

NICK A. GARDNER – MEng., IEng (AIMMM, UK)

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EXPERIENCE

May '16- Present Mine Planning Manager, Kinross Gold Corporation, Toronto Office

- *Due Diligence for potential Merger & Acquisition*
- *Pit Optimisation(NPVS, Whittle, SimSched)*
- *Underground Optimisation – MSO(Datamine, Vulcan) and PCSLC*
- *Long-term Planning and review for Chirano Site in Ghana*
- *Cut-off grade analysis*
- *Economic evaluation and Productivity Analysis*
- *Strategic mine planning and scheduling(NPV Scheduler, EPS, MineMax Planner, SimSched)*
- *OPEX and CAPEX review (Xeras)*

May '13- May '16 Senior Mine Planning Specialist, AMEC, Oakville Office

- *Scoping, Prefeasibility, Feasibility Studies for different commodities*
- *Pit Optimisation- LG, NPV, etc*
- *Underground Optimisation – MSO(Datamine, Vulcan, Deswik) and AFW Stope Optimiser*
- *Economic evaluation and Productivity Analysis*
- *Mine design(pit, dump, road etc) and mine sequence*
- *Strategic mine planning and scheduling(NPV Scheduler, COMET, Whittle)*
- *OPEX and CAPEX estimation*

Consulting projects completed:

- *Conceptual studies for Labrador Iron Mines(Scheduling, OPEX and CAPEX Estimation, Report)*
- *Pre-Feasibility Studies for Arcelor Mittal(Pit Optimisation, Pit Design, Strategic Mine Planning, Scheduling, OPEX and CAPEX Estimation, Report)*
- *FEL 3 mining lead for Vale Post Ovoid Pit (Block Modelling, Cut-off Value Optimisation, Mine Planning and Scheduling, Equipment Selection, OPEX and CAPEX Estimation)*

- *General reviewer for Newmont Ahafo project.(Pit Optimisation, Block Modelling, Design, Schedule and final report)*
- *Technical report writing for Vale IPO for all the Sudbury operations*
- *Various confidential due diligence for Kinross*
- *Reconciliation work Vale Creighton Mine, Sudbury*
- *Technical report writing for Goldcorp Redlake and Elenore sites*
- *Review of Technical Report for Kinross Tasiast Mine*

May '10 –May '13 Senior Strategic Mine Planner, Rio Tinto Iron Ore of Canada

- *Mine Strategic Planning*
- *Pit Optimisation- LG, NPV, etc*
- *Economic evaluation and Productivity Analysis*
- *Mine design and scheduling(COMET)*
- *Auditing*
- *Feasibility studies*
- *Fleet selection*
- *Operational Support*
- *Supervising junior engineers*

October '08 -May '10Long Range Planning Engineer-Special Projects, Teck Coal Limited - Elkview Operations

- *Develop an Automated Coal Blender using Excel VBA and Microsoft Solver Foundation (OML programming).*
- *Liaison with Medium range and Long range planners on coal volume and quality input for coal blender.*
- *Reconciliation of both long term, medium term and short term mine plan based on coal quality results from the blender.*

Geotechnical Engineer, Teck Coal Limited- Coal Mountain Operations

- *Responsible for monitoring spoil dump movements readings.*
- *Analyzing spoil monitor readings for spoil dumps from foreman.*

- *Dump and Lagoon designs using Minesight and AutoCAD.*
- *Compaction testing for Dumps and Lagoons.*
- *Monitoring highwall slope movement reading of slope face.*
- *Analyzing seismograph data from blast within the conveyor tunnel.*
- *Design of Pit walls and footwalls using Minesight and AutoCAD.*

- *Project Engineer for coal conveyor tunnel project:*

1. Monitor tunnel support

2. Costing and budgeting for tunnel support.

3. Scheduling and planning for tunnel project for contractors

4. Preparation of monthly cost reports and Invoices for the Contractor Company.

5. Cost control and cost monitoring of labour and plant resources, indirect cost (general running cost) and site operations.

- *Project Engineer for Lagoon Lift and Coal Coarse Refuse Dump:*

1. Design Lagoon Lift and Coal Coarse Refuse Dump

2. Implementation of design and surveying

3. Cost and Budget estimation

4. Scheduling and planning for contractors

5. Preparation of monthly cost reports and invoices for the Teck Coal Limited and Contractor Company.

Short Range Planner, Teck Coal Limited- Coal Mountain Operations

- *Responsible for putting together weekly and monthly plans for mining.*
- *Build weekly and monthly plans for coal quality and shipment. Monitored spoils dumps and mining sequence within pit.*
- *Worked alongside Pit Superintendent, Plant Superintendent and Engineering Superintendent to monitor safety concerns.*
- *Organise weekly safety, pre-planning and planning meetings.*
- *Designed weekly and end of month plans and reports.*
- *Designing and planning for Coal Refuse Dump*

July 2007 – October 2008 GJIMAAS AMERICAS INC. - Sudbury, ON - Mining Consultant (Open pit and Underground)

- Implementation, training, and client support of Mine2-4D, EPS and mineCAD software.
- Mine design, layout, planning and scheduling using the Mine2-4D suite of products.
- Consulting projects completed:
 1. **Vale Inco Copper Cliff Deep Feasibility Project, Sudbury, Ontario, Canada:** Responsible for stope and underground infrastructure designs. Evaluated block model against stope design. Scheduled life of mine plan using EPS and Microsoft Excel. Plotting of stope and infrastructure designs using mineCAD.
 2. **Redlake Mine Feasibility Project, RedLake, Ontario, Canada:** Responsible for stope design (Cut & Fill method and Longhole stoping method) and underground infrastructure designs. Evaluated block model against stope design. Scheduled life of mine plan using EPS. Scheduled their 18month to 5years plan using EPS and EPS Blend.
 3. **St Ann Bauxite, Jamaica, Open Pit Design and Planning Project:** Responsible for implementation and training of Mine2-4D, EPS, mineHaul and mine CAD. Analyzing haul distances and trucks selection.
 4. **Barrick Gold, Helmo Mine, Marathon, Ontario, Canada:** Responsible for implementation and training of EPS VIZ and EPS.
 5. **Xstrata Copper, Kidd Creek Mine, Timmins, Ontario, Canada:** Responsible for implementation and training of EPS VIZ and EPS.
 6. **Vale Inco Creighton Phase 3 Project, Sudbury, Ontario, Canada:** Responsible for stope and underground infrastructure designs. Evaluated block model against stope design. Scheduled life of mine plan using EPS. Plotting of stope and infrastructure designs using mineCAD. Scheduled their 18month to 5years plan using EPS and EPS Blend.

October 2006 – July 2007 CSA CONSULTING INTERNATIONAL LIMITED – Crawley, United Kingdom - Mining Consultant (Open pit and Underground)

- Responsible for Planning and developing programs for geological data acquisition.
- Help with planning and coordinating mine exploration projects. Helped with designing of Geological Models and evaluation using Datamine.
- Open Pit design and planning using Datamine.
- Planning and scheduling Development of geological maps using MapInfo.
- Development of geological database. Travelling to site to collect and analyze data.
- Prepare reports with analysis and recommendations for the construction of mines.
- Cashflow and Sensitivity Analysis.
- Consulting projects completed include:
 1. **SLDC Alluvial Diamond Feasibility Study, Sierra Leone:** Responsible for fleet selection, long and short range plan.

2. *New Liberty Gold Limited (Mano River Resources), Liberia: Responsible for underground scoping study.*
3. *Due diligence reports for World Bank for small scale mining projects in Senegal, Mali and Tanzania.*
4. *Due Diligence for Chinese investor on exploration concession formerly owned by Newmont Gold at Laos.*

April 2006 – September 2006 ALTONA RESOURCES PLC – London, United Kingdom - Technical Assistant to the CEO (Open Pit)

- *Designed the Coal Geological Model from the corrected and formatted data with SurpacMinex.*
- *A final Model and Report was made and analyzed by the VP of SurpacMinex-Gemcom (Jon Barber) before submission.*
- *Developing an in-house Cashflow Analysis for Altona Resources. Research into CO2 Sequestration around the world. Reports on CO2 Sequestration.*
- *Researched Gas to Liquid Technologies and Coal to Liquids Technologies; worked closely with Jacobs Consultancy, United Kingdom.*
- *Administrator of Altona Share Point Service Database.*
- *Plan and develop programs of geological data acquisition*

November 2005 – March 2006 AFRICAN MINING SERVICES (Newmont Ghana Gold) - Ghana -Junior Mining Engineer (Drill & Blast) and Data Entry Engineer (Open Pit)

- *Evaluation of bidding/Tender Documents submitted by Contractors; included checking and assessing the bill of quantities submitted and the responsiveness of contractors to the project requirements.*
- *Visiting project sites with the Area manager and inspecting works on the mine site.*
- *Ensuring that contractors build in accordance with the contract drawings and specifications.*
- *Plan and co-ordinate mine exploration projects. Supervision of RC drilling and Grade control.*
- *Managing contracts and subcontracts. Preparation of project program and master program.*
- *Monitoring and forecasting on cost including cash flow forecast and analysis and preparing quarterly forecast.*
- *Cost control and cost monitoring of labour and plant resources, indirect cost (general running cost) and site operations.*
- *Preparation of monthly cost reports and Invoices for the Contractor Company.*
- *Supervision of Drillers and Blastmen. Making of Reports from the Drilled and blast working sites.*
- *Working closely with the Drill and Blast Engineers of the Contractor Company for planning and design.*

November 2004 – November 2005 AngloGold Ashanti Limited- Underground Supervisor

- *Visiting project sites with the engineer's representative and inspecting works carried out by the shift workers.*
- *Supervising of geologist and Surveyors underground.*
- *Ensuring that the work was done in accordance with the design and specifications.*
- *Making of Reports for the Mine captain after shift hours.*
- *Taking measurements and ensuring that the right markings are done for the drilling of pilot holes and blast holes. Supervising of underground survey markings and making of reports.*
- *Analyzing the Underground environment for the right type of Ventilation System.*
- *Supervising the hanging of Ducting and Auxiliary Fans for Ventilation underground.*

EDUCATION & TRAINING

2016 MEng, Mining Engineering (Mineral Economics) – McGill University, Montreal, Quebec, Canada
2005 B.Sc. (Hons), Mining Engineering – University of Mines and Technology formerly Kwame Nkrumah University of Science and Technology School of Mines – Ghana

PROFESSIONAL MEMBERSHIPS

- *Society for Mining, Metallurgy and Exploration Inc (SME), United States of America (Professional Member)*
- *Institute of Materials, Minerals and Mining, United Kingdom (Incorporated Engineer Designation)*
- *Professional Engineer Association of Newfoundland(Passed Ethics exams and waiting on designation)*
- *Association of Mining Analyst (AMA), United Kingdom*
- *The Canadian Institute of Mining, Metallurgy and Petroleum, Canada*
- *JORC Competent Person*

ACHIEVEMENTS

- *Developed Cashflow and Sensitivity Analysis tool using Visual Basic6.*
- *Feasibility studies for Goldcorp, Redlake and Vale Inco, St Ann's Bauxite, Sierra Leone Diamond Company, Mano River resources, Arcelor Mittal, and Vale Voisey's Bay.*
- *Project Engineer for designing and implementing Teck Coal, Elkview Operations Lagoon D, Coarse Refuse Dump and Tailings dump.*
- *Current Guest Lecturer at McGill University lecturing Open Pit design, Pre-Feasibility/Feasibility Studies and Risk Analysis with respect to mineral economics since 2010.*

- *Presented a paper on "The impact of strategic mine planning on investment decision" at SME conference 2014, Salt lake, Utah*
- *Developed a standalone tool for Geotechnical analysis (Dilution, Pillar stability, Recovery) using C++.*

SHORT COURSES & TRAINING

- *Safety and Courageous Leadership training – Teck Coal Limited*
- *Safety and Courageous Leadership Supervisor training – Randy Smith Solutions*
- *Rocscience training-Slide, Dips, Phase2, Swedge and RocPlane*
- *Siteline environmental training in compliance with ISO 14000 and ISO 9000*
- *Strategic Risk Management in Mine design: From life-of-mine to global optimisation- McGill University*
- *Mineral Project Evaluation : From conventional to Real Options-McGill University*
- *Using Dynamic DCF and Real Options to Value and Manage Mining and Petroleum Projects – Colorado School of Mines*
- *Orebody Knowledge and Strategic Mine Planning professional development program through Duke University Corporate Education*
- *Vulcan Basic and Open Pit Design training - Denver Colorado*
- *Comet Strategic Scheduling Tool training – Rio Tinto, Salt Lake*
- *Advanced Interpersonal Business Communications through McGill Executive Institute*

COMPUTER EXPERIENCE

- *PCSLC*
- *GEMS*
- *Minesight*
- *Microsoft Office*
- *Microsoft Solver Foundation(OML/Linear/Mixed integer programming)*
- *SurpacMinex*
- *Visual Basic 6*
- *VBA-Microsoft Excel*
- *GIS*

- *MapInfo*
- *mineHaul*
- *NPV Scheduler*
- *Whittle*
- *Talpac*
- *SQL*
- *Linux*
- *LAN & WLAN*
- *Visual Basic.NET*
- *C#*
- *AutoCAD*
- *Datamine*
- *Mine 2-4D*
- *EPS*
- *mineCAD*
- *MapInfo*
- *Wenco Dispatch*
- *3DMine*
- *Rocscience – Slide, Dips, Phase2, Swedge and RocPlane*
- *Vulcan*
- *Comet*
- *Minemax Planner*
- *Xeras*
- *@Risk*
- *Crystal Ball*
- *Risk Simulator*

LANGUAGES

English

French-Basic

REFERNCES

Referees provided upon request