

Appendices

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Appendix 1 Summary of Previous Modifications (6 pages)



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Appendix 1

Summary of Previous Modifications

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	Original Application	MOD1 – November 2013 Minor adjustments to time to complete roadworks and residue management	MOD2 – April 2015 Caloma 1 Cutback and Amenity Bund	MOD3 – July 2016 Caloma 1 cutback, Caloma 2 Open Cut, Caloma 1 and 2 Underground (basis for comparison against future modification applications)	MOD4 – Current Application Residue Storage Facility Stages 7 to 9
Limits on Approval	- Life of the Mine – until 31/12/2022 - Rate of processing – 1.5Mtpa	No change	No change	No change	No change
Mining Operations	- Open cut - Caloma 1, Wyoming 1 and Wyoming 3 - Conventional open cut drill, blast, load and haul - Underground - Wyoming 1 - In-pit portal - Conventional long-hole open stoping - Waste rock backfill of completed stopes	No change	- Open cut - Minor cutback of Caloma 1 to address geotechnical issues with wall stability	- Open cut - Additional minor cutback of Caloma 1 - Development of Caloma 2 - Underground - Underground mining of Caloma 1 and Caloma 1 and exploration of Wyoming 1 - Lining of the workings associated with Wyoming 1, Caloma 1 and Caloma 2	No change
Waste Rock Management	3 x surface waste rock emplacement - WRE1, WRE2, WRE3 - Total design volume = 29.66Mm³ - Maximum height = 40m - Non-acid forming waste rock	No change	No change	- Backfilling of Wyoming 3 Open Cut with waste rock. - Extension of WRE3	Importation of up to 335,000t or 161, 250cm of waste rock associated with the SAR Exploration decline
Processing Operations	- Conventional carbon-in-leach (CIL) process, comprising - ROM Pad - Crushing, screening and grinding circuit - Gravity circuit - CIL circuit - Gold room - Annual throughput = up to 1.5Mtpa	No change	No change	No change	Importation of up to 20,000t of bulk sample for batch processing and testing within the Processing Plant.
Residue Management	- Residue Storage Facility - Two cells - Area - 42ha - Maximum Stage – Stage 6 - Maximum crest elevation – 280.5m AHD. - Maximum residue elevation– 280.0m AHD. - Design volume – 4.8Mm³ - Liner – engineered clay - Construction method – upstream lifts - Perimeter discharge, centre decant	- Amendment of fauna deterrent measures - Cyanide monitoring - Monitoring location – residue transfer pipe inlet (not outlet). - WAD cyanite monitoring (not total cyanide)	No change	Construction of a downstream lift for Stage 2 of the Residue Storage Facility	- Residue Storage Facility – Stages 7 to 9 - Increased capacity to approximately 8.93Mt. - Increase in maximum elevation from 280.5m AHD to 286.5m AHD. - Increased footprint from approximately 50ha to approximately 55ha
Water Management	- Water balance (priority order) - Storages – Residue Storage Facility, Process Water Dam, Settling Dam, Mine Dewatering Ponds 1 and 2, Raw Water Dam Sediment Basins 1 to 5. - Sources – process water dams, sediment basins, water supply pipeline (1GL/year) - Uses – dust suppression, processing - Sediment and Erosion Control - Sediment Basins 1 to 5, clean and dirty water diversions - Separation of clean, dirty and contaminated water	No change	No change	Minor adjustments to the Central Clean Water Channel and WRE3 Dirty Water Drain and construction of Sediment Basins 6 and 7 and Wyoming Central Dam.	No change

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Transportation Operations	- Site access via Tomingley West Road which was to be upgraded - Heavy vehicles - Transportation of equipment, consumables, reagents and supplies - Up to 8 movements/day - Gold transported infrequently using security vehicle	Deferred timing for completion of road upgrades to 31/3/2014.	No change	No change	No change
Supporting Infrastructure	“Woodlands” bores and water supply pipeline 20km 66kV transmission line from Peak Hill - Newell Highway underpass - Site access road and intersection with Tomingley West Road - Site offices, workshops, stores, car parks, laydown areas	No change	Enlargement of the Eastern Amenity bund from 3m high to 10m high	No change	No change
Hours of Operation	- Vegetation clearing and topsoil stripping – 6:00am to 6:00pm, 7 days per week - Construction, mining, processing, maintenance – 24 hours, 7 days per week. - Rehabilitation - 7:00am to 10:00pm, 7 days per week	No change	No change	No change	No change
Employment and Economic Contributions	- Employment – up to approximately 130 positions - Economic contributions (annual) - Wages/salaries – up to approximately \$13M - Goods and services – up to approximately \$34M - Rates, taxes and royalties – up to approximately \$2M - Planning agreement – Life of mine - Community Fund - \$430,000 - Road Maintenance (except for Tomingley West Road) - \$360,000 - Provision of Council Environmental Management Expertise - \$160,000	No change	No change	- Planning agreement – annual for life of mine - Community Fund - \$53,750 - Road Maintenance (except for Tomingley West Road) - \$45,000 - Provision of Council Environmental Management Expertise - \$20,000	No change
Final Landform and Rehabilitation	3 x open cuts 3 x shaped Waste Rock Emplacements 1 x shaped Residue Storage Facility - Final land use - Combination of agriculture and nature conservation	No change	No change	Minor adjustments to reflect the revised site layout	Minor adjustments to reflect the revised Residue Storage Facility design
Other	- Biodiversity offset - Preservation of approximately 80ha of native vegetation - Supplementary planting of approximately 77ha of native vegetation	No change	No change	Minor changes to soil stockpile locations to reflect revised site layout	Support for underground exploration in the vicinity of the Mine Site
Key changes to Environmental Impacts	Not applicable	No change	- Noise – enhanced noise attenuation - Air quality – additional emissions during construction of the amenity bund - Visual – additional amenity bund visible from surrounding areas	- Noise – additional noise impacts associated with mining of Caloma 2. Mitigated with receiver architectural treatments. - Water – potential offsite impacts mitigated through modified erosion and sediment control measures. - Air quality – additional emission associated with Caloma 2 would remain less than the relevant assessment criteria. - Biodiversity – additional 0.8ha disturbance not significant - Visual – minor changes as a result of extension of WRE3 not significant	Visual – minor increase in the height of the Residue Storage Facility. No significant visual impact.

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