ASX/AIM:**BKY**

# Berkeley
Resources Ltd

*Developing a large scale uranium project in Spain*

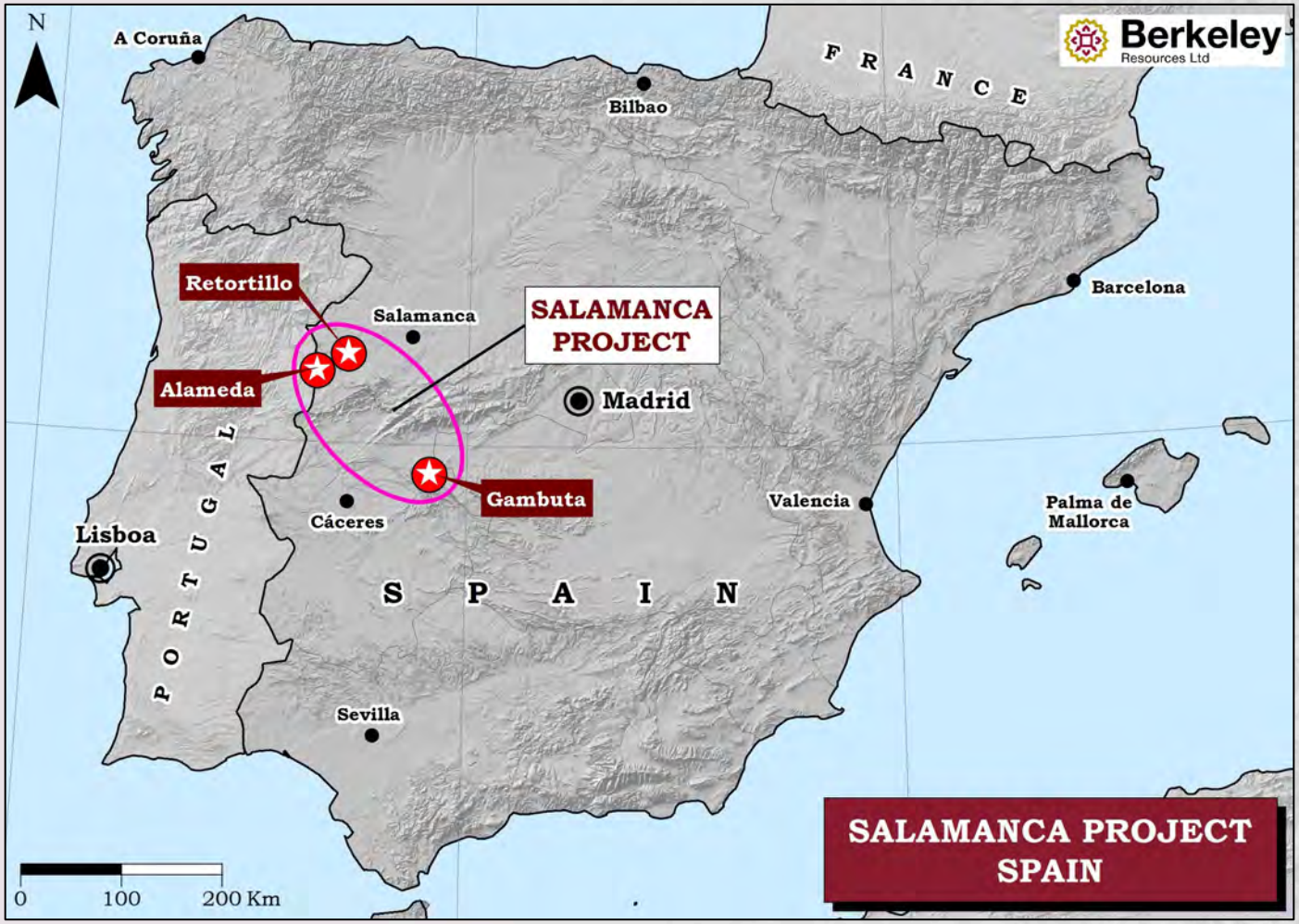
www.berkeleyresources.com.au

May 2013

# Executive Summary

- Uranium projects in Spain
- Total Mineral Resource Estimate of 61 Mlb $U_3O_8$ (@ 430 ppm)
- Flagship Salamanca Project
  - Scoping Study completed
    - based on integration of Retortillo & Alameda deposits only (33.9 Mlb $U_3O_8$)
    - demonstrates robust Project with strong economics
    - significant production scale and mine life
    - excellent growth potential
  - Pre-Feasibility Study underway
- Strong board/management with proven track record in Uranium & Spain
- Strong cash position (~A$30m)

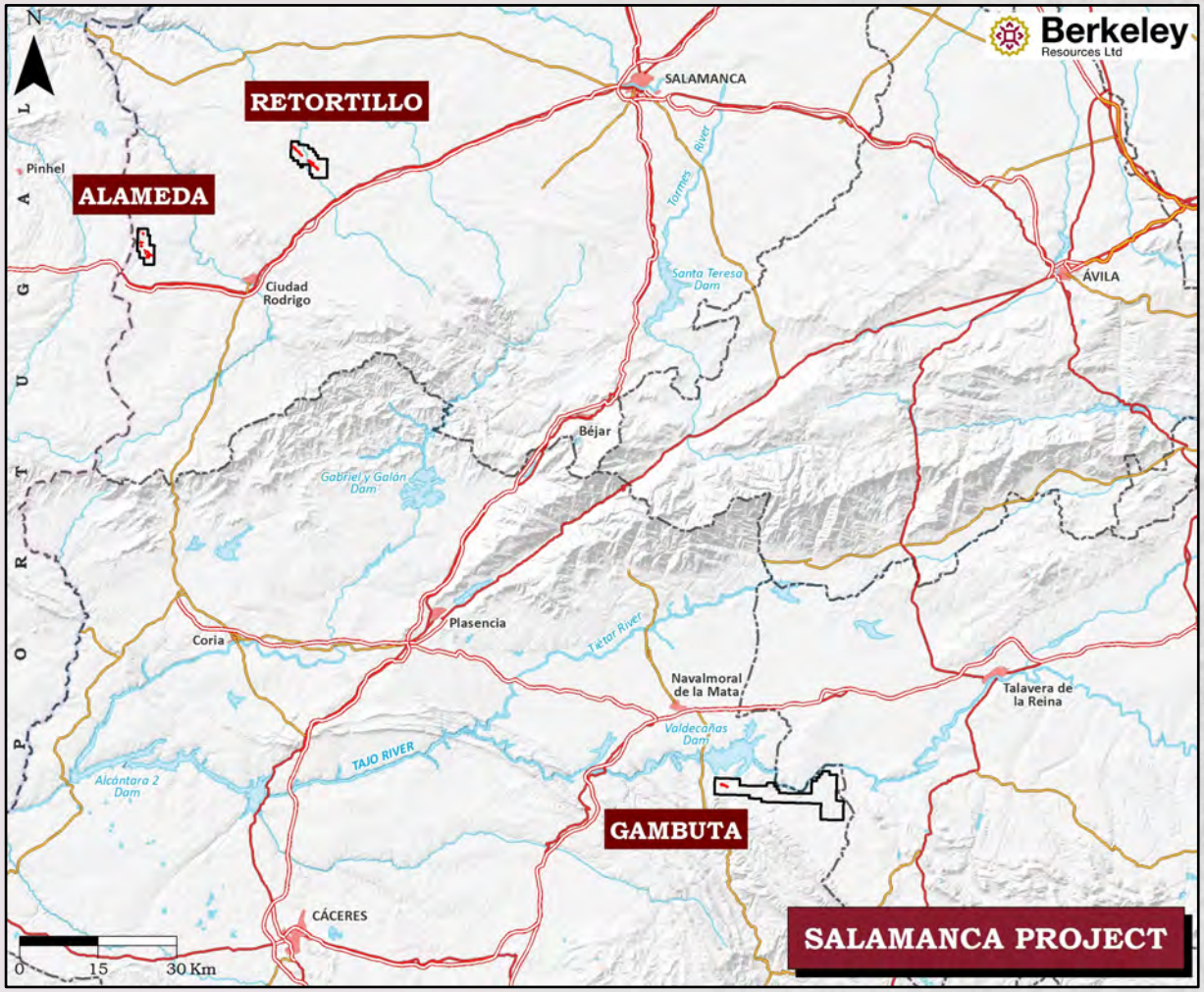
# Project Location




## Spain

- Historical uranium mining
- Existing nuclear power industry
- Government support for mining industry
- Skilled local workforce
- Internationally competitive contractors and suppliers

# Salamanca Project




- Scoping Study evaluated integrated project comprising Retortillo and Alameda only (33.9 Mlb)
- Significant growth potential through inclusion of Gambuta and Satellite deposits (27.1 Mlb)
- Total Resource = 61 Mlb $U_3O_8$ (@ 430 ppm)
- Exploration upside
- Excellent infrastructure
- Berkeley interest 100%

# Scoping Study – Conceptual Approach

- Staged development and capital expenditure incorporating two deposits
  - Initial development and production at Retortillo
  - Subsequent development of Alameda in Year 2
  - Steady state production in Year 3 from both deposits
- Open pit mining
  - transfer mining to facilitate continuous rehabilitation
- Heap leaching at each mine using on-off leach pads
- Centralised plant at Retortillo (solvent extraction & ammonium diurante precipitation)
- At Alameda, ore will be initially be treated on site by remote ion exchange operation
- Loaded resin will then be trucked from Alameda to centralised plant at Retortillo for final extraction and purification

# Scoping Study – Robust Project

| Scoping Study: Based on current Retortillo and Alameda MREs | |
|---|---|
| Mine Life | Minimum 11 years<br>Including 7 years steady state operation |
| Production | 3.2 Mlb per annum (average steady state)<br>2.6 Mlb per annum (average LOM) |
| Operating Cost (C1) | US$25.65 per pound (average LOM) |
| Capital Cost | US$84m upfront<br>US$95m incurred in Yr 2 |

***Robust, low capex project with significant production scale & mine life***

# Mineral Resources – Retortillo & Alameda

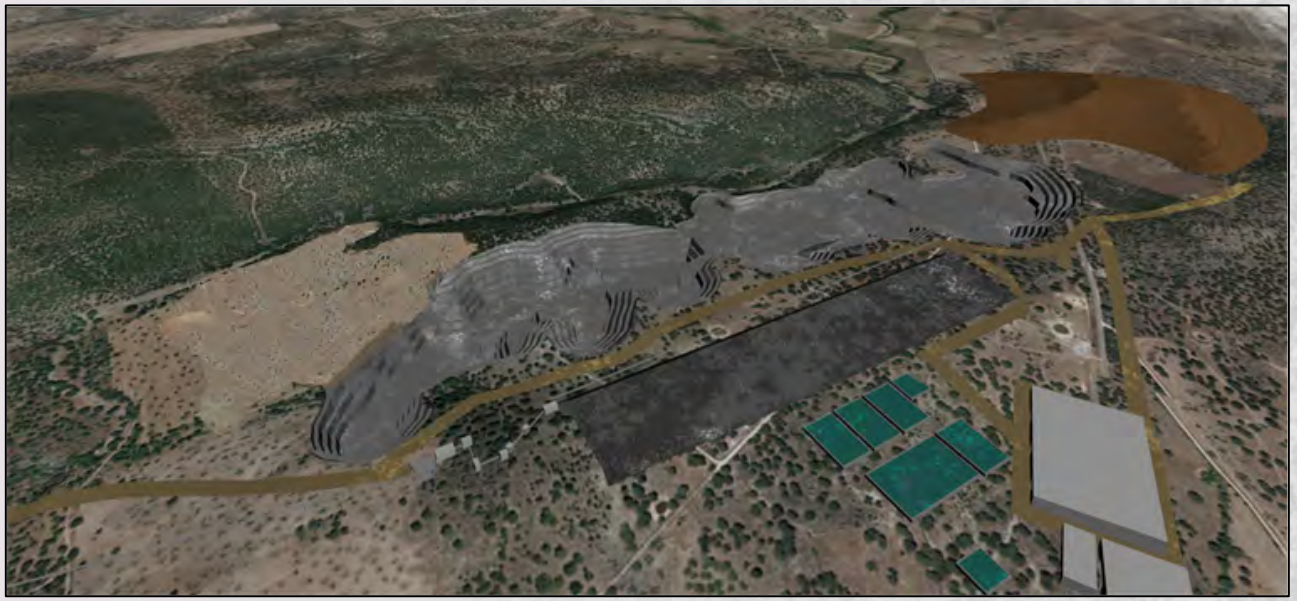
| Retortillo and Alameda<br>Combined Mineral Resource Estimate as at July 2012<br>Reported at a cut-off grade of 200 ppm $U_3O_8$ | | | |
|---|---|---|---|
| | Tonnage (million tonnes) | Grade (ppm $U_3O_8$) | Contained Uranium (million pounds) |
| Indicated Resource | 29.0 | 437 | 27.9 |
| Inferred Resource | 6.9 | 396 | 6.0 |
| **Total Resource** | **35.9** | **429** | **33.9** |

- Scoping Study was based solely on the Retortillo and Alameda resources
- Berkeley has 100% interest in additional Inferred Resources totalling 27.1 Mlb $U_3O_8$ (28.5 Mt @ 431 ppm $U_3O_8$) at Gambuta and other Satellite deposits, which are in close proximity to Retortillo and Alameda

***Strong potential to increase production profile and mine life***

# Shallow Open Pit Mining

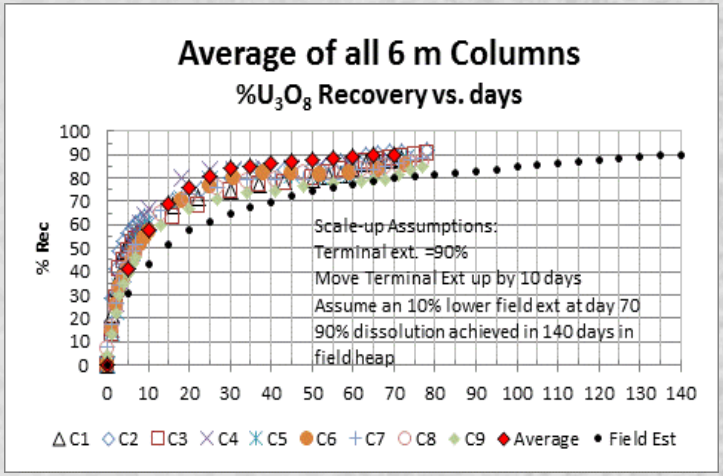
- Open pit mining using drill & blast followed by diesel powered truck & shovel operation
- Transfer mining method to facilitate continuous backfill / rehabilitation
- Shallow open pits – max depths 90m at Retortillo and 135m at Alameda
- Low strip ratios - average 1:2.6 (ore to waste) at Retortillo and 1:1.6 at Alameda over LOM
- Mining schedule averages 5.5 Mt ore per annum combined mine production during steady state
  - Mined grade averages 291 ppm $U_3O_8$ at Retortillo and 322 ppm $U_3O_8$ at Alameda over LOM
  - Study assumes contractor mining scenario



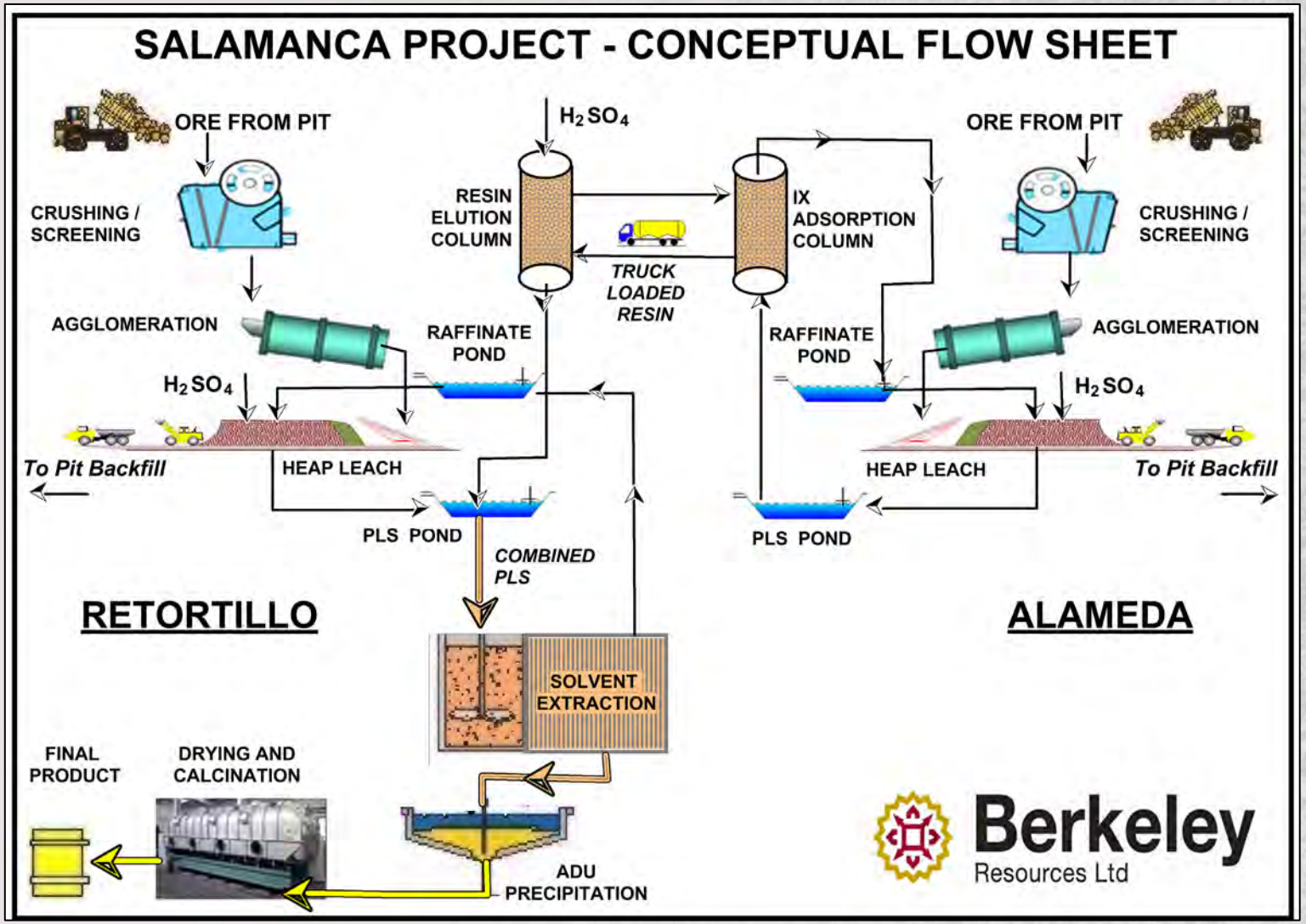
# Heap Leach Processing

- Extensive metallurgical testwork undertaken
  - 5T representative sample of Alameda – SGS laboratories in Perth (2011)
  - 5.5T representative sample of Retortillo – Mintek laboratories in Johannesburg (2012)

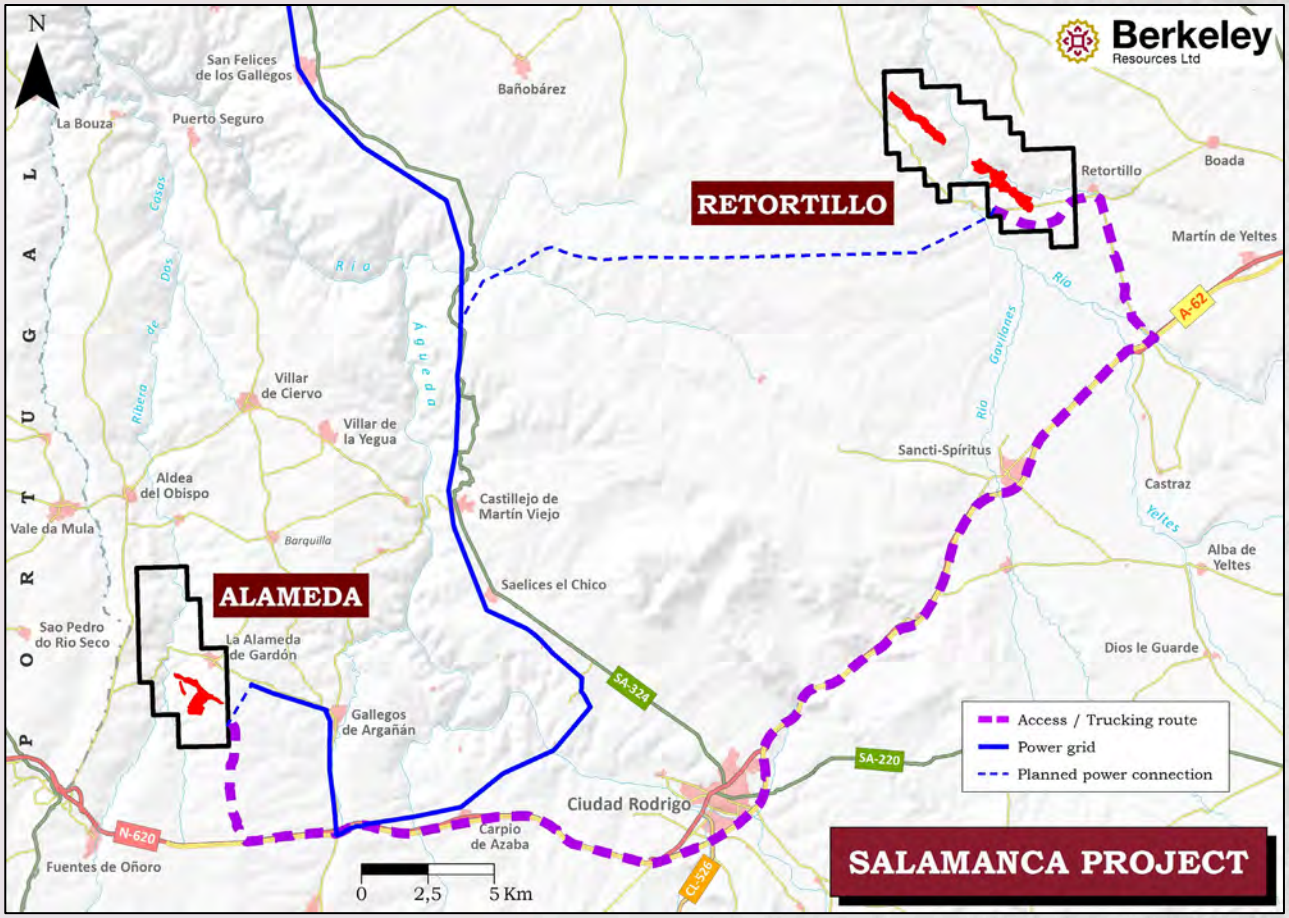
- Heap leach technology selected as preferred leaching option due to:
  - high recoveries (85% to 95% across both deposits)
  - good leach kinetics
  - coarse crush sizes (20 - 40mm)
  - Ripios backfilled into pits, removing requirement for Tailings storage facility (TSF)



# Process Flow Sheet



# Excellent Infrastructure




- Readily accessible from existing public road network
- Water available from both adjacent water courses and on-site bores
- Power supplied from local grid at US$0.10/kWh
- Total power requirements low (~3.7 MW at both sites)
- Proximal to city of Salamanca and local villages
  - on-site accommodation / camp not required
- In-country sources of sulphuric acid
  - Acid Plant not required

***Significant Capex savings***

# Excellent Infrastructure


***Access***

***Power***

***Water***

***Site Infrastructure***

***Regional Infrastructure***


***Sulphuric Acid Sources***

***Significant Capex savings***

# Pre-Feasibility Study

- SENET of South Africa engaged as Study Manager
- Study team comprises specialists across all disciplines, including in-country representatives
  - SRK Consulting (mine design)
  - Knight Piesold (heap design)
  - Duro Felguera (in-country project cost estimates)
  - URS (environmental management) and Iberdrola (radiological protection)
- Scope of Work:
  - Resource infill and exploration drilling to upgrade resource classification and grow resource base
  - Detailed mine scheduling and material movement optimisation study
  - Column leach testwork, geotechnical characterisation, assessment of downstream precipitation options
  - Infrastructure assessment and generation of optimal site layout plans
  - Use of local suppliers and rates will be investigated to further enhance Project's capital efficiency
- Study scheduled for completion in Sept Qtr 2013
- Permitting process continuing in parallel

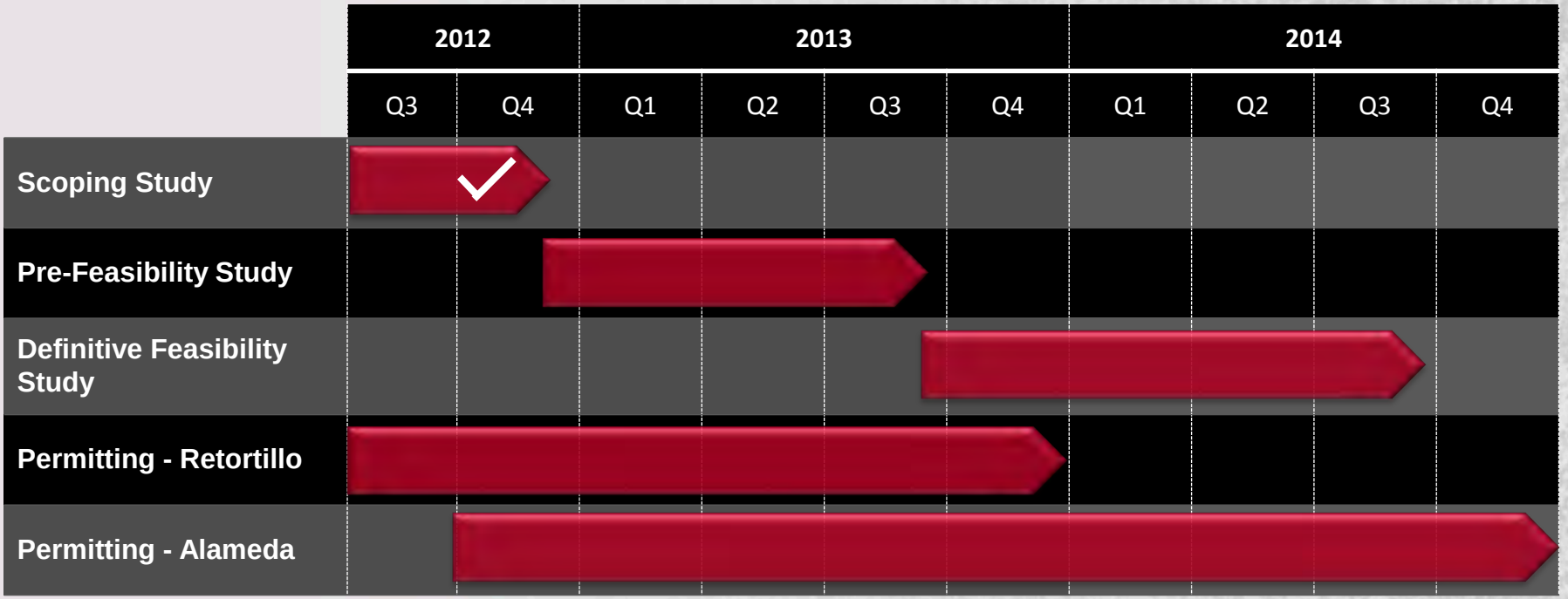
# Permitting

- Management team with strong track record of successful mine permitting in Spain
- Permitting process for uranium mining and processing well understood
- All plans developed in conjunction with local experts and authorities
- Best practice environmental management approach
- At Retortillo, all key permitting processes well advanced
- At Alameda, permitting underway with initial documentation submitted in Dec 12
- Local community support with Co-Operation Agreements in place with three municipalities

**Key Permitting Processes:**

1) Exploitation Concession (Mining Permit)
2) Authorisation of the Process Plant as a Radioactive Facility
3) Authorisation for the Exceptional Use of Rural Land for Industrial Purposes

# Indicative Timeline




***Key development milestones over next 18 months***

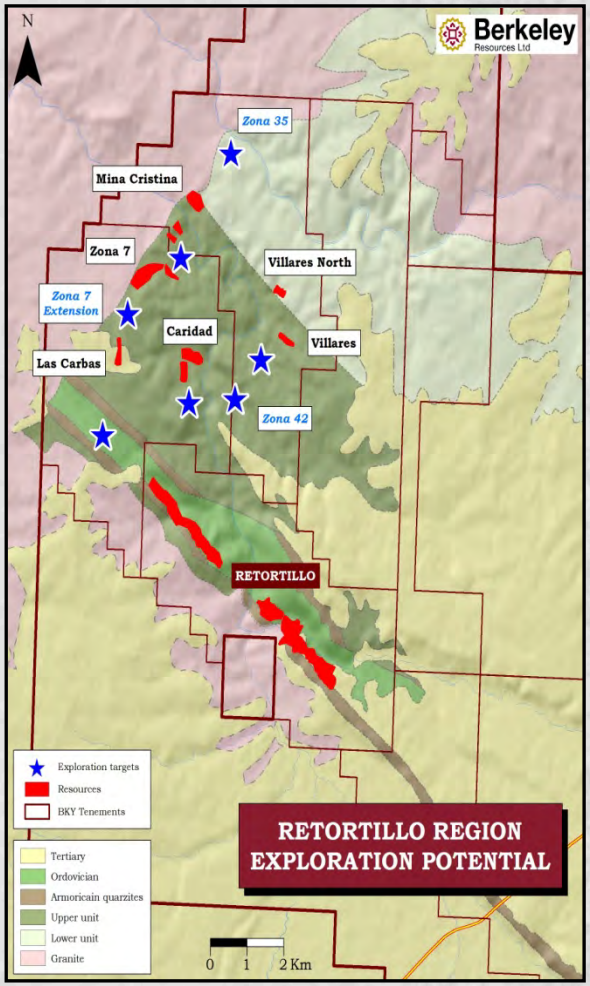
# Production Growth Potential – Gambuta

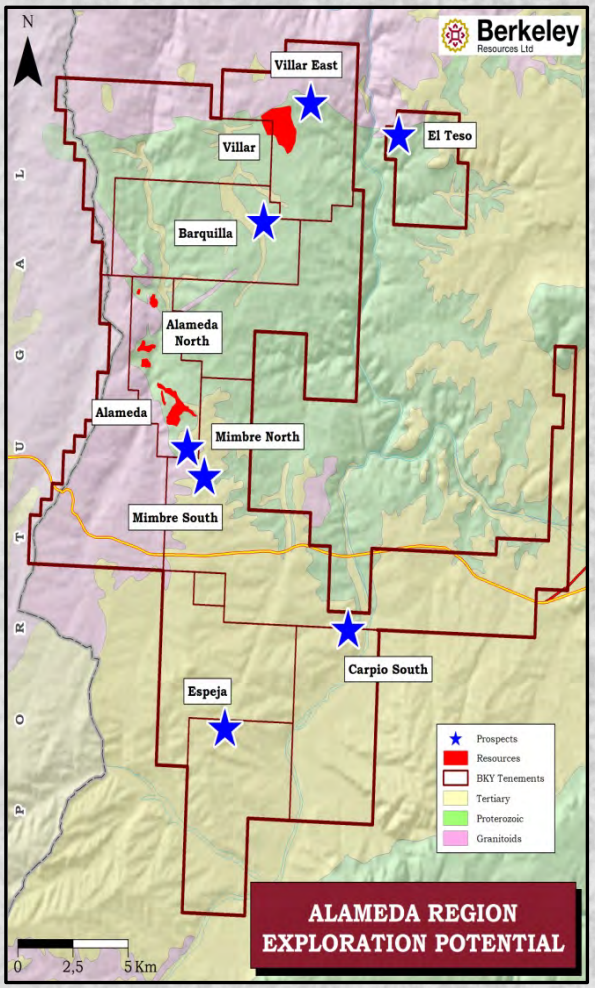
- Potential to increase production scale or mine life of Salamanca Project, once incorporated
- Scoping Study commenced following positive results of initial Desktop Study
- Scope of Work:
  - Initial mine design and production/materials movement schedule using existing Inferred MRE (11.1Mlb)
  - Initial metallurgical testwork on 330kg sample (crushability / diagnostic assays / column leaching)
  - Initial process and plant design under heap leach and remote ion exchange scenario
  - Conceptual approach same as for Alameda (loaded resin transported to centralised plant at Retortillo)
- Study anticipated conclusion – Sept Qtr 2013
- Permitting process commenced in Mar 2013
- Gambuta will be integrated with Retortillo and Alameda once resource classification and technical studies are sufficiently advanced

***Potential robust, low capex additional production source for Salamanca Project***

# Exploration Upside – Retortillo and Alameda

- Significant exploration potential:
  - Numerous untested or poorly tested radiometric anomalies
  - Exploration under shallow Tertiary cover
  - Extensions to known resources
- 2013 exploration work program includes:
  - Detailed radiometric surveys, mapping and sampling to better define targets
  - Water well sampling & gamma probing to detect uranium anomalies under cover
  - Drill testing of Zona 7, Villar and priority radiometric anomalies



# Experienced Board and Management

| | |
|---|---|
| **Ian Middlemas**<br>Chairman | Chartered Accountant with over 20 years mining industry experience; extensive corporate and management expertise |
| **Jim Ross**<br>Deputy Chairman | Leading international geologist whose technical qualifications include an honours degree in Geology at UWA and a PhD in Economic Geology from UC Berkeley; extensive international experience in exploration and mining |
| **Robert Behets**<br>Non-Executive Director | Geologist with over 20 years mining industry experience; Founding MD of Mantra Resources and ex-WMC executive; member of JORC Committee |
| **Francisco Bellon**<br>General Manager - Operations | Mining Engineer with further specialisation in mineral processing and metallurgy with over 18 years experience in both operational and project management roles in Europe, South America and West Africa. Has developed and operated numerous mines in Spain |
| **Javier Colilla**<br>Senior VP - Corporate | Economist and Lawyer with more than 25 years experience in the Spanish and international mining industry. Held several executive management roles during a long career with Rio Narcea Gold Mines and was responsible for the permitting of four mines in Spain and one in Mauritania |
| **Russell Bradford**<br>Technical Advisor | Metallurgist with over 20 years experience in Africa and Australia; former GM - Project Development for Mantra, GM - Operations for LionOre's Australian nickel mines, Head of Metallurgy at BCL in Botswana |

# Corporate

## Capital Structure

| | |
|---|---|
| Shares on Issue | 179.4m |
| Unlisted Options & Rights | 16.2m |
| Market Cap. (undiluted @ A$0.29) | A$52.0m |
| Cash (31 Mar 13) | ~A$30.0m |

## Substantial Shareholders

| | |
|---|---|
| Anglo Pacific | 15.1% |
| Hadron | 7.9% |
| Resource Capital Fund | 7.2% |
| CBA | 6.3% |
| Management | ~4.0% |
| **Top 20 Shareholders** | **70.2%** |

# Investment Case

**HIGH QUALITY ASSET BASE**

- Large (61.0Mlb @ 430 ppm) resource base
- Salamanca Project - shallow open pit mining, heap leach process
- Significant production scale and mine life, excellent infrastructure

**GROWTH POTENTIAL**

- Scoping Study considered only Retortillo and Alameda deposits
- Desktop Study highlighted potential of Gambuta deposit
- Exploration Upside

**DE-RISKING THE PROJECT**

- Scoping Study demonstrated robust Project
- Permitting at Retortillo well advanced
- Well funded with PFS underway targeting completion Q3 2013

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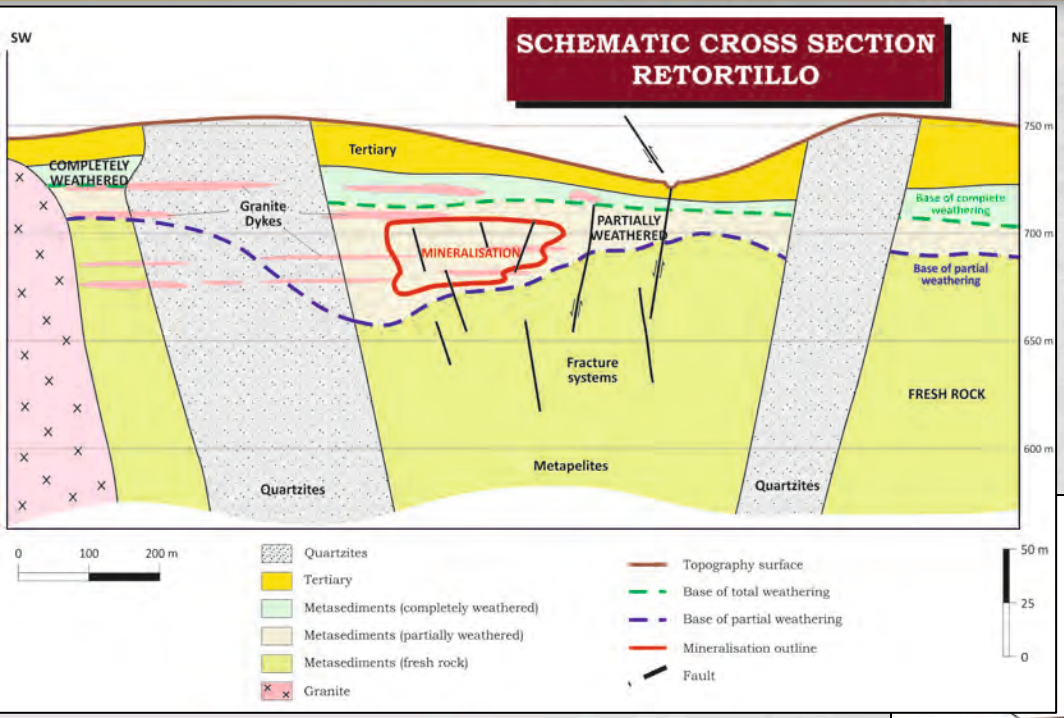
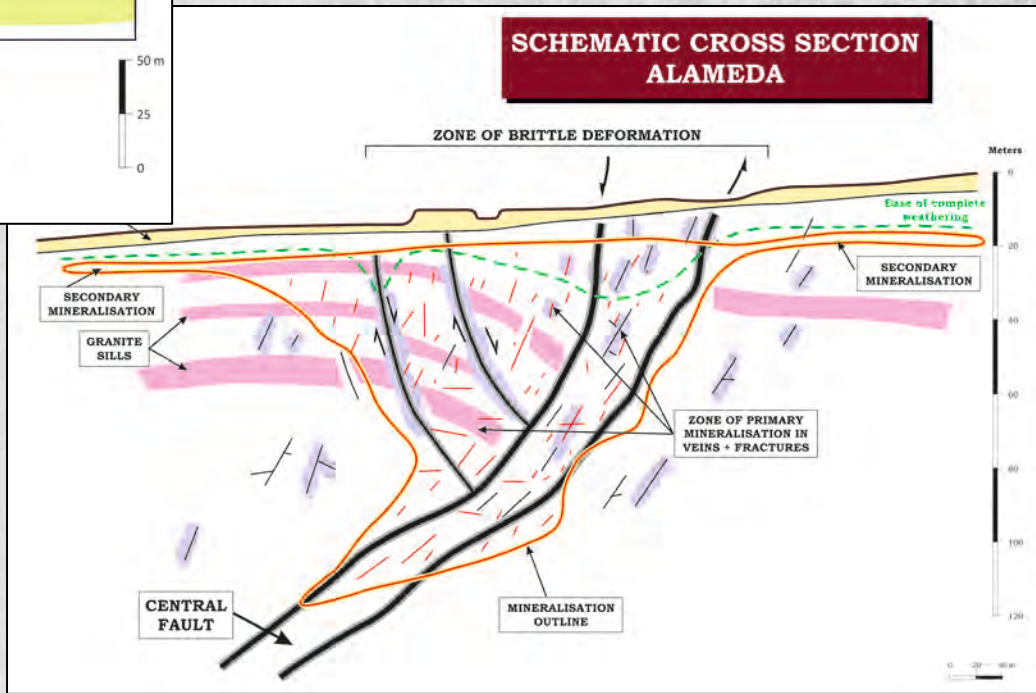
# *Additional Information*

# Geology – Retortillo & Alameda

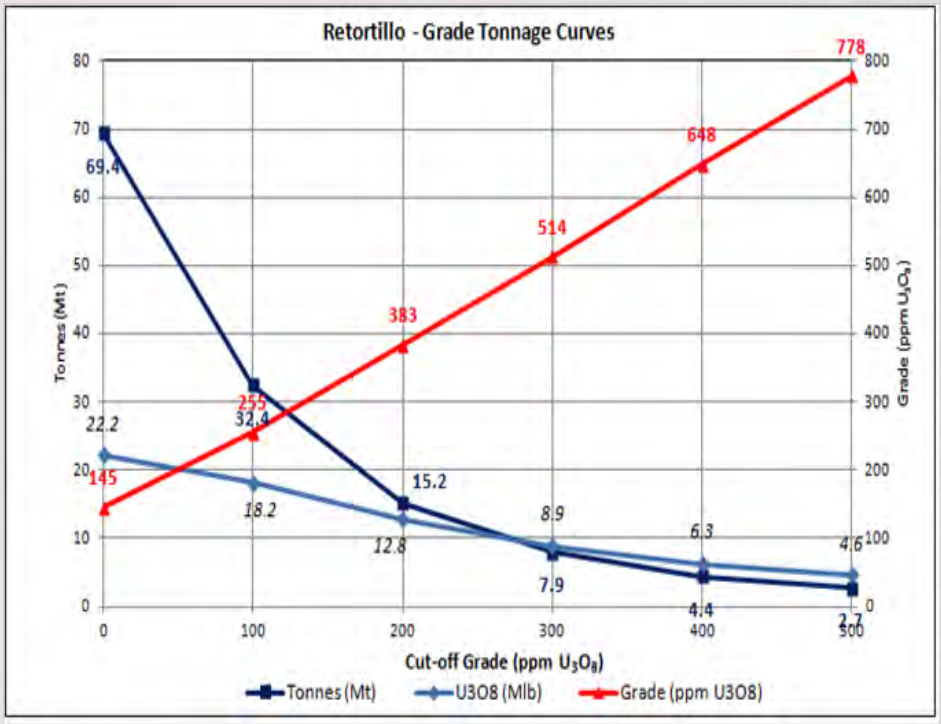


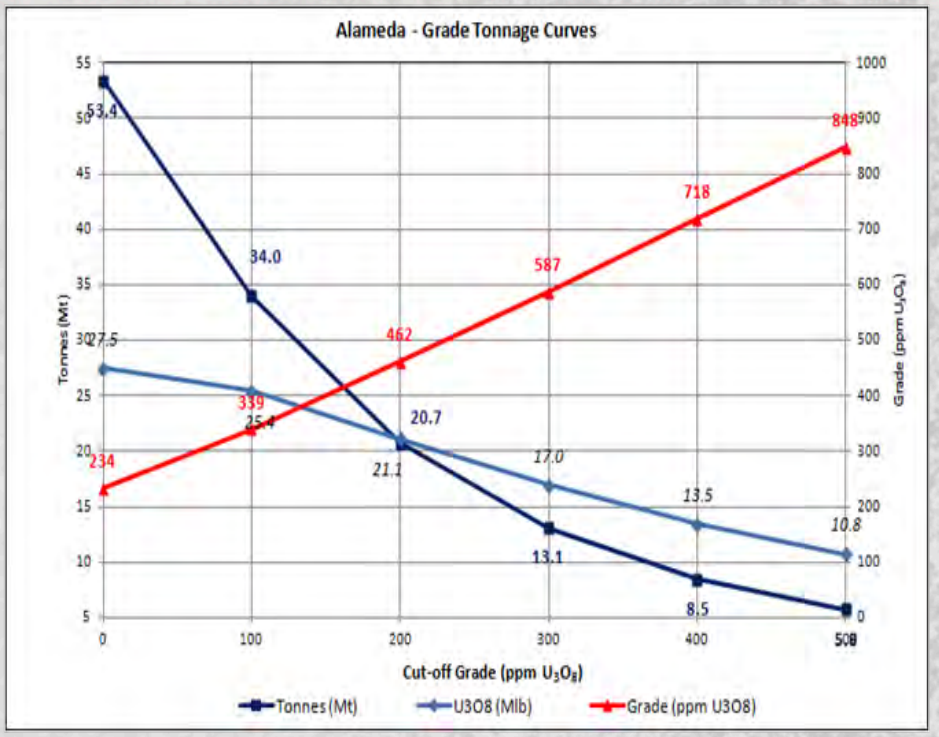

- Vein Type deposits hosted in meta-sedimentary sequences adjacent to granites
- Retortillo mineralisation includes vein, stockwork and disseminated mineralisation in joint / fracture fillings associated with brittle deformation




- Alameda mineralisation occurs in a complex network of moderately to steeply dipping brittle structures
- Primary uranium minerals are pitchblende/uraninite and coffinite

# Grade Tonnage Curves – Retortillo & Alameda




- G-T curves highlight significant impact of cut-off grade (COG)
- At 100 ppm $U_3O_8$ COG, which approximates the mining COG derived from the Scoping Study pit optimisations, MRE's for Retortillo and Alameda total 18.2 Mlb and 25.4 Mlbs $U_3O_8$ respectively
- Represents an increase of 42% and 20% in contained $U_3O_8$ at Retortillo and Alameda respectively when compared with the MRE reported at the 200 ppm COG

# Total Mineral Resources

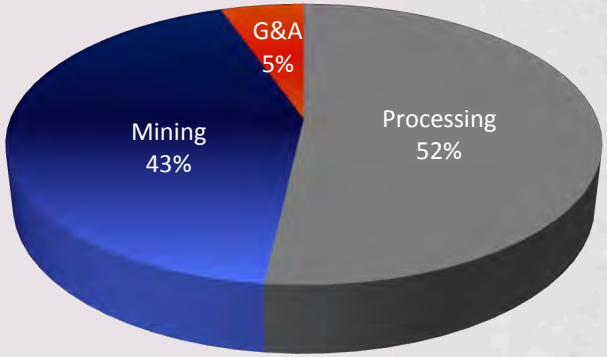
| Mineral Resources as at Oct 2012<br>Reported at a cut-off grade of 200 ppm $U_3O_8$ | | | | |
|---|---|---|---|---|
| | Resource Category | Tonnage (million tonnes) | Grade (ppm $U_3O_8$) | Contained $U_3O_8$ (million pounds) |
| Retortillo | Indicated | 8.9 | 395 | 7.8 |
| | Inferred | 6.2 | 366 | 5.0 |
| | ***Total*** | ***15.2*** | ***383*** | ***12.8*** |
| Alameda | Indicated | 20.0 | 455 | 20.1 |
| | Inferred | 0.7 | 657 | 1.0 |
| | ***Total*** | ***20.7*** | ***462*** | ***21.1*** |
| Gambuta | Inferred | **12.7** | **394** | **11.1** |
| Other Satellites | Inferred | **15.8** | **459** | **16.0** |
| Total Resources | Indicated | 29.0 | 437 | 27.9 |
| | Inferred | 35.4 | 424 | 33.1 |
| | Total | 64.4 | 430 | 61.0 |

*All figures are rounded to reflect appropriate levels of confidence. Apparent differences occur due to rounding*

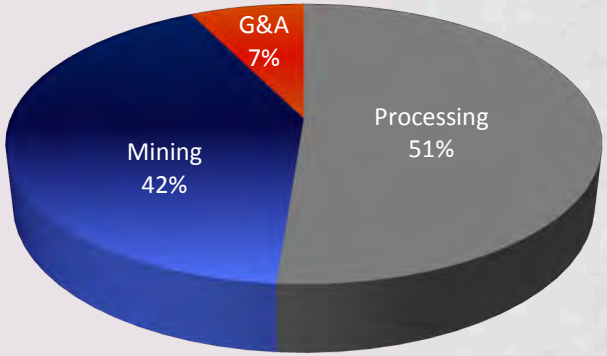
# Scoping Study Cost Estimates

**Operating Cost (C1) – US$25.65/lb $U_3O_8$ (ave. LOM)**

**Retortillo - US$30.70/lb**

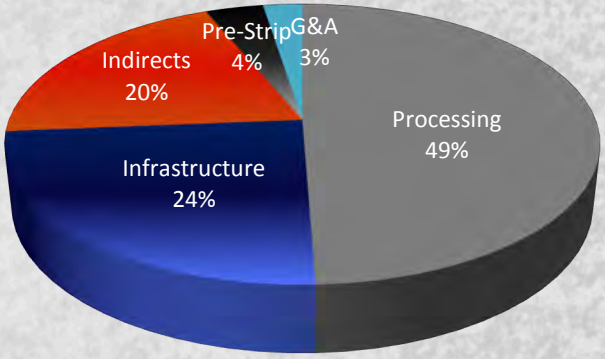



**Alameda - US$22.47/lb**

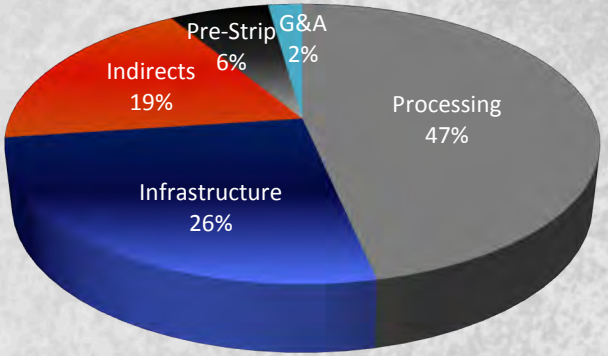



**Capital Costs (to steady state) – US$179 million**

**Retortillo - US$84m**




**Alameda - US$95m**



# Permitting

**Key Permitting Processes:**

1) Exploitation Concession / State Reserve suitable for Exploitation (Mining Permit)
2) Authorisation of the Process Plant as a Radioactive Facility
3) Authorisation for the Exceptional Use of Rural Land for Industrial Purposes

**Substantive Authorities:**

1) Retortillo - Mines Dept of Ministry of Industry and Employment of Regional Government
   Alameda (State Reserve) - Mines Dept of Ministry of Industry of Central Government
2) Department of Nuclear Energy of Ministry of Industry of Central Government
   Nuclear Safety Council
3) Urbanism Department of Regional Government
   Local Municipalities

# Permitting Status - Retortillo

**Exploitation Concession (Mining Permit):**

- ✓ Application for Exploitation Concession submitted in Oct 11, together with Environmental Scoping Document (ESD)
- ✓ ESD subjected to consultation period, comments received incorporated into Environmental Impact Assessment (EIA)
- ✓ EIA, Exploitation Plan, Reclamation & Closure Plan approved for Public Information in May 12
- ✓ Public Information Period (PIP) concluded in Sept 12
- ✓ Berkeley's responses to PIP submissions provided to relevant authorities for review and evaluation in Oct 12. Discussions with authorities regarding mitigation measures concluded
- ✓ Environmental Technical & Executive Committees at Provincial level completed reviews of EIA and provided favourable recommendation report to Regional Government in Feb 13
- ❑ Declaration of Environmental Impact Assessment (positive)
- ❑ Approval of Exploitation, Reclamation and Closure Plans
- ❑ Grant of Exploitation Concession

# Permitting Status - Retortillo

**Authorisation of the Process Plant as a Radioactive Facility:**

- ✓ Initial Authorisation for the Radioactive Facility documentation submitted in Mar 12
- ✓ Documentation approved for Public Information in Jul 12
- ✓ Public Information Period concluded in Sept 12
- ✓ Nuclear Safety Council confirmed all required information for preparation of their compulsory report regarding the mining activities, and for the Initial Authorisation for the Radioactive Facility has been received. Both drafted and pending formal approval by NSC Board
- ❑ Grant of Initial Authorisation
- ❑ Grant of Authorisation for Construction
- ❑ Grant of Authorisation for Operations

# Permitting Status - Retortillo

**Authorisation for the Exception Use of Rural Land for Industrial Purposes:**

- ✓ Authorisation for the Use of Rural Land for Industrial Purposes submitted in Mar 12
- ✓ Documentation approved for Public Information in May 12
- ✓ Public Information Period concluded in Sept 12
- ✓ Requested land declared as “suitable for the exceptional authorisation, subject to issuance of the environmental license” by relevant authority in Feb 13
- ❑ Authorisation for the Exceptional Use of Rural Land for Industrial Purposes

**Community Relations:**

- ✓ Co-Operation Agreements with Retortillo and Villavieja municipalities signed in Oct 11
- ✓ Co-Operation Agreements with Villares municipality signed in Sept 12

# Permitting Status - Alameda

**State Reserve suitable for Exploitation (Mining Permit):**

- ✓ Application, together with Environmental Scoping Document, submitted in Dec 12
- ❑ Baseline studies being updated for inclusion in EIA
- ❑ Exploitation, Reclamation and Closure Plans being prepared for submission in June Qtr 13

**Authorisation of the Process Plant as a Radioactive Facility:**

- ❑ Documentation for Initial Authorisation being prepared for submission in June Qtr 13

**Authorisation for the Exception Use of Rural Land for Industrial Purposes:**

- ✓ Authorisation for the Use of Rural Land for Industrial Purposes submitted in Dec 12
- ✓ Documentation approved for Public Information in Feb 13
- ✓ Public Information Period concluded in Mar 13
- ❑ Preparation of responses to comments/allegations and submission to authorities
- ❑ Declaration of the requested land as “suitable for the exceptional authorisation, subject to obtaining the environmental license”

# Important Notices

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***Competent Persons Statement***

*The information in this Report that relates to Exploration Results and Mineral Resources is based on information compiled by Craig Gwatkin, who is a Member of The Australian Institute of Mining and Metallurgy and is an employee of Berkeley Resources Limited. Mr. Gwatkin has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Gwatkin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*