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| **Job Code/Level:** |  |
| **Position Title:** | **Mineralogist (Process)** |
| **Reports To:** | Chief Mine Geologist |
| **Direct Reports:** | Principal Resource Geologist |
| **Department:** | Geology |
| **Location:** | KML |
| **Roster:** | Mixed |
| **Date Reviewed:** | 21.07.2017 |

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| **General Role Purpose (brief description of this job)** | * To manage the daily mineralogical functions using optical microscopy and XRD as the primary analytical techniques and incorporating SEM data. Using all results to add value to the process and geology operations for Sentinel and Enterprise Mine.
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| **Qualifications (required for this job)** | * Bachelor’s degree in any geology or metallurgical related field combined with a mineralogy related Master’s degree (material engineering, mineral research)
* Experience in optical microscopy (transmitted and reflected light) essential
* Experience in XRD and SEM (QEMSCAN) highly advantageous
* Clean valid drivers’ license (essential)
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| **Core Specific Responsibilities – related to this Job****Expected Deliverables from this job** | * Analysis of polished thin sections under transmitted and reflected light using an optical microscope.
* Routine and investigative XRD analysis
* Incorporation of SEM data (offsite analysis) into results
* Report findings and perform “ground-truthing” quality control checks on outputs
* Frequent targeted studies into mineralogical relationship to process challenges and ore feed variance
* Supervision of sample preparation areas and the assigned employees
* Involvement in other projects relevant to mineralogical understanding of Sentinel/Enterprise e.g. XRF, 3D modelling
* Assisting mine geologists with knowledge/understanding required to integrate mineralogical results/interpretations into geological/resource models
* Assisting metallurgists with knowledge/understanding required to use results for plant diagnostics and trouble-shooting
* Perform any other relevant duties assigned by the supervisor
* Ensure effective running of the daily mineralogy functions, continuously identifying opportunities to add value to operations
* Continuous liaison between process and geology teams to ensure mineralogical study results are understood for effective use
* To effectively supervise other sample preparation staff assigned to the mineralogy section, and ensure that they perform their duties according to standards
* Ensure that the person, immediate environment, team and work performed is accident / incident free
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| **Behavioural Traits** | * Must have a thorough methodical approach to routine tasks and problem solving
* Must be highly detail orientated
* Must be motivated towards continuous improvement of systems and data
* Must be a strong and effective communicator who enjoys frequent and team-orientated interaction
* Must be willing to work with and assimilate experience from colleagues from a variety of skills and national backgrounds
* Must have strong team ethic and communication abilities
* Must be self-motivated
* Ability to work independently
* Ability to supervise a small support team
* Must be willing to locate to and work at a developing site in a relatively remote area
* Must have a clean criminal record (essential)
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| **Operational Requirements** | * Competency in all fundamental mineralogical and optical microscopy skills to ensure all work is completely accurately and in a timely fashion
* Ensure adherence to operational requirements and regulations to avoid unnecessary implications
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| **Knowledge and Experience required to perform in this job** | The **Mineralogist** will require knowledge, skills and experience in the following areas:* Good understanding of mineralogical concepts and their application to mining in base metal deposits (Cu, Ni)
* Good understanding of process mineralogy, with a focus on froth flotation
* Proficient in the use of an optical microscope (reflected and transmitted light) as an analytical technique
* Good understanding of XRD and SEM (QEMSCAN) analytical methods
* Strong IT skills; will be required to use Zeiss Axioscope software
* Experience with other analytical techniques advantageous (XRD, XRF, SEM)
* Demonstrable strong verbal and written communications skills
* Basic Health and Safety knowledge
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