

29 November 2019  
(Our Ref: P200-06-LET-016)

Katrina O'Reilly  
Team Leader Compliance  
NSW Department of Planning, Industry and Environment  
GPO Box 39  
Sydney NSW 2001

By Email – [Compliance@planning.nsw.gov.au](mailto:Compliance@planning.nsw.gov.au)

Dear Katrina,

**Re: Dargues Gold Mine – Request for Approval of Backfill Expert**

Big Island Mining Pty Ltd (the Company) would like to nominate Florencio Felipe as the suitably qualified backfill expert consistent with Condition 3 (47B) of the Dargues Gold Mine's Modified Project Approval 10\_0054 MOD4 (MP10\_0054 MOD4).

In order to assist the Secretary of the Department of Planning, Industry and Environment (the DPIE) to make a determination on the suitability of the proposed expert, please find attached to this letter a professional resume for Florencio Felipe.

I look forward to your response on this matter and please do not hesitate to contact me directly on 0477 418 492 if required.

Yours Sincerely



Shannon Green  
General Manager

CC:

- Rob McLean – Chief Mining Engineer, Diversified Minerals  
(████████████████████)
- Katrina O'Reilly- Team Leader Compliance – Department of Planning, Industry and Environment ([Katrina.OReilly@planning.nsw.gov.au](mailto:Katrina.OReilly@planning.nsw.gov.au))
- [DGM.HSEC@divminerals.com.au](mailto:DGM.HSEC@divminerals.com.au)

# RESUME

**Florencio Felipe**



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## QUALIFICATIONS

Master of Science in Mining Engineering, University of New South Wales (UNSW)  
Bachelor of Science in Mining Engineering, Saint Louis University (SLU)

## PROFESSIONAL MEMBERSHIPS AND ACCREDITATIONS

Member, Australasian Institute of Mining and Metallurgy (AusIMM)  
Chartered Professional (CP Mining)  
Registered Professional Engineer of Queensland (RPEQ)

## EXPERTISE AND SERVICES

Florencio is an experienced mining engineer specialising on cemented paste fill, cemented hydraulic fill and cemented rock fill. These specialisations cover system studies, designs, onsite operations support, reviews, test works, optimisation, training and development of procedures. Expertise include designing backfill plant, borehole, underground reticulation, barricade and fill mass stability. Expertise include the following:

- Backfill studies from high level to detailed analysis
  - Backfill material assessment, test works and mix design
  - Backfill plant processing options and selection criteria
  - Underground reticulation system and distribution set up
  - Barricade design including drainage specifications
  - Backfill mass stability analysis and design
  - Filling regime, fill note design and drainage management
- Backfill system operations and management optimisation review
  - Backfill plant system review
  - Underground reticulation system review
  - Barricade construction and fill mass stability review
  - Backfill recipe and filling operations review
- Reticulation distribution system design and specifications
  - Pipeline design, installation and instrumentation
  - Borehole, inter-level inserts design and construction installation
- Barricade/Bulkhead design and backfill placement
  - Barricade analysis and design
  - Drainage design and installation specifications
  - Filling regime and fill note specifications
  - Hydraulic fill drainage management
- Cemented Rock Fill (CRF) study, design and operation strategy
  - CRF mix design, fill material analysis and optimisation
  - CRF placement strategy, mixing bay and tramming operation
- Operational support and training of backfill personnel
- Development of fill note, filling procedures, SOPs and management plan
- Backfill plant construction management, commissioning and start up

## SUMMARY OF EXPERIENCE

Florencio has more than 25 years operational, consultancy and technical mining experience, gained in Australia and overseas. These cover 12 years specialisation in mine backfill supported by 15 years of various broad mining experiences.

1. Florencio is currently practicing as an independent backfill specialist/consultant for more than two years now extending technical and operational support and assistance to mining operations in Australia and overseas.
2. Florencio has worked as Senior Backfill Consultant for more than 4 years at AMC Consultants where he has undertaken numerous backfill studies, analysis, technical support to several mines in Australia, Papua New Guinea, Africa, India, Philippines, Canada and South America.
3. Florencio has worked for more than 6 years as Senior Backfill Operations Engineer at Mount Isa Copper Operations (Glencore Xstrata Mount Isa Mines) where he has provided support and leadership to meet both paste fill and hydraulic fill operations.
4. Florencio's other roles and experiences at Mount Isa Copper Operations were as underground production Drill and Blast Engineer, Operations Projects Engineer and as team member of the Business Continuous Improvement group.
5. Florencio's other overseas various mining experiences include Mining Engineer, Senior Mining Engineer, Production Engineer and Planning Engineer.

## **CAREER SUMMARY**

**June 2016 to Present      Independent Backfill Specialist/Consultant  
Mine Backfill Technology Specialist (MBTS)  
Melbourne, Australia**

### ***Some Previous Short and Medium-Term Contracts:***

#### **1) Fosterville Gold Mine – September 2018 to present**

- Paste Plant construction and commissioning
- Reticulation pipeline design, instrumentation specification and construction
- Development of backfill management plan and SOPs
- Development of fill note, filling guides and fill level/fill holes specification
- Design of barricade, instrumentation and exclusion zone specification
- Training of paste crew and supervisors

#### **2) Prominent Hill Mine – January-February 2018**

- Hydraulic fill plant operational support
- Fill note preparation and filling scheduling
- Stope drainage modelling and reporting
- Coordinating daily filling schedule with mine technical and underground operations

#### **3) Black Mountain Mining, South Africa – January 2017 – May 2017**

##### *Backfill Review and Technical Assistance, January-February 2017*

- Operations audit and review
- Preparation of plant upgrade design
- Test works and analysis, recipe/mix design
- Backfill operations support and assistance

##### *Backfill System On-Site Project Management, March-June 2017*

- Backfill plant upgrade
- Surface pipeline and borehole upgrade
- Underground reticulation upgrade
- Training of Backfill Engineer and personnel
- Development of filling procedure and management plan
- Fill mass exposure stability analysis and design
- Barricade and drainage design and construction

#### **4) IGO Nova Project, WA – Backfill Specialist, June-November 2017**

- Coordinated paste fill plant system start-up and commissioning

- Stope commissioning and reticulation performance test
- Established paste plant QA/QC sampling, recipe and rheology
- Stope fill note preparation, and filling scheduling
- Installation of CCTV, pressure cells and instrumentations of paste fill lines
- Barricade design and construction set up
- Cemented rockfill barricade design, tramping strategy and tipping set up
- Managed filling of the first few stopes with paste fill and cemented rockfill

**5) Perilya Broken Hill Mine, NSW – Backfill Review and Audit, May-June 2017**

- CHF filling regime optimisation and scheduling
- Permeability/drainage modelling and design including training
- Filling regime procedure with spreadsheet estimator

**April 2012 to April 2016 Senior Backfill Consultant  
AMC Consultants, Melbourne**

- Prepared studies on hydraulic fill, paste fill and rock fill systems to several mining projects and operating mines in Australia, Africa, Canada, India, Papua New Guinea
- Prepared numerous detailed studies on fill materials assessment, test works and mix recipe, fill plant process, fill rheology and reticulation flow modelling, borehole and pipeline installation and instrumentations
- Designed and introduced various bulkheads/barricades and drainage set up, barricade construction procedures, filling regime and fill note specifications
- Designed fill mass vertical and horizontal exposure stability for paste fill, hydraulic fill and cemented rockfill
- Provided onsite backfill technical and operations support, training of backfill personnel, as well as development of fill notes, procedures and management plan

**April 2011 to March 2012 Operations Projects Engineer  
Glencore Xstrata Copper, Mount Isa Mines, Qld**

- Coordinated with contractors and managed underground special projects
- Prepared project proposals, investment and capital expenditure requests
- Identified and implemented improvements and cost-saving measures as team member-representative to the company's business continuous improvement group.

**Mar 2010 to Mar 2011 Drill and Blast Engineer  
Glencore Xstrata Copper, Mount Isa Mines, Qld**

- Led the drill and blast production team, plans and schedules
- Led a 5 months project trialing and testing remote electronic initiation blasting systems and detonator blasting products (Ikon and Smartshot)
- Identified and implemented improvements and cost-saving measures as team member-representative to MIM business continuous improvement group

**Jan 2005 to March 2010 Senior Backfill Engineer  
Glencore Xstrata Copper, Mount Isa Mines, Qld**

- Managed backfill operations meeting the paste fill, hydraulic fill and rock fill backfill mining cycle requirement
- Introduced several backfill system upgrades and improvement such as mix design, cement optimization, backfill plant upgrade and underground reticulation
- Undertaken test works on slags and chemical admixtures. This resulted in the optimization of binder usage saving the company millions of dollars annually
- Evaluated and tested various pipe makes and borehole linings resulting to upgrades and optimisation of the underground reticulation system
- Prepared backfill annual operating and capital expenditure budgets, project proposals, investment and capital expenditure requests

- Guidance and training of graduate engineers on backfill operation

#### **OTHER EXPERIENCES**

- Feb 2002 to Nov 2005** Seasonal Lecturer and Research Assistant  
School of Mining Engineering, University of Ballarat
- Jan 1996 to July 2001** Project Lead  
Field Operations and Projects  
Department of Environment and Natural Resources
- Jan 1993 to Dec 1996** Senior Mining Engineer-Safety and Mine Valuation  
Bureau of Mines and Geo-Sciences
- Feb 1991 to Dec 1992** Full Time University Postgraduate Student in Australia  
Master of Science Degree in Mining Engineering  
University of New South Wales, Sydney, Australia.
- May 1989 to Jan 1991** Mine Production Engineer/Backfill Engineer/Planning/Scheduling

**From:** [REDACTED]  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Dargues Gold Mine - EPL 20095 - Licence Variation No. 1588863  
**Date:** Tuesday, 21 January 2020 12:14:48 PM  
**Attachments:** [image001.png](#)

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Hi James,

Thanks for your email and apologies for the delay. Unfortunately, the EPA is not able to review, approve or endorse suitably qualified experts. Notwithstanding, the EPA has noted that the nominated person appears adequate in principle, and we have no specific comments to make at this stage.

Kind regards

### **Andreas Stricker**

#### **Regional Operations Officer – South East Region**

South and West Branch, NSW Environment Protection Authority  
+61 2 6229 7002 +61 429 456 672

[Andreas.Stricker@epa.nsw.gov.au](mailto:Andreas.Stricker@epa.nsw.gov.au) [www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)  @EPA NSW

**Report pollution and environmental incidents 131 555 (NSW only) or +61 2 9995 5555**



**Please send all official electronic correspondence to [queanbeyan@epa.nsw.gov.au](mailto:queanbeyan@epa.nsw.gov.au)**

*I acknowledge and respect the traditional custodians and ancestors of the lands I work across.*

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**From:** James Dornan [REDACTED]  
**Sent:** Tuesday, 14 January 2020 12:24 PM

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
**Subject:** RE: Dargues Gold Mine - EPL 20095 - Licence Variation No. 1588863

Hi Andreas,

I trust you had a bit of a break over the Christmas / New Year period.

I'm just touching base regarding the attached backfill expert. We need to engage the backfill expert by the end of January 2020 at the absolute latest, so will be submitting the attached to DPIE at the end of the week. If the EPA has any comments, could you please send them through.

Regards,

**James Dornan** | Project Development Manager

