SCOPE OF WORKS (SOW)

FAN VENTALATION SYSTEM AT SEFATENG CHROME MINE – LIMPOPO

INTRODUCTION

Sefateng Chrome Mine, Zwartkoppies is an operating underground mining operation.

PROJECT LOCATION

The project is located approximately 90km southeast of Polokwane, the capital of the Limpopo Province, approximately 58km from Burgersfort, and 2km southwest of the R37 provincial road which links Polokwane to Nelspruit via Burgersfort and Lydenburg. The Sefateng Chrome Mine encompasses the farm Zwartkoppies 413KS.

BUDGET

1. Completed BOQ in excel format, password protected

FAILURE TO SUBMIT AND COMPLETE ALL THE ABOVE DOCUMENTATION MAY RENDER A TENDER LIABLE FOR REJECTION.

Please ensure that Tenders comply with the following:

- Please document the complete tender name and number on the Tender Submission
- Sefateng- FAN VENTILATION must be displayed in the subject line of all emails.
- Budget Quotation closing date: FRIDAY 6 JANUARY 2023 at COB
- All tender documents must be emailed to procurement2@mtcmining.com
- The password for the BOQ must be sent to legal@mtcmining.com before tender closing date.
- All documents containing prices must be password protected.

BUDGET SUBMISSION:

- The size of the individual emails should not exceed 10MB _ if the size exceeds, please send in separate emails
- On no account will Budgets received after the time and date for submission of Tenders be considered.

- No queries will be entertained by the Company Representative after 48 hours from the tender closing date and time.
- Any request for an extension of the tender period, must be submitted in writing to the company representative, 48 hours before the tender closing date.

SCOPE OF WORK OVERVIEW

The simulation is discussed as follows:

GENERAL

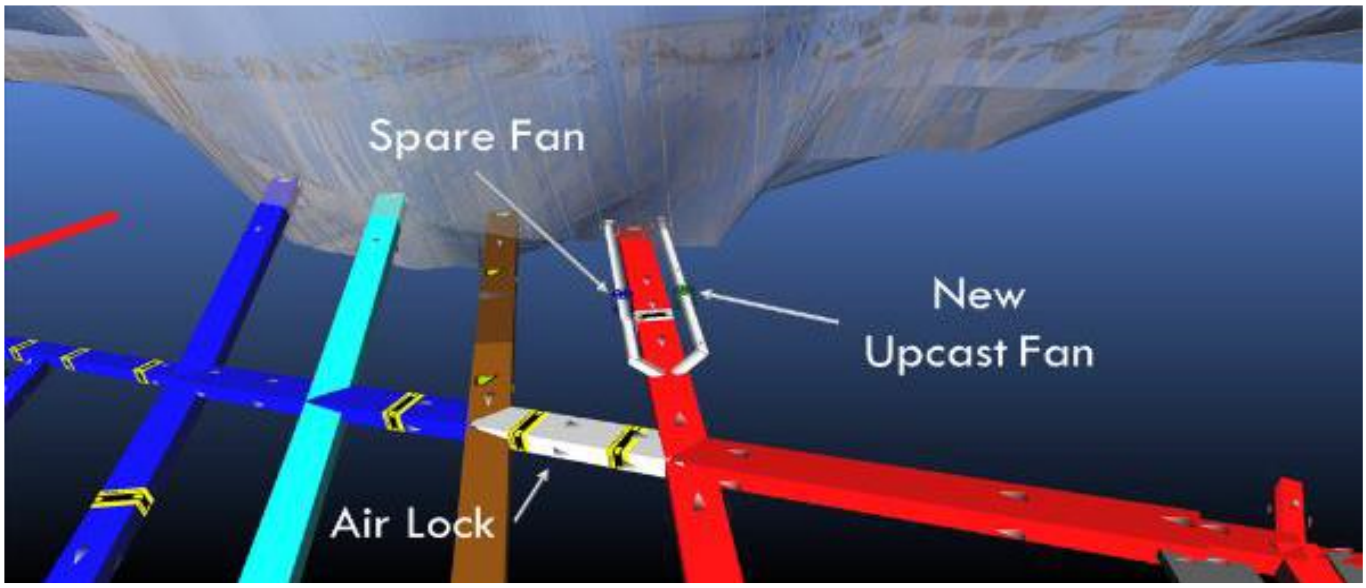
To provide a full solution to supply and install ventilation fans.

Except as otherwise expressly provided herein, the service provider shall supply all adequate and competent labour, supervision, tools, and equipment, installed and consumable materials, services, testing devices, and each item of expense necessary.

The operation makes use of an inverted tree-shaped configuration. The shape is dictated by the development of the main decline and the need to access the ore.

The ventilation principle is to divide, at a minimum, the mine into a western and eastern ventilation district. Each district will have its own dedicated upcast shaft. Ventilation will be drawn in down mine through its four main intake portals. It will then pass down the central intake declines until it reaches the bottom of the mine. It will then split and be coursed along the stope faces until it reaches the extreme west and east upper stopes. Thereafter, the ventilation will return to the respective upcast shaft. Given that each level is served by a conveyor drive for the purposes of ore extraction, short-circuiting of ventilation along these drives will be achieved by means of ventilation doors and belt regulators. A certain amount of leakage is inevitable but will provide adequate ventilation along each drive.

SEFATENG
CHROME VALLEY DEVELOPMENT

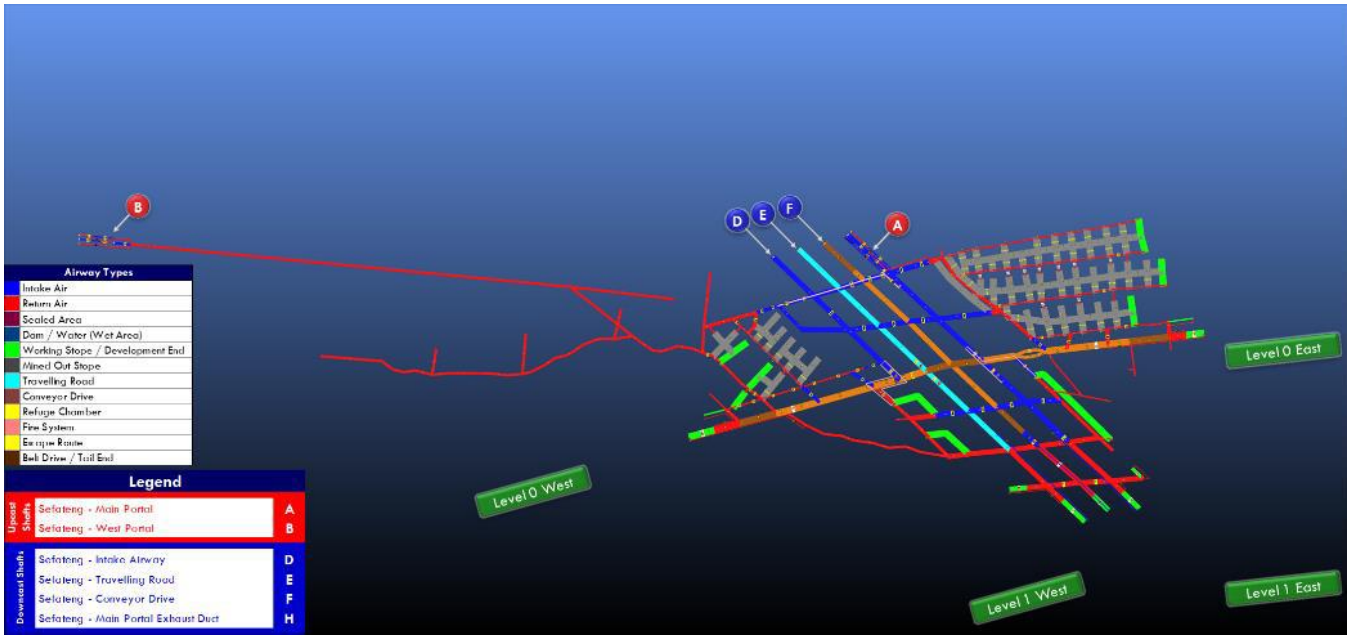


Design Phases:

In accordance with the operation's instructions, numerous models were constructed to simulate future ventilation layouts for the following periods: (Please be advised this plan only provides information up until 2027, the life of mine exceeds twenty years).

- • End 2022
- • End 2023
- • End 2024
- • End 2025
- • End 2026
- • End 2027

SEFATENG
CHROME VALLEY DEVELOPMENT



SCOPE OF WORK BREAKDOWN

The existing 2 x 75kW fans are removed and replace with 2 parallel x Ø1600 132kW (Dual Stage - Half Blade) Fans. One Fan is kept with a spare and is equipped with a self-closing mechanism. Initially the operational fan will only be run at 80% capacity.

In addition, an air lock is installed adjacent to the upcast fan station for the purpose of return airway access.

A proposal for the is welcomed as different manufacturers will have their own technology and inputs. Nevertheless, the compliance to the outcome must still be adhered to. A site visit will be arranged if necessary or requested after a proposal has been submitted.

All spares are to be kept in stock at all time and a minimal lead time of delivery if there are any breakages or damages.

SEFATENG
CHROME VALLEY DEVELOPMENT

The fan must be installed on a concrete substrate on skids for the easy installation and or removal of the fans. A detailed description of this to be submitted with tender proposal.

DUTIES OF THE FAN (MAIN PORTAL)

Surface Fan Settings									
Period	**Calibrated Model**	**STIP**	**STIP with Mitigation System**	**End 2022**	**End 2023**	**End 2024**	**End 2025**	**End 2026**	**End 2027**
Sefateng - Main Portal									
Fans Installed	2	2	2	2	2	2	1	1	1
Fans Operational	2	1	1	1	1	1			
Blade Setting (°)	0°	0°	0°	0°	0°	0°			
Speed (% of full RPM)	100%	80%	100%	100%	100%	100%	100%	100%	100%
Total Upcast Quantity (m^3/s)	47.8	50.8	63.1	61.8	61.9	60.8			
Fan Total Pressure (Pa)	1345.2	1413.6	2260.7	2427.5	2416.2	2552.8			
Installed Capacity (kW)	150	528	528	528	528	528	264	264	264
Sefateng - West Portal									
Fans Installed		2	2	2	2	2	3	3	3
Fans Operational		1	1	1	1	1	2	2	2
Blade Setting (°)		0°	0°	0°	0°	0°	0°	0°	0°
Speed (% of full RPM)		80%	100%	100%	100%	100%	100%	100%	100%
Total Upcast Quantity (m^3/s)		53.9	62.1	62.7	62.4	62.0	83.5	80.2	78.9
Fan Total Pressure (Pa)		1081.2	2387.9	2333.3	2369.1	2412.9	4328.3	4376.3	4382.7
Installed Capacity (kW)		528	528	528	528	528	792	792	792
Sefateng - East Portal									
Fans Installed							3	3	3
Fans Operational							2	2	2
Blade Setting (°)							0°	0°	0°
Speed (% of full RPM)							100%	100%	100%
Total Upcast Quantity (m^3/s)							95.8	89.4	80.5
Fan Total Pressure (Pa)							3875.3	4076.5	4269.0
Installed Capacity (kW)							528	528	528
TOTALS									
Fans Installed	2	4	4	4	4	4	7	7	7
Fans Operational	2	2	2	2	2	2	4	4	4
Total Upcast Quantity (m^3/s)	47.8	104.7	125.2	124.5	124.3	122.8	179.3	169.6	159.4
Average Fan Total Pressure (Pa)	1345	1242	2324	2380	2393	2482	4086	4218	4325
Installed Capacity (kW)	150	1056	1056	1056	1056	1056	1584	1584	1584
Total Input Power (kW)	102	173	365	371	372	377	913	910	901

SEFATENG
CHROME VALLEY DEVELOPMENT

PROJECT EXECUTION PLANNING

The Supplier shall develop a project execution plan and provide to the Client in the form of a document presentable to the Client.

A detailed Project Execution Plan (the "Project Execution Plan") is to be provided (7) days from Project award that sets out:

(a) Overall management of the Work.

(b) Overall coordination of services to be provided by the Supplier, procurement, and management activities.

(c) Preparation of detailed cost estimates and schedules for all Project phases.

(d) Preparation of detailed planned sequencing activities.

(e) Preparation of procurement documents and logistics planning, material management and subcontracting.

(f) Deployment of the Clients Policies.

(g) Procedure and process for cost control and reporting.

(h) Project accounting details.

(i) Development of necessary specifications, standards, and procedures

(j) Development of training, operation, and maintenance manuals.

(k) Planned assistance to the Owner for the acquisition of local and site-specific permits.

The Project Execution Plan shall also contain the Work Schedule, which constitutes:

(a) A detailed sequence in which the Supplier intends to perform the Work.

(b) start and completion dates for all separate portions of Work in MS Project Format

(c) manpower forecasts by trade or discipline.

CONCLUSION

The Supplier shall perform all work as described in this scope of the Work and Clients strategies, plans and procedures to provide all services required to a complete and operable facility. The Supplier shall provide all adequate and competent management, personnel, supervision, staff, labor, scheduling, documentation and SHEQ to complete the Work in accordance with the Standard of Performance.

SUBMISSION DATE

All quotes and proposal shall be submitted on or before the 6 JANUARY 2023 COB.

CONTACT:

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