Developing a world-class rare earth deposit in South Africa

March 2011
Safe Harbour Statement

Forward-looking information

Certain statements contained in or incorporated by reference into this presentation constitute “forward-looking statements”. Officers and representatives of Frontier Rare Earths Limited (the “Company”) may, in their remarks or in response to questions regarding this presentation, make certain statements which are “forward-looking statements” and are prospective. Forward-looking statements are neither promises nor guarantees, but are subject to risks, uncertainties and assumptions that may cause the actual results, performance or achievements of the Company, or developments in the Company’s business or its industry, to differ materially from the anticipated results, performance, achievements or developments expressed or implied by such forward-looking statements. Forward-looking statements are based on management’s beliefs and opinions at the time the statements are made or presented, and undue reliance should not be placed on any of these forward-looking statements. There should be no expectation that these forward-looking statements will be updated or supplemented as a result of changing circumstances or otherwise, and the Company does not intend, and does not assume any obligation, to update these forward-looking statements.
## Topics

<table>
<thead>
<tr>
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<th>Topic</th>
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<td>Frontier Overview</td>
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<td>The Zandkopsdrift Project</td>
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March 2011
Company Background and Overview

- Frontier established in 2002
- Management active in South African mining sector since 1994
- Exclusively focused on rare earth elements in Southern Africa
- Listed on the Toronto Stock Exchange in November 2010 (TSX:FRO)
- Market Capitalisation $265m; well funded (cash c.$54m, no debt)
- Zandkopsdrift (“ZC1”) is Frontier's flagship project
  - Project identified by Frontier in 2005 and prospecting right secured in 2006
  - 95% economic interest held by Frontier
  - World-class deposit measured by size, grade, rare earth distribution, and geological setting
  - Good scope for increasing resource as remains ‘open’ both laterally and at depth
  - Potential for rapid development
Recent Rare Earth Market Developments

- Chinese policy changes continue to dominate the landscape
  - Government controlled rare earth pricing mechanism introduced and industry consolidation being pursued
  - Clampdown on illegal mining (estimated 280 illegal mines closed) and stricter environmental controls now in force
  - Further significant reductions in export quotas announced 28 December 2010 (-35% H1 2011 vs. H1 2010). Changes to quota system anticipated introducing quotas by element
  - Significant increase in REO prices in last 6 months, with continued price growth forecast

- US government seeking to re-establish domestic REE supply chain

- High level discussions continuing between Western governments and China regarding security of rare earth supply

- China confirms only 15-20 years reserves of Heavy and Medium REOs (Q4 2010)

- Plans by countries including China, Japan, South Korea announced and more recently US and EU, to stockpile rare earths widely reported
Zandkopsdrift Project Background

- One of the largest carbonatite complexes in the world
  - Complex is ~ 5km across
  - ZC1 carbonatite is 120 ha (approx. 1.2 km diameter)
  - Mineralization similar to Lynas’ Mount Weld deposit

- Close to infrastructure
  - Power, water and roads
  - 44 km by road to rail head; 230 km by rail to Saldanha Bay deep water port

- Mining-friendly region
  - Over 150 years of mining history in the area
  - Base metals, mineral sands, iron ore and diamonds currently being mined/processed in the area

- Black Empowerment
  - 74% owned by Frontier
  - 26% owned by BEE shareholders, carried to BFS but must pay 21% at that time
  - Frontier currently has an effective 95% economic interest at present
Project Location
Zandkopsdrift Project Area

- Gravel road to N7
- Zandkopsdrift carbonatite complex
- N7 tarred road to Cape Town
- Exxaro Resources Namakwa Sands Mine (~45 km)
- Bitterfontein rail head (~44 km by road)
ZC1 Carbonatite
Zandkopsdrift Overview

- **World-class deposit**
  - Extensive evaluation carried out by Frontier and previously Anglo American
  - NI 43-101 compliant resource (56% in the indicated resource category)
  - High grade zones identified (ZC1-'B' and ZC1-'C') which rank in top three deposits outside China in terms of Neodymium-equivalent grade

- **Easy to develop**
  - Close to power, water, transport (road, rail & port) and mining support infrastructure
  - Shallow, large tonnage open pit potential

- **Low cost environment**
  - Significant capital and operating cost advantages expected compared to most North American projects being developed

- **Potential for rapid development**
  - Mining friendly jurisdiction should allow rapid permitting
  - Good regional infrastructure will facilitate development
  - Objective to be one of the early new producers after Lynas and Molycorp

*Note: Equivalent grade is a measure that allows comparisons to be made between deposits that contain different distributions of minerals that have different values. The Ontario Securities Commission has recommended this metric for comparing rare earth projects. See page 30
Evaluation Work on ZC1 to date

- **Anglo American**
  - 3,400 metres drilled over 54 holes
  - 2,100 samples assayed
  - Original samples (core and pulps) acquired by Frontier and re-assayed

- **Frontier**
  - More than 1,000 metres drilled over 13 holes.
  - 3,420 samples assayed

- **Metallurgical test work by Anglo American and Johnson Matthey**
  - Independent review carried out by SGS Minerals Services for Frontier

- **Independent technical report and NI 43-101 compliant resource estimate prepared by The MSA Group (October 2010)**
ZC1 Resource Estimate

- 56% of the contained TREO ZC1 resource is at the Indicated level
- The deposit contains higher grade zones which could be exploited as discrete units
- ZC1 is ‘open’ laterally and at depth giving scope for upgrading the estimated resource

<table>
<thead>
<tr>
<th></th>
<th>Cut-off grade (% TREO)</th>
<th>Tonnes (Mt)</th>
<th>Average Grade (% TREO)</th>
<th>Contained TREO (kt)</th>
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<tbody>
<tr>
<td>Indicated Resource</td>
<td>1%</td>
<td>22.9</td>
<td>2.32%</td>
<td>532</td>
</tr>
<tr>
<td>Inferred Resource</td>
<td>1%</td>
<td>20.8</td>
<td>1.99%</td>
<td>415</td>
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</tbody>
</table>

Notes:
1. Relative distribution of individual REOs in ZC1 is shown in the Appendix
2. Resource is NI 43-101 compliant and presented in accordance with CIM definitions
3. The mineral resource classifications that have been applied are in accordance with CIM Definition Standards. The mineral resource estimates reflect 100% of the estimated resources at Zandkopsdrift. Frontier’s 74% owned subsidiary, Sedex, has complied with the BEE equity ownership requirements as laid down by the Mining Charter and MPRDA, through shareholder agreements with historically disadvantaged South African individuals and entities that together hold the remaining 26% of the issued share capital of Sedex. In addition to Frontier’s direct interest in the Zandkopsdrift Project through its 74% shareholding in Sedex, Frontier shall also be entitled to, in consideration for Frontier’s funding of the BEE Shareholders’ share of Sedex’s expenditure on the Zandkopsdrift Project up to bankable feasibility stage, a payment from certain of the BEE Shareholders following the completion of the bankable feasibility study equal to 21% of the then valuation of the Zandkopsdrift Project. This gives Frontier an effective 95% interest in the Zandkopsdrift Project until such payment has been received.
ZC1 Total Resource – Indicated @ 2.32% TREO
## ZC1 Resource Estimate – Higher grade zones

### ZC1 – A Zone

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<thead>
<tr>
<th></th>
<th>Cut-off grade (% TREO)</th>
<th>Tonnes (Mt)</th>
<th>Average Grade (% TREO)</th>
<th>Contained TREO (kt TREO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicated Resource</td>
<td>1.5%</td>
<td>16.6</td>
<td>2.74%</td>
<td>453</td>
</tr>
<tr>
<td>Inferred Resource</td>
<td>1.5%</td>
<td>12.9</td>
<td>2.48%</td>
<td>319</td>
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</tbody>
</table>

### ZC1 – B Zone (contained within ZC1-A) likely sufficient for 10-15 years output at planned production rates

<table>
<thead>
<tr>
<th></th>
<th>Cut-off grade (% TREO)</th>
<th>Tonnes (Mt)</th>
<th>Average Grade (% TREO)</th>
<th>Contained TREO (kt TREO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicated Resource</td>
<td>2.5%</td>
<td>7.8</td>
<td>3.67%</td>
<td>287</td>
</tr>
<tr>
<td>Inferred Resource</td>
<td>2.5%</td>
<td>4.5</td>
<td>3.61%</td>
<td>163</td>
</tr>
</tbody>
</table>

### ZC1 – C Zone (contained within ZC1-B)

<table>
<thead>
<tr>
<th></th>
<th>Cut-off grade (% TREO)</th>
<th>Tonnes (Mt)</th>
<th>Average Grade (% TREO)</th>
<th>Contained TREO (kt TREO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicated Resource</td>
<td>3.5%</td>
<td>3.2</td>
<td>4.57%</td>
<td>148</td>
</tr>
<tr>
<td>Inferred Resource</td>
<td>3.5%</td>
<td>1.5</td>
<td>4.72%</td>
<td>73</td>
</tr>
</tbody>
</table>

**Notes:**
1. Relative distribution of individual REOs in ZC1 is shown in the Appendix
2. Resource is NI 43-101 compliant and presented in accordance with CIM definitions
ZC1-A Zone – Indicated @ 2.74% TREO
ZC1-B Zone – Indicated @ 3.67% TREO
ZC1-C Zone – Indicated @ 4.72% TREO
Section across ZC1
Exploration and Resource Upgrade Potential

- ZC1 remains 'open' laterally and at depth
- Good potential to expand the resource particularly to the SE and SW of ZC1
- Churchite (HREE-rich) also present at ZC1
- 30 intrusives/plugs already discovered around ZC1, a number of which are proven to be RE bearing
- Other RE occurrences identified in the region and new 75,000 hectare prospecting right application submitted
Historic Resource and Validation Drilling

Legend
- Frontier Drilling
- Anglo American drilling

Surface Geology
Lithology
- Sand Cover
- Fe-Mn
- Carbonatite outline
- Drainages
- 2m Contour

FRONTIER
RARE EARTHS
Resource Expansion Potential

Legend
- Phase 1 RC - ZKRC
- Frontier 2009 Drilling
- Anglo American drilling
- Carbonatite outline

Primary target areas based on radiometrics

Zandkopsdrift REE Project
Planned drilling
Total Count (Th+U+U) Image
Operational Update

► 2011 drill programme commenced at ZC1 in January
► Metallurgical samples for processing to be shipped to SGS Minerals Services in March
► Up to 20,000 meters of RC and core drilling planned over the next 6 months to focus on:
  ► Metallurgical sampling
  ► Geological controls
  ► Stratigraphic analysis
  ► Infill
  ► Step out / close out
  ► Satellite pipes / intrusives
Metallurgical Sample Sites

Drill sites for met.samples

Hole ZKR
Core Drilling at Zandkopsdrift (January 2011)
Project Development Plans – 2011/2012

- **Convert full ZC1-A Zone resource to Indicated/Measured Resource**
  - Infill drilling at 40m spacing

- **Identify additional resources**
  - Stratigraphic drilling to investigate potential extension of ZC1 resource to SE and SW
  - Sampling, evaluation and preliminary drill testing of up to 30 satellite plugs and pipes
  - Initiation of regional exploration programme to target additional carbonatite intrusives within the existing Prospecting Right (c.60,000 hectares)

- **Metallurgy**
  - Complete bench-scale and pilot plant metallurgical studies

- **Target scoping study completion Q3/Q4 2011**

- **Pre-feasibility study Q4 2011/ Q1 2012**

- **Bankable feasibility study by end 2012**

- **2011-2013 budget for ZC1 development estimated at $8-10m p.a.**
Project Development Plans 2013+

- Conceptual development plan
  - Possible production commencement Q4 2014/ Q1 2015
  - Target production of up to 20,000 tonnes separated REO per annum
  - Mining, flotation and potentially cracking plant on site at ZC1
  - Saldanha Bay has good infrastructure to site and support a rare earth separation plant

Sichèn to Saldanha iron ore rail line
Saldanha Port
Arcelor Mittal steel works
Exxaro ilmenite smelter
Rare Earth Metallurgy

- Metallurgy is key to development time and capital and operating costs for RE projects.
- RE minerals in many new projects have never had commercial processes developed for flotation or leaching of the contained rare earths.
- Zandkopsdrift is expected to principally contain “conventional” RE minerals for which commercial extraction processes exist.
  - Bulk of the rare earth content is in supergene monazite (similar to Lynas’ Mount Weld deposit).
  - Lesser amounts in crandallite and gorceixite.
- Mineralogy and metallurgy reviewed by SGS Minerals Services\(^1\), who concluded:
  - Considerable potential for upgrading by flotation of a majority of the available REE.
  - Very good levels of recovery (>90%) of rare elements to solution.
  - The REE element bearing minerals are likely amenable to conventional extractive processes.
- Low thorium (average 225ppm) and uranium (average 65ppm).
  - Reduces environmental permitting and related issues.

Differing Rare Earth Distributions Makes Benchmarking difficult

The “Big 5” REOs are key and contribute >50% to RE project revenues for all peers (notably not Molycorp)

<table>
<thead>
<tr>
<th>RE Oxide</th>
<th>LREO</th>
<th>HREO</th>
<th>Avg REO price ($/kg)</th>
<th>Current REO price ($/kg)</th>
<th>Lynas Mt Weld</th>
<th>Molycorp Mtn Pass</th>
<th>Frontier ZC1-C</th>
<th>Frontier ZC1-B</th>
<th>Rare Element Bare Lodge</th>
<th>Arafura Nolans ZC1</th>
<th>Frontier ZC1-A</th>
<th>Frontier ZC1</th>
<th>Avalon Nechalacho</th>
<th>Quest Strange Lake</th>
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</thead>
<tbody>
<tr>
<td>Lanthanum</td>
<td>$12</td>
<td>$91</td>
<td>2.03%</td>
<td>2.39%</td>
<td>1.17%</td>
<td>0.93%</td>
<td>1.08%</td>
<td>0.55%</td>
<td>0.67%</td>
<td>0.55%</td>
<td>0.21%</td>
<td>0.13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerium</td>
<td>$10</td>
<td>$91</td>
<td>3.63%</td>
<td>3.44%</td>
<td>2.04%</td>
<td>1.61%</td>
<td>1.63%</td>
<td>1.33%</td>
<td>1.16%</td>
<td>0.96%</td>
<td>0.46%</td>
<td>0.27%</td>
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<tr>
<td>Praseodymium</td>
<td>$29</td>
<td>$136</td>
<td>0.40%</td>
<td>0.30%</td>
<td>0.21%</td>
<td>0.17%</td>
<td>0.14%</td>
<td>0.16%</td>
<td>0.12%</td>
<td>0.10%</td>
<td>0.06%</td>
<td>0.03%</td>
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<tr>
<td>Neodymium</td>
<td>$30</td>
<td>$147</td>
<td>1.39%</td>
<td>0.82%</td>
<td>0.73%</td>
<td>0.58%</td>
<td>0.41%</td>
<td>0.59%</td>
<td>0.41%</td>
<td>0.34%</td>
<td>0.23%</td>
<td>0.11%</td>
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<tr>
<td>Samarium</td>
<td>$8</td>
<td>$91</td>
<td>0.20%</td>
<td>0.06%</td>
<td>0.11%</td>
<td>0.08%</td>
<td>0.08%</td>
<td>0.07%</td>
<td>0.06%</td>
<td>0.05%</td>
<td>0.05%</td>
<td>0.03%</td>
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<th>Avalon Nechalacho</th>
<th>Quest Strange Lake</th>
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<td>Europium</td>
<td>$494</td>
<td>$740</td>
<td>0.05%</td>
<td>0.01%</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.02%</td>
<td>0.01%</td>
<td>0.02%</td>
<td>0.01%</td>
<td>0.01%</td>
<td>0.00%</td>
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<tr>
<td>Gadolinium</td>
<td>$13</td>
<td>$98</td>
<td>0.12%</td>
<td>0.01%</td>
<td>0.07%</td>
<td>0.05%</td>
<td>0.04%</td>
<td>0.03%</td>
<td>0.04%</td>
<td>0.03%</td>
<td>0.05%</td>
<td>0.03%</td>
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<tr>
<td>Terbium</td>
<td>$515</td>
<td>$740</td>
<td>0.01%</td>
<td>0.00%</td>
<td>0.01%</td>
<td>0.01%</td>
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<tr>
<td>Dysprosium</td>
<td>$148</td>
<td>$450</td>
<td>0.05%</td>
<td>0.00%</td>
<td>0.04%</td>
<td>0.03%</td>
<td>0.01%</td>
<td>0.01%</td>
<td>0.02%</td>
<td>0.02%</td>
<td>0.04%</td>
<td>0.04%</td>
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<tr>
<td>Yttrium</td>
<td>$18</td>
<td>$106</td>
<td>0.17%</td>
<td>0.00%</td>
<td>0.19%</td>
<td>0.15%</td>
<td>0.03%</td>
<td>0.04%</td>
<td>0.11%</td>
<td>0.09%</td>
<td>0.15%</td>
<td>0.28%</td>
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<tr>
<td>Erbium</td>
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<td>$0</td>
<td>0.02%</td>
<td>0.00%</td>
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<td>0.01%</td>
<td>0.00%</td>
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<tr>
<td>Thulium</td>
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<td>0.00%</td>
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<td>0.00%</td>
<td>0.00%</td>
<td>0.03%</td>
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<td>Ytterbium</td>
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<td>0.01%</td>
<td>0.00%</td>
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<td>0.01%</td>
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<td>0.01%</td>
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</tr>
<tr>
<td>Holmium</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<td>0.00%</td>
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<tr>
<td>Lutetium</td>
<td>$0</td>
<td>$0</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<td>0.00%</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Grade</td>
<td>8.08%</td>
<td>7.04%</td>
<td>4.62%</td>
<td>3.65%</td>
<td>3.45%</td>
<td>2.79%</td>
<td>2.63%</td>
<td>2.16%</td>
<td>1.30%</td>
<td>1.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big 5 Grade</td>
<td>1.89%</td>
<td>1.13%</td>
<td>1.01%</td>
<td>0.80%</td>
<td>0.59%</td>
<td>0.78%</td>
<td>0.57%</td>
<td>0.47%</td>
<td>0.34%</td>
<td>0.19%</td>
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</tr>
</tbody>
</table>

Notes:
1. Based on average FOB China prices for 2008 through end 2010. No value is attributed to Holmium, Erbium, Thulium, Ytterbium and Lutetium as these elements have small markets, are typically produced to special order and do not have a regularly published price.
   Source: Roskill
2. Prices from Metal Pages 1 March 2011

B and C zones have good grades of the “Big 5”
Big 5 Combined Absolute Grade %

Note: Absolute grade calculated as set out on slide 30
Equivalent Grade-The Best Metric for Comparing Rare Earth Projects

- Comparisons of rare earth projects based on TREO and HREO can be misleading
  - Some LREOs are low value, but some are high value, and have high demand growth (Neodymium and Praesodymium)
  - Some HREOs are high value, but many are low value (Gadolinium) or are produced in small quantities to special order, so do not have a regular market price (Ho, Er, Th, Yb & Lu)

- Equivalent grade is a better metric
  - Allows comparisons to be made between multi-commodity deposits containing different distributions of minerals with different values by converting individual mineral grades into a single, dominant mineral grade
  - Provides for relative ranking of projects
  - ‘Metal equivalent’ widely used and common in other multi-commodity deposit environments
  - Neodymium (Nd) is proposed as an appropriate REO for which to calculate equivalent grade as, using three year average pricing data, is the largest or second largest revenue contributor in the majority of Frontier’s peer group
  - Is a direct proxy for in situ revenue per tonne
  - Approach endorsed by Ontario Securities Commission
The following assumptions have been made in calculating Nd equivalent grades:

a) Calculated on an oxide-equivalent basis. Data is for Measured and Indicated Resource, except for Strange Lake and Bear Lodge, which contain inferred resources only.

b) Assumes 100% metallurgical recovery.

c) Based on the REO distributions and grades as set out in slide 27.

d) Based on average REO prices from 2008 through end 2010 as set out in slide 27.

e) Only projects with > 200 kt TREO calculated on code compliant basis included.

f) Non-REO by products excluded.
Potential Capital Cost

Cost Drivers

<table>
<thead>
<tr>
<th>Size of plant</th>
<th>Zandkopsdrift’s position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The anticipated plant size at the Zandkopsdrift project is of globally significant scale (20ktpa TREO)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographic location</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa is a mining friendly, lower cost jurisdiction with a benign (arid) year-round climate</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Existing Infrastructure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The ZC1 deposit is located in SA’s oldest mining province, close to transport links and other relevant infrastructure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mining method</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>As the Zandkopsdrift deposit outcrops on surface it can be mined on an open pit basis with a low/zero strip ratio</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ore type and process complexity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The principal Rare Earth host mineral is monazite for which commercial extraction processes exist</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rare Earth Grade</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The deposit has several high/higher Rare Earth grade zones which are expected to reduce ore throughput and capex</td>
<td></td>
</tr>
</tbody>
</table>

Announced Rare Earth Project Capex costs (US$m)

* Includes costs of 10ktpa mine & processing plant and 25ktpa separating plant

** Quest capex of $562m only brings product to a 99% mixed RE concentrate
## Comparative Valuation-Overview

<table>
<thead>
<tr>
<th>Company</th>
<th>Lynas</th>
<th>Molycorp</th>
<th>Frontier</th>
<th>Rare Element</th>
<th>Arafura</th>
<th>Avalon</th>
<th>Quest</th>
<th>Greenland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit</td>
<td>Mt Weld</td>
<td>Mtn Pass</td>
<td>ZC1-C</td>
<td>ZC1-B</td>
<td>ZC1-A</td>
<td>ZC1</td>
<td>Bear Lodge</td>
<td>Nolans Bore</td>
</tr>
<tr>
<td>Location</td>
<td>Australia</td>
<td>California</td>
<td>S. Africa</td>
<td>Wyoming</td>
<td>Australia</td>
<td>NW Territories</td>
<td>Quebec</td>
<td>Greenland</td>
</tr>
<tr>
<td>Nd equivalent grade</td>
<td>5.23%</td>
<td>3.43%</td>
<td>3.02%</td>
<td>2.38%</td>
<td>1.71%</td>
<td>1.41%</td>
<td>2.06%²</td>
<td>1.74%</td>
</tr>
<tr>
<td>Size of Resource (Mt)</td>
<td>1.414</td>
<td>2.072</td>
<td>0.946</td>
<td>0.548</td>
<td>0.848</td>
<td>4.298</td>
<td>1.149</td>
<td>4.899</td>
</tr>
<tr>
<td>Market Capitalisation</td>
<td>$3,583 m</td>
<td>$4,040 m</td>
<td>$265m</td>
<td>$389 m</td>
<td>$442 m</td>
<td>$649 m</td>
<td>$320 m</td>
<td>$317 m</td>
</tr>
<tr>
<td>Project stage</td>
<td>Construction</td>
<td>Construction</td>
<td>PFS 2011</td>
<td>PEA</td>
<td>BFS in progress</td>
<td>PFS</td>
<td>PEA</td>
<td>PEA</td>
</tr>
<tr>
<td>Deposit type</td>
<td>Pipe</td>
<td>Pipe</td>
<td>Pipe</td>
<td>Dykes</td>
<td>Veins</td>
<td>Tabular</td>
<td>Veins</td>
<td>Massive</td>
</tr>
<tr>
<td>Mining method</td>
<td>Open Pit</td>
<td>Open Pit</td>
<td>Open Pit</td>
<td>Open Pit</td>
<td>Open Pit</td>
<td>Under-ground</td>
<td>Open Pit</td>
<td>Open Pit</td>
</tr>
<tr>
<td>Climate</td>
<td>Arid</td>
<td>Arid</td>
<td>Arid</td>
<td>Cold</td>
<td>Arid</td>
<td>Arctic</td>
<td>Cold</td>
<td>Arctic</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Poor</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>None</td>
</tr>
</tbody>
</table>

1. Measured and Indicated shown where available; Inferred shown for projects with no M&I resources
2. Based on Inferred resource grade
3. Market Capitalisations as at 1 March 2011
4. The following assumptions have been made in calculating Nd equivalent grades:
   a) Calculated on an oxide-equivalent basis
   b) Assumes 100% metallurgical recovery
   c) Based on the REO distributions and grades in slide 27
   d) Based on average REO prices for 2008-2010 slide 27
   e) Non-REO by products excluded
IPO Overview - November 2010

► Successful IPO on the Toronto Stock Exchange (TSX:FRO) (TSX:FRO.WT)
  ▸ $62m (gross) raised in full treasury issue
  ▸ IPO structured as a Unit offer (one share and one half warrant)
  ▸ Offer significantly oversubscribed
  ▸ 40+ institutional accounts participated

IPO Offer Split

Retail 18%
Institutional 82%

Geographic Split

UK/Europe 16%
US 29%
Canada 55%
Zandkopsdrift Summary

- World-class deposit
- Good potential for increase in deposit size
- Excellent exploration potential both locally and regionally
- Straightforward to develop
- Low cost environment (capex and opex)
- Potential for rapid development and early production compared to many peers
Appendices
Rare Earths – Overview

- Series of 15 chemically similar elements that occur and are recovered together
  - Distribution of elements varies from deposit to deposit
  - Two distinct categories based on atomic weight: Light Rare Earths and Heavy Rare Earths
- Each element has a range of distinctive physical properties which allow them to be used in a variety of technological applications
  - Magnetic, optical, electrical, catalytic and metallurgical
- Underpin the “green economy”
  - Hybrid motor and battery technology
  - Energy efficiency
  - Wind power
  - Consumer electronics
  - Defence
- Most have no substitutes and are indispensable in many applications
Rare Earths – Uses

- Biggest use is for magnets, phosphors and metal alloys
  - Accounts for 82% of demand by value

Value of RE usage by application (2008)

Source: Roskill
Rare Earths – Historical Supply

- China has dominated world rare earths supply since mid 1990’s; currently controls 97% of supply
- No increase since 2005 despite steadily increasing demand
- China’s supply dominance likely to continue

Global Supply (tonnes REO)

Source: Roskill
Rare Earths – Supply/Demand Forecasts

- Demand projected to grow at 10-15% CAGR from 2010 to 2015
- China’s domestic demand continues to increase faster than its supply
- Supply deficit widely forecast
  - 55kt of REO required from non-China sources by 2015, up from 5kt in 2010
  - Significant opportunity for new producers

Global Supply and Demand (tonnes REO)

Source: Roskill
Management

Management team with extensive experience of exploration and development of mineral projects in Southern Africa, financing and corporate development

**James Kenny B Comm, MBS**  
Chief Executive  
20+ years experience in natural resources sector as an adviser, broker, executive and promoter. Centrally involved in Frontier's corporate strategy and development activities to date.

**Dr. Stuart Smith B Sc, PhD**  
Vice President, Exploration  
30+ years experience in mineral exploration with particular experience in rare earths, uranium, base metals and diamonds.

**Paul McGuinness B Comm, ACA**  
Chief Financial Officer  
14 years experience in investment banking and financial control: Arthur Anderson, Salomon Brothers, Schroders, Collins Stewart and MG Capital.

**Philip Kenny B Eng, MBA**  
Non–executive Chairman  
25 years experience in natural resource sector. CEO of Firestone Diamonds plc, an AIM-listed diamond mining company focused on Southern Africa.
Non-executive Directors

Crispin Sonn B.A., B.Comm
(South Africa)
Executive Director of Old Mutual South Africa, the largest integrated financial services company in South Africa. Chairman of the Old Mutual Foundation, founding Chairman of Foodbank South Africa and Non-executive Director of Capespan (Pty) Ltd.

Eamonn Grennan B.Sc, M.Sc
(Ireland)
Independent consulting geologist with over 40 years experience as an exploration manager, geologist, consultant and senior lecturer. Former President of the Irish Association for Economic Geology and member of the Consultative Committee of the Irish Geological Survey.

Anu Dhir B.A., J.D.
(Canada)
Former VP Corporate Development and Company Secretary of Katanga Mining Limited. Managing Director of Miniqs Limited, Non-executive Director of Anooraq Resources Corporation and Non-executive Director of Compass Asset Management.
ZC1 Historical Exploration
ZC1 Historical Drilling Summary

Legend

Wagon_Drilling
Ce-La %

- 0.060000 - 0.380000
- 0.380001 - 0.840000
- 0.840001 - 1.640000
- 1.540001 - 3.190000
- 3.190001 - 7.040000
- Phelps_Dodge_Diamond
- ZKP_Drilling
- Anglo_ZKP
- Anglo_DD
- Anglo_drilling_1974
- Rivers

Anglo_geology

Geology
- Carbonatised Breccia
- Carbonatised Intrusive
- Carbonatite
- Melanite
- Silicified Volcanic
- Mn Wed
- Gneiss - Fenitised
## ZC1-C Zone: Significant High Grade Intersections

<table>
<thead>
<tr>
<th>Drill Hole</th>
<th>Intersection (m)</th>
<th>Average Grade (%) TREO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZKR36</td>
<td>0-58</td>
<td>4.3</td>
</tr>
<tr>
<td>ZKR08</td>
<td>26-33</td>
<td>5.8</td>
</tr>
<tr>
<td>ZKR13V</td>
<td>19-42</td>
<td>5.4</td>
</tr>
<tr>
<td>ZKR28V</td>
<td>3-17</td>
<td>3.6</td>
</tr>
<tr>
<td>ZKR12</td>
<td>22-46</td>
<td>5.6</td>
</tr>
<tr>
<td>ZKR15</td>
<td>46-56</td>
<td>4.5</td>
</tr>
<tr>
<td>and</td>
<td>76-86</td>
<td>4.1</td>
</tr>
<tr>
<td>ZKD38</td>
<td>0-19</td>
<td>4.4</td>
</tr>
<tr>
<td>and</td>
<td>43-49</td>
<td>11.4</td>
</tr>
<tr>
<td>including</td>
<td>44-45</td>
<td>18.9</td>
</tr>
<tr>
<td>ZKR27V</td>
<td>52-55</td>
<td>4.8</td>
</tr>
<tr>
<td>and</td>
<td>90-108 (1)</td>
<td>3.3</td>
</tr>
<tr>
<td>ZKR33V</td>
<td>7-65</td>
<td>4.0</td>
</tr>
<tr>
<td>ZKR07</td>
<td>15-35</td>
<td>4.1</td>
</tr>
<tr>
<td>ZKR26</td>
<td>35-51</td>
<td>3.5</td>
</tr>
<tr>
<td>ZKR16</td>
<td>35-49</td>
<td>3.2</td>
</tr>
</tbody>
</table>

(1) Hole terminated in mineralization
**Illustrative Southern Africa cost advantage vs. North America**

1. Chart shows capex and opex for similar sized kimberlite diamond mines being developed in Canada and Southern Africa
2. Gahcho Kue (Mountain Province/ De Beers), Renard (Stornoway), AK6 (Lucara)
## REO Prices and Relative Distribution

<table>
<thead>
<tr>
<th>RE Oxide</th>
<th>Average price (^1) ($/kg REO)</th>
<th>Current price (^2) ($/kg REO)</th>
<th>Frontier</th>
<th>Lynas</th>
<th>Molycorp</th>
<th>Rare Element</th>
<th>Arafura</th>
<th>Avalon</th>
<th>Quest</th>
<th>Strange Lake</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LREO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lanthanum</td>
<td>$12</td>
<td>$91</td>
<td>25.42%</td>
<td>25.14%</td>
<td>34.00%</td>
<td>31.27%</td>
<td>19.78%</td>
<td>15.83%</td>
<td>13.19%</td>
<td></td>
</tr>
<tr>
<td>Cerium</td>
<td>$10</td>
<td>$91</td>
<td>44.17%</td>
<td>44.97%</td>
<td>48.80%</td>
<td>47.19%</td>
<td>47.63%</td>
<td>35.72%</td>
<td>27.37%</td>
<td></td>
</tr>
<tr>
<td>Praseodymium</td>
<td>$29</td>
<td>$136</td>
<td>4.55%</td>
<td>4.90%</td>
<td>4.20%</td>
<td>4.05%</td>
<td>5.83%</td>
<td>4.51%</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>Neodymium</td>
<td>$30</td>
<td>$147</td>
<td>15.77%</td>
<td>17.18%</td>
<td>11.70%</td>
<td>11.87%</td>
<td>21.24%</td>
<td>17.83%</td>
<td>10.69%</td>
<td></td>
</tr>
<tr>
<td>Samarium</td>
<td>$8</td>
<td>$91</td>
<td>2.31%</td>
<td>2.44%</td>
<td>0.79%</td>
<td>2.35%</td>
<td>2.37%</td>
<td>3.91%</td>
<td>2.60%</td>
<td></td>
</tr>
<tr>
<td><strong>HREO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europium</td>
<td>$494</td>
<td>$740</td>
<td>0.59%</td>
<td>0.56%</td>
<td>0.13%</td>
<td>0.55%</td>
<td>0.40%</td>
<td>0.49%</td>
<td>0.20%</td>
<td></td>
</tr>
<tr>
<td>Gadolinium</td>
<td>$13</td>
<td>$98</td>
<td>1.44%</td>
<td>1.54%</td>
<td>0.21%</td>
<td>1.22%</td>
<td>1.00%</td>
<td>3.71%</td>
<td>2.70%</td>
<td></td>
</tr>
<tr>
<td>Terbium</td>
<td>$515</td>
<td>$740</td>
<td>0.17%</td>
<td>0.17%</td>
<td>0.02%</td>
<td>0.17%</td>
<td>0.08%</td>
<td>0.54%</td>
<td>0.60%</td>
<td></td>
</tr>
<tr>
<td>Dysprosium</td>
<td>$148</td>
<td>$450</td>
<td>0.77%</td>
<td>0.58%</td>
<td>0.05%</td>
<td>0.41%</td>
<td>0.33%</td>
<td>2.71%</td>
<td>4.10%</td>
<td></td>
</tr>
<tr>
<td>Holmium</td>
<td>$0</td>
<td>$0</td>
<td>0.13%</td>
<td>0.08%</td>
<td>0.02%</td>
<td>0.03%</td>
<td>0.00%</td>
<td>0.48%</td>
<td>0.90%</td>
<td></td>
</tr>
<tr>
<td>Erbium</td>
<td>$0</td>
<td>$0</td>
<td>0.32%</td>
<td>0.22%</td>
<td>0.02%</td>
<td>0.06%</td>
<td>0.00%</td>
<td>1.26%</td>
<td>2.80%</td>
<td></td>
</tr>
<tr>
<td>Thulium</td>
<td>$0</td>
<td>$0</td>
<td>0.04%</td>
<td>0.02%</td>
<td>0.02%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.17%</td>
<td>0.50%</td>
<td></td>
</tr>
<tr>
<td>Ytterbium</td>
<td>$0</td>
<td>$0</td>
<td>0.23%</td>
<td>0.09%</td>
<td>0.02%</td>
<td>0.03%</td>
<td>0.00%</td>
<td>1.01%</td>
<td>2.90%</td>
<td></td>
</tr>
<tr>
<td>Lutetium</td>
<td>$0</td>
<td>$0</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.02%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.14%</td>
<td>0.40%</td>
<td></td>
</tr>
<tr>
<td>Yttrium</td>
<td>$18</td>
<td>$106</td>
<td>4.07%</td>
<td>2.08%</td>
<td>0.02%</td>
<td>0.81%</td>
<td>1.32%</td>
<td>11.69%</td>
<td>28.07%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

1. Based on average FOB China prices for 2008-2010. Source: Roskill
2. Based on current FOB China prices. Source: Metal Pages, 1 March 2011
3. No value is attributed to Holmium, Erbium, Thulium, Ytterbium and Lutetium as they have small markets and are typically produced to special order and do not have regularly published prices.
4. Mount Weld distribution calculated as a weighted average of the Central and Duncan deposits.