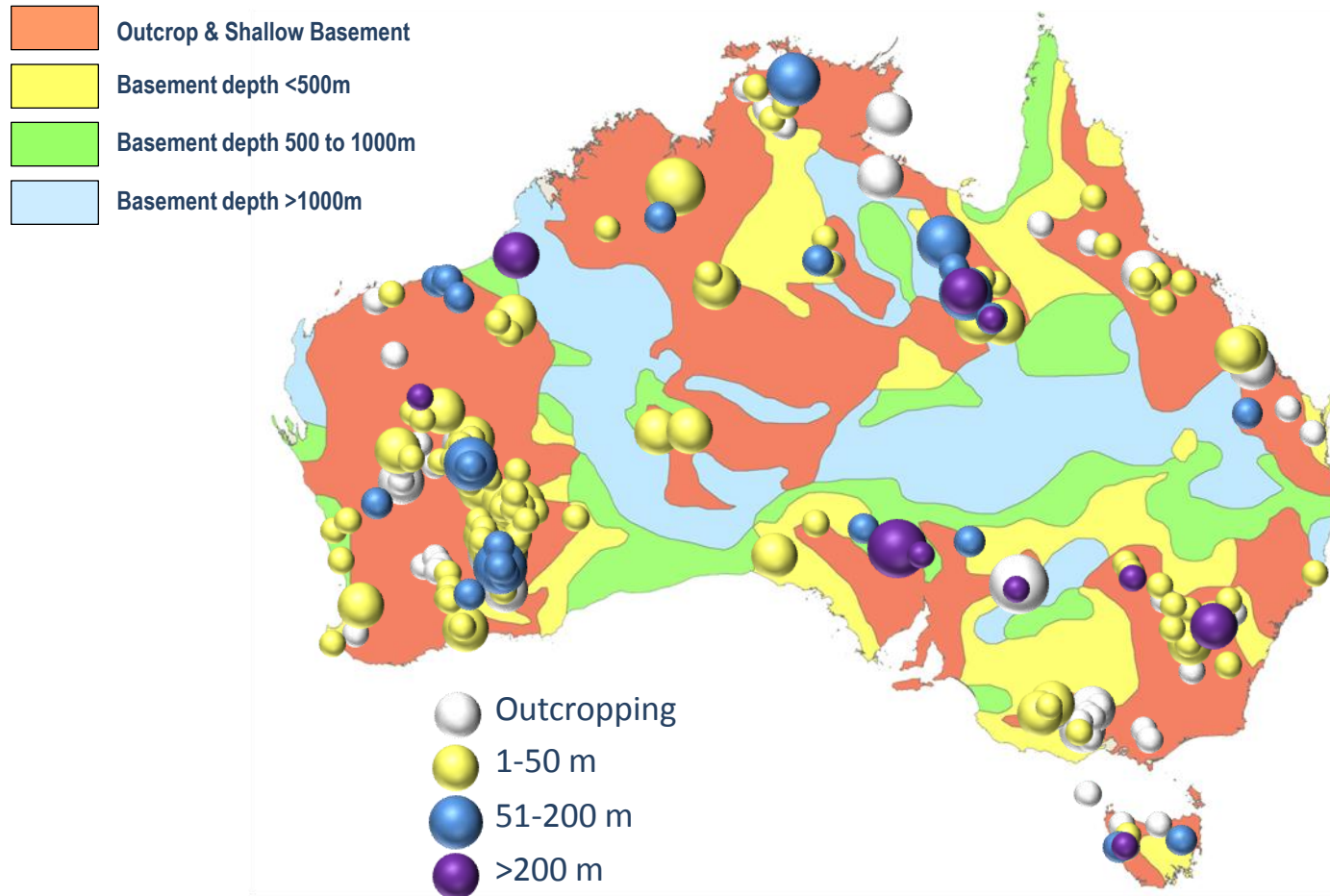
Email: Richard@MinExConsulting.com

Website: MinExConsulting.com

BACKUP SLIDES

Major mineral deposits in Australia

Depth of cover



Note: Major defined as >1 moz Au, >1mt Cu, > 100kt Ni or equivalent
Excludes Bulk Minerals such as Coal, Bauxite and Iron Ore

Sources: MinEx Consulting August 2010
Geoscience Australia

Figure 6: Uncertainty concerning environmental regulations

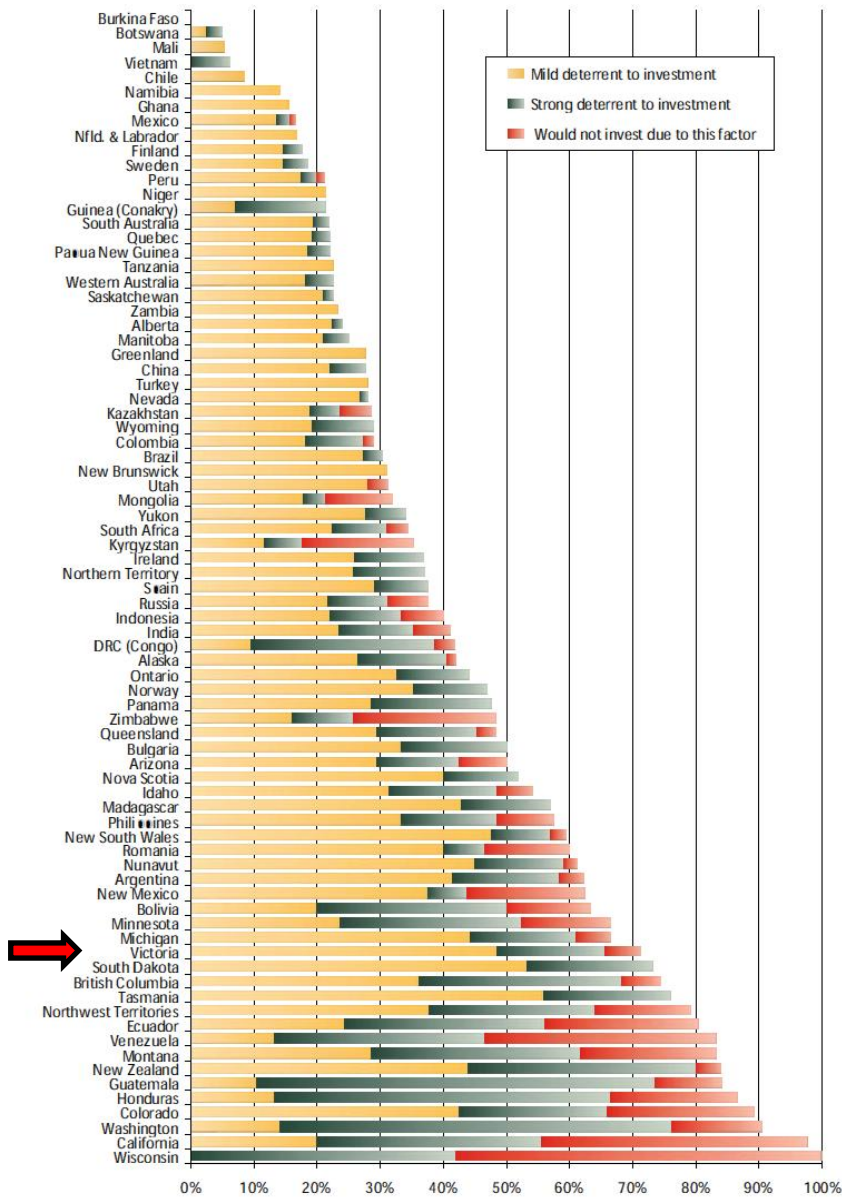
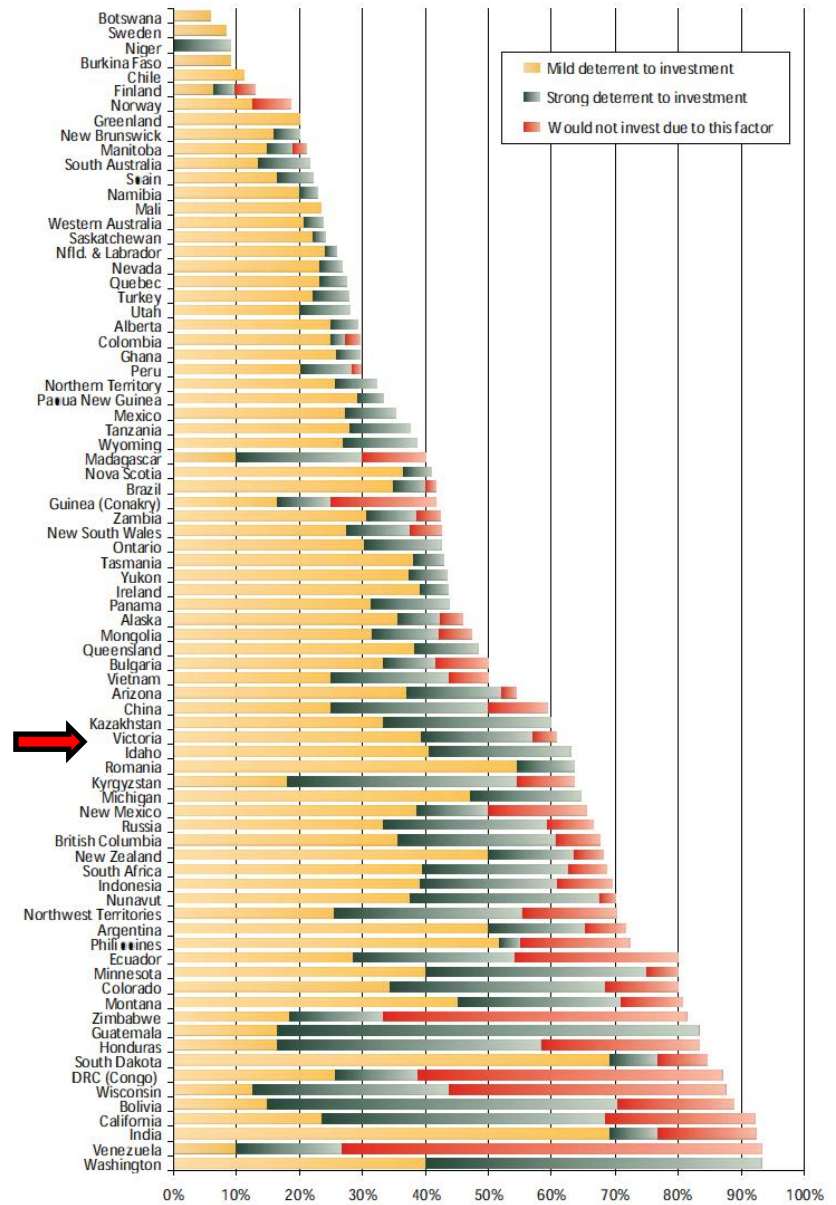


Figure 7: Regulatory duplication and inconsistencies



Source: Fraser Institute March 2011