Tete East (7521C)

Feasibility Study Report (for capacity of 5.3MTPA) prepared by a Consultant containing following details, is available with ICVL:

I- Mining & Geology of the Tete East 7521C

a) Project Development Strategy

- Project Size data
- Project Risks and Opportunities
- Exploration Processes and History Data
- Topographic Mapping & Geological Mapping data
- Remote Sensing and Collar Surveys Data
- Geophysical Surveys & Exploration Drilling Data
- Down Hole Wireline Logs and Acoustic Televiewer
- Down Hole Declination and Core Recoveries data
- QAQC of Exploration Processes of Adequacy of Core Drilling
- QAQC of Exploration Processes of Sampling Methods
- Tete East Topography and Physiography

b) Geology and Exploration Results for the 7521C

- Exploration & Geology Data
- Regional Geology & Karoo Super Group in Mozambique
- Basement & Vúzi Formation data
- Moatize Formation & Matinde Formation data
- Intrusions /Structural Interpretation data
- Sequence Stratigraphy Interpretation, Seam Correlation
- Coal Qualities (Sampling, Testing and Data Quality)
- Coal Ash chemistries by ply
- Tete East & Zambeze Coal Quality comparison
- Mineralogy and Coal Yields data

- Competent Person's Report containing geological data.
- Additional Geological Surveys is ongoing in order to declare coal resource in compliance with JORC code.

c) Geological Resource Estimation

- Resource Classification & Estimation
- Geostatistical analysis & Geological Resource Summary data

d) Geotechnical

- Data Acquisition & Sources of Information
- Geotechnical Laboratory Test Data (General, Inter burden Density and Porosity,
- Rock Strength Analysis for Mine Design, UCS)
- Elastic Parameters & Abrasiveness and Workability
- Petrographic Analysis & Defect Direct Shear Strength
- Sources of Information for Geotechnical Infrastructure & Seismic Risk
- Geotechnical Design, Model & Geological and Structural Models
- Rock Mass Characterization & Coal Ply Strength
- Local faults & In Situ Stress
- Geological and Structural Model Uncertainties
- Rock Mass Model Uncertainties & Blast Design
- Waste Dump Design and Management
- In-Pit dumping &Out of Pit Dumps
- Hydrogeological Hazards & Mining at Depth
- Low-wall Stability & Mining Adjacent to Fault Zones
- Pit Slope Design and stability & Inter burden and Coal Seams
- Depth & Alluvium
- Embankments and Dams
- Surface infrastructure

e) Hydrology and Hydrogeology

- Temperature and Evaporation & Climate
- Rainfall & Hydrology data
- Major River Flows & Planned Dams
- Important Gauging Stations near Tete East Block
- Hydrological Risk in Flood line Determination and Design Risks
- Surface Water Management
- Storm Water Management
- Hydrogeological Setup
- Conceptual Model and a Numerical Modelling

f) Mining Studies

- Resource Validation
- Coal Resource Statement
- Coal Resource Conversion
- Block ranking:
- Cumulative Strip Ratio per RoM Tonne
- Cumulative Strip Ratio per Product Tonne
- Mine Optimization:
- Whittle Optimizations
- XPac Data Import
- Modification and Recovery Assumptions
- XPac Scheduled Area / Pit Selection
- Box cut Position and Mining Direction
- Mining Related Schedules
- Whittle Optimizations
- Modification and Recovery Assumptions
- XPac Scheduled Area/ Pit Selection
- Mine Design:
- Mining Overview & Mining Benches
- Topsoil Stripping & Softs Stripping
- Overburden Removal & Inter burden Removal data
- Coal Handling Methodology & Waste Dumps data
- Equipment Selection and Productivity
- Equipment Matches & Key Assumptions on Truck and Shovel Productivity
- Fleet Design Productivities

- XPac Production Schedule and Product Qualities
- Mining Stage Plans
- Mine Equipment
- Explosive Facility & Pit Dewatering
- Mine Rehabilitation
- Water Management/ Demand and Supply
- Power Supply
- Maintenance and Fueling Facilities
- Access Roads
- Support Infrastructure
- Fuel Depot
- Explosives Facility
- Mining Operations Systems
- Mining Operating Costs
- OEM Equipment Operating Cost per Hour
- Operating Cost per BCM
- Capital costs.

II- Coal Handling and Processing Plant (CHPP) for capacity of 5.3MTPA of the Tete East 7521C:-

- CHPP Design and Process Design Criteria
- Overall Process Throughput Design Data
- Product Specification (Source C)
- Dry Solids Densities & Plant Feed Size Distribution Envelope
- Plant Areas Designation
- Washability Data and Yield Range Envelope
- Overall Mass Balance
- Estimation of Product and Discard Surface Moisture Contents
- Fresh Water requirement
- Raw Coal Handling Process description & Sectional Design Criteria
- Tete East CHPP Basis of Operating Cost Estimate
- Basis of Assumptions & Labor Complement
- Process Plant Spares & Electrical Power
- MIA & CHPP related infrastructure
- Support Infrastructure

- Tailings Management
- Design Criteria & Concept Design of TSF
- Capital Costs
- CHPP Operating Costs
- OEM Equipment Operating Cost per Hour

III- Transportation of Coal Products (CC+TC) by Rail from Moatize Siding to Beira Port (600 km) of the Tete East 7521C:-

- Existing Government Railway Line of about 600 km from Moatize Siding to Beira Port
- Coal Transportation Workforce Strategy & Data
- Rail Load-Out System
- Capital Costs Estimate & Estimating Methodology
- Transport Costs
- Operating Expenditure Summary
- Maintenance and Fueling Facilities
- Regional Transport Options
- Support Infrastructure

IV- Additional Information available of the Tete East 7521C: -

- Approved Mining Plan by the Government of Mozambique
- Completed socio-economic survey and found that about 463 families from the Cancope existing village are to be shifted.
- Completed study of EIA/EMP and Approved by the Mozambican Environmental Authority.
- HR and Operational Readiness.
- General and Administrative Operating Costs.
- Sustaining Capital Costs (Mining, CHPP, Infrastructure and closure costs).
- Valid Mining Concession (7521C) for 25 year.