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RE: Job Application – Principal Advisor, Mine Optimisation

Dear Sir/Madam,

I am writing to signal my interest in filling the role of Principal Advisor, Mine Optimisation in the Operations Research & Decision Science (ORDS) team in PACE Analytics currently advertised. I am currently based in Singapore with Boston Consulting Group’s (BCG) advanced analytics team Gamma, but am interested in relocating to Brisbane to fill this role.

I joined BCG Gamma 18 months ago as part of the acquisition of The Simulation Group (TSG). My role as Senior Data Scientist has provided the opportunity to expand my data science skillset to complement my simulation expertise with mathematical optimization and machine learning.

Whilst my analytics experience is primarily discrete-event simulation, I am a strong believer in using fit-for-purpose tools to solve each problem. Having now delivered simulation, optimization and machine learning use cases across the full mining value chain, I am in a unique position to advise on a range of business problems with the lens of using the right tool to maximise value.

Prior to my transfer to BCG Gamma, I was building and leading a team of analytics consultants at TSG in Brisbane with a view to move to a more advisory role. My tenure at BCG Gamma however required a shift back to focusing on the implementation side of projects. Whilst this has provided a strong appreciation of the requirements of delivering data science projects across the analytical spectrum, I have come to realise that my strengths and interests are more aligned to consulting, and I am looking for a role which will enable me to apply those skills more frequently than my current position allows. The Principal Advisor role seems to provide the balance I am seeking.

I pride myself on my consulting skillset, and using this to bring analytics use cases to fruition. One of my passions is turning complexity into simple, actionable outcomes which can be understood and adopted by stakeholders. One example which has surfaced at a number of clients over the past 8 years has been to clearly articulate implications of different product strategies on the required infrastructure and associated operating procedures. Working at BCG has given me the skills to translate this to the business value generated by advanced analytics.

I have long been an advocate of creating integrated solutions with stakeholders, working in an agile, iterative manner in order to define, develop and implement analytics solutions. Such a working model helps ensure success of analytics solutions, provides stakeholders continuous touch-points to influence the final product, and builds confidence in the final solution. Working in such a manner also helps build rapport within the team.

My demonstrated communication skills and rapport building have enabled me to develop long-lasting relationships with former clients. I have been fortunate to work with a number of Rio Tinto (RT) teams during my time with both BCG Gamma and TSG. Projects I have worked on are listed below along with the key project contact. I believe all these engagements delivered significant value to Rio Tinto, and I encourage you to contact each of these people for their views on my suitability for this role.

* **2020:** Machine-learning prediction of bulk carrier arrival time at RT iron ore ports, working with the PropheSea product team in Singapore

Contact: Karen Hamber, Lead Product Manager, PropheSea

* **2019:** Mixed integer programming model for Titanium market price discovery over 0-5 year horizon based on expected demand and supply availability

Contact: Ed Barlow, Manager, Market Analysis – Minerals, Diamonds & Specialties

* **2018-2019:** Discrete-event simulation of Oyu Tolgoi bagging plant and trucking logistics as part of the Oyu Tolgoi Underground Project (OTUP)

Contact: Andrew See, Principal Engineer Processing, Copper & Diamonds Technical

* **2017-2018:** Discrete-event simulation of load & haul operations of the RT Kennecott Copper 10% ramp following requirements to switch to single-lane operations

Contact: Greg Doyle, Chief Surface Mining Engineer

* **2017:** Discrete-event simulation of Oyu Tolgoi incline conveying system for OTUP

Contact: Matthew Betts, GM Engineering – RT Projects, Growth & Innovation

These experiences have given me first-hand perspective on the working culture of Rio Tinto. I have seen the opportunities provided to staff to build their careers, from internal rotations and transfers, to overseas secondments. I was also able to see the action taken by RT at the commencement of the Covid-19 global pandemic; I was impressed by the reactiveness of the business to protect its employees in Singapore. All these factors make me a firm believer that this role and corporate environment will enable me to thrive and deliver value to the business.

I believe my professional and personal attributes – along with my existing experience with the Rio Tinto group – will fit in seamlessly with Rio Tinto. In particular, I feel my preference to work as part of an energetic team, attention to detail, comfort with fast-paced environments and the desire to always perform to the best of my ability will be an important element in my future ambitions and those of the ORDS team in promoting the use of mathematical optimization across Rio Tinto.

My curriculum vitae has been included separately to this letter. I look forward to receiving feedback from you regarding my application. I can be contacted on +65 9771 9781 or at [kleinschmidt\_tf@yahoo.com.au](mailto:kleinschmidt_tf@yahoo.com.au).

Yours sincerely

Dr Tristan Kleinschmidt