

Coal Discard to Clean Power

Decreasing mining environmental liabilities with GCT's coal reclamation and beneficiation technologies to produce clean coal for industrial use



Green Coal
Technologies

(Pty) Ltd



March 2025 – Mooiplaats Colliery Coal Reclamation Project

Confidential

The Opportunity

- Green Coal Technologies (GCT) started in 2018 has developed an internationally patented, environmentally friendly, fine coal processing technology, designed to reclaim coal slurry ponds and spiral discard dumps which were previously viewed by mines as a liability, with “zero value” into a usable, industrial quality, clean burning coal product.
- GCT has the technology to pelletize the recovered high quality fine coal into a water and crush resistant pellet, fit for use in local industrial markets that require low to medium ash, high heat CV Duff and Pea sized coal for chain grate boiler steam production, or PCI (Pulverized Coal Injection) industries like cement and power production.
- GCT has completed successful test work with both Eskom, the SA power utility and John Thompson international boiler manufacturers, that prove GCT’s coal and pellet performance in both boiler environments are within parameters that give high efficiency boiler performance. The pellet is clean burning with very low emissions, with a high heating value that allows for less use of coal in many boilers, vastly reducing emissions in industrial boiler applications. This high-quality sized coal is normally sold at a premium price.

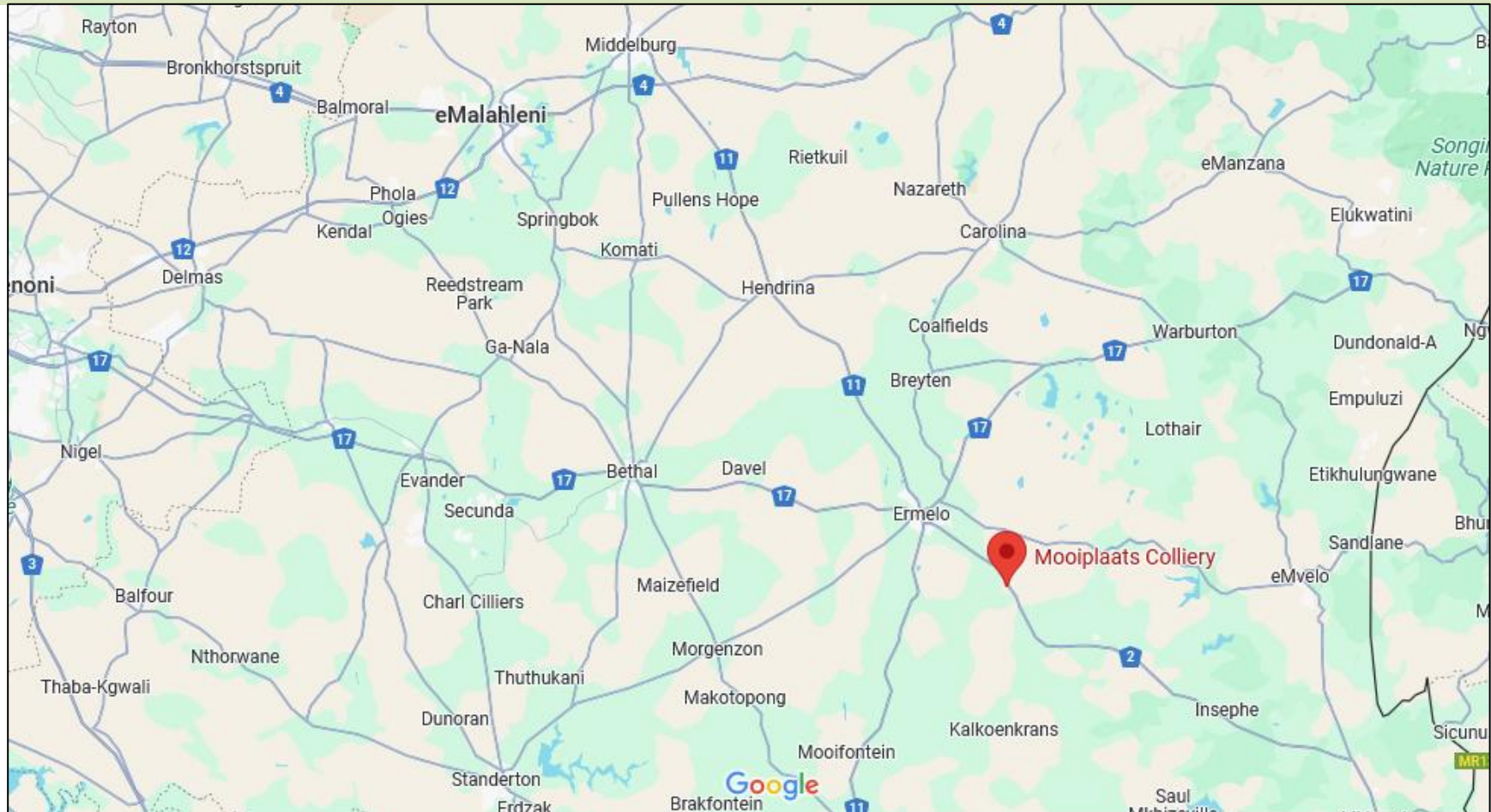
The Opportunity Cont.

- Base load power production is an issue in SA and the long-term GCT plan is to produce large volumes of clean coal with a high heat and low ash, from an estimated and abundant 500 Million tons of slurry ponds and coal discard dumps available across the coal fields of South Africa, to supply into upgraded and refurbished SA power stations that require a higher-grade coal for ongoing, efficient, low emission operation.
- Several coal reclamation projects have been researched by GCT over 7 years and available to establish the technology. As with Mooiplaats, all discard projects planned have already been previously bulk tested through the GCT test plant onsite and pellet production tests and researched for economic viability.
- The potential savings and increased profits from utilising GCT beneficiation technology on a mine site, come from reduced mine contributions for slurry pond maintenance and to rehabilitation funds. The technology allows for longer periods of mining due to longer life of slurry ponds, lower discard footprints vastly reducing the impact of coal mining on the environment and groundwater pollution.

Project Overview



- The GCT Mooiplaats reclamation project is located 30km outside the town of Ermelo on the N2 route 10 Km's from Camden Power Station in the province of Mpumalanga in South Africa.



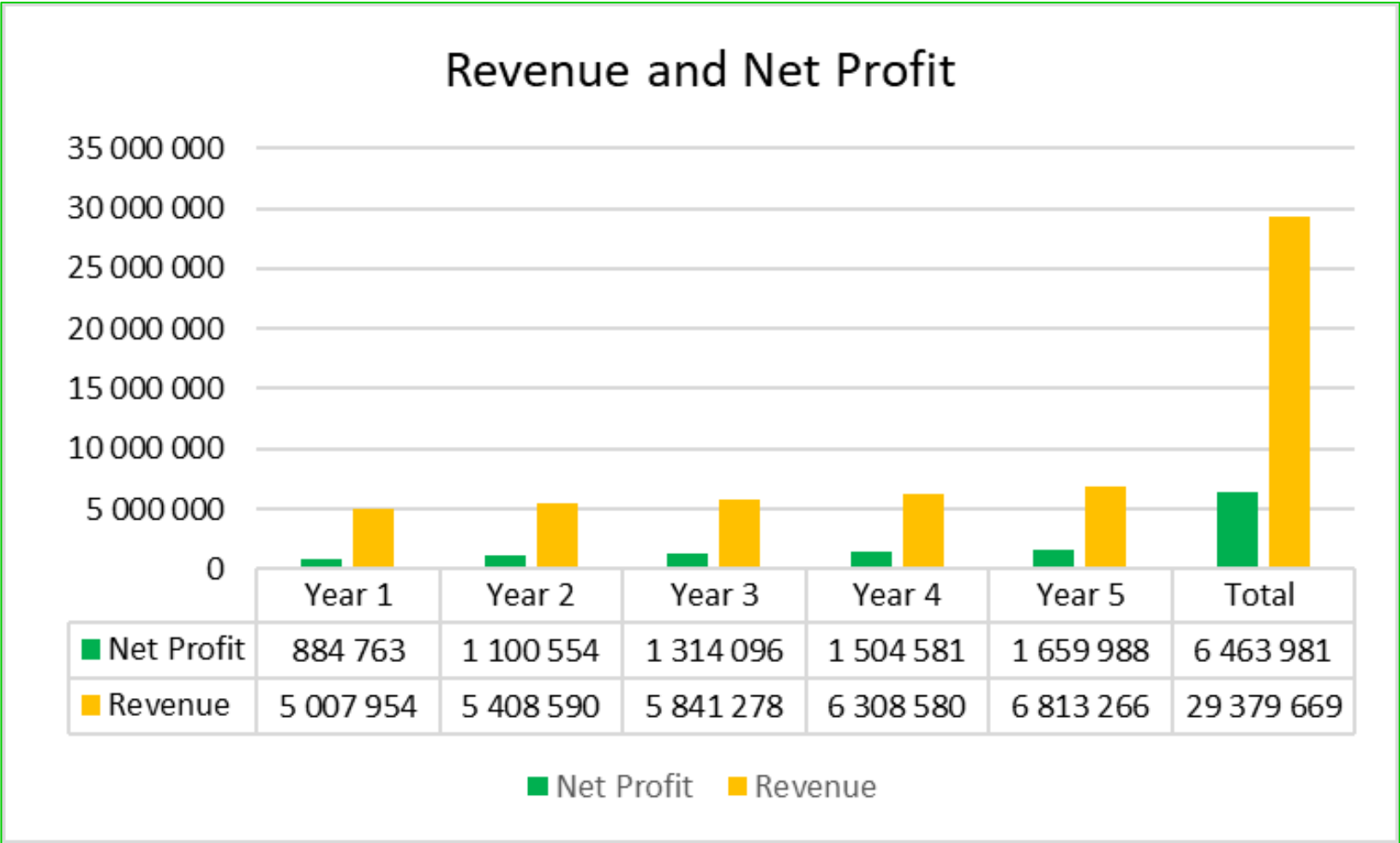
- GCT spent 6 months onsite at the mine, operating our 5-ton/Hr. bulk test plant, to complete the BFS and prove economic viability to establish a reclamation project to recover the slurry ponds and spiral discards available onsite at the mine.
- The GCT business plan shows the Mooiplaats project has an EBTDI of between 35% and 45% and robust ROI's after capital repayments and tax, of between 22% and 28% over the 5-year project life. All parts of the Mooiplaats project plan are in place, all paperwork and offtake agreements are signed and GCT is ready to commence with the project as soon as funding is available
- GCT requires either a funder, or an equity investment partner, to provide the capital for commencing the project and building the 50 ton per hour coal processing plant and the 20 ton per hour pellet plant.
- The mine needs to reduce its slurry pond volumes to continue mining and hence the relationship with GCT and urgency to raise capital to build the plant and assist the mine in continued operation. The mine operates on the Camden Power Station grid so will never have a power outage and ensures plant efficiency and production is reached



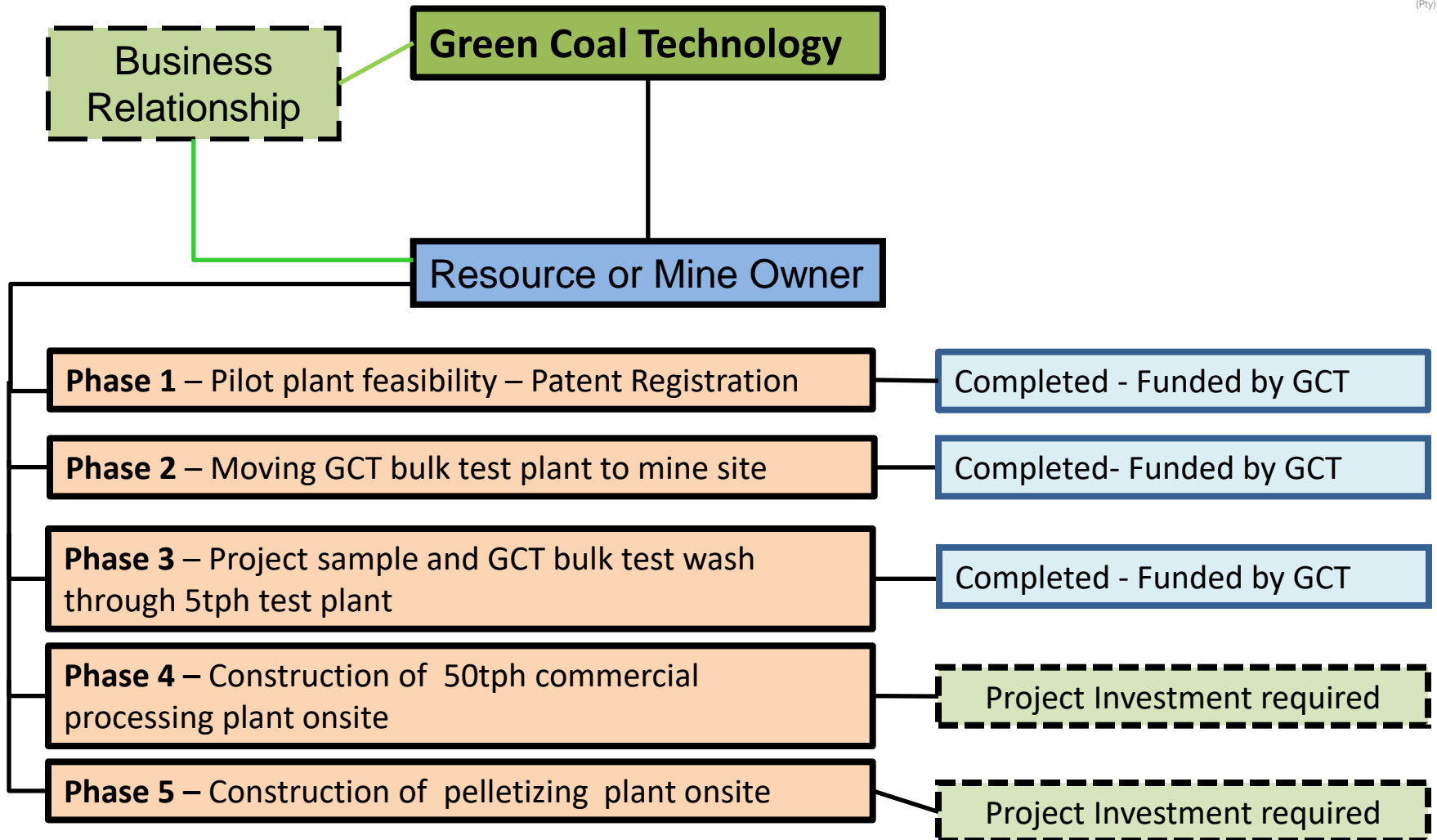
- Funding required for GCT to proceed with the Mooiplaats project is a total of R68M (\$3.5M) broken down as follows:
 - ✓ R3.0 million (\$163 000) for working capital, engineering consultant and project management fees, to continue with the current work schedule and project planning activities already underway at Mooiplaats.
 - ✓ R65M (\$3.1M) to complete the planning and construction of a 50 ton per hour washing plant and a 20 ton per hour pelletizing plant
 - ✓ Initial 50% or R35M (\$1.89M) is required to pay deposits to manufacturers and suppliers of equipment and specialist services to commence with plant construction that will take 16 to 20 weeks
 - ✓ Remaining R30M (\$1.63M) or 50% within 4 to 8 weeks thereafter to complete commissioning and commence production

Revenue Projections

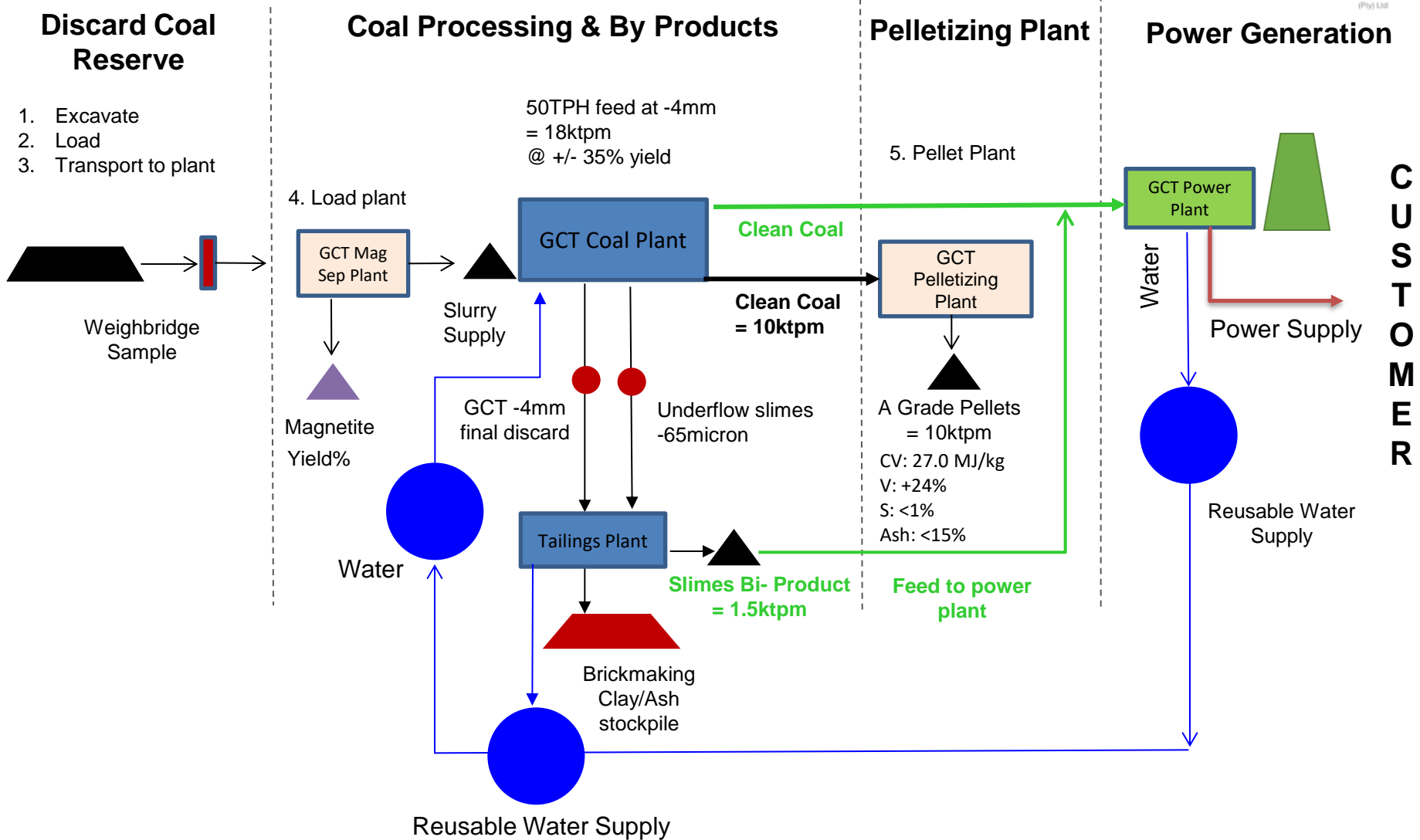
- Revenue over 5 year life of project will be \$29M and Net Profit after tax will be \$6.4M



Project Roll Out



GCT Discard to Coal to Power Process Flow



Conclusions

- The GCT comprehensive business plan and CJL Consulting inland coal market report clearly indicate that the GCT Mooiplaats reclamation project can deliver excellent investment returns. This using a conservative sale price of R750 per ton (\$40.50) loaded at the mine for the high-quality fine clean coal produced.
- This fine coal can then be pelletised, as a pea coal sized pellet (10mm x 30mm) that would have a sale price of between R1400 (\$76) to R1600 (\$86) per ton loaded at the mine. With a price of R1200 (\$64) per ton obtainable for the high value magnetite that can be extracted from the GCT discards during production of the clean coal.
- No inclusion is made in the production figures and ROI's for revenue generated from the sale of any coal middling's product GCT may produce for supply to Eskom and excludes any potential revenue that may be generated from the sale, or use of the high content Kaolinite and Bentonite clays available on the mine site to possibly produce bricks
- GCT primary focus for onsite operations at Mooiplaats, will be to produce high quality clean coal for sale to either the mine, or Eskom, or pelletizing for sale to the local PCI <15% ash users. The long-term plan is to roll out generation of clean power from clean coal production by reclaiming the huge resources of slurry and spiral discard stockpiles available from mining and making this plan a reality.

Conclusions Cont.

- Secondary focus for GCT will be in acquiring additional sources of slurry and discard over the short term (12 – 24 months) to increase the GCT project life at operations beyond 8 - 10 years
- Run of mine (ROM) coal washing is set to continue at coal mining operations in SA and the world for many years to come and this will further enhance GCT future as a company that can extend its project life for many years to come, from the ongoing slurry discard arising's at these coal producing operations
- GCT is offering investors an opportunity to make a change and create a better understanding on the benefit of green reclamation of fine coal discards into clean coal, to be used as an efficient fuel source with vastly reduced emissions, for the generation of base load power sorely needed for the future of South Africa and the world



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Success at the current project, will provide an opportunity for GCT shareholders and funders, to create a coal mining and beneficiation business that will be uniquely positioned to exploit several resources that GCT have identified and proved to be economically viable.

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