Project Summary – Wabra Creek Quarry Project (Elaine Ville Housing Development)-Operation of a Stone Quarry.

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PROJECT SUMMARY DESCRIPTION

1.0 INTRODUCTION

The Wabra Creek quarry project is being proposed by Elaine Ville Housing Development INC. The proposed project area is located in the Potaro Mining District No.2, central Guyana. The area is approximately 102.5 miles south west of the capital city of Georgetown and the closest town is Mahdia, some 42.7 miles west. The project area can be found on Terra Survey Sheet 44NE encompassing 2,797 acres.

It is estimated that this area has a reserve of 3,450,000 tons of rocks that can be used to produce crushed aggregates and boulders. The life of mine is expected to be twelve years producing 300,000 tons of product annually.

Elaine Ville Housing Development INC intends on making an investment of 7,000,000 USD in a modern quarry business at the Wabra Creek area, Demerara River. This project is expected to provide employment for 26 persons.

2.0 LOCATION AND ACCESS

The project area is approximately 102.5 miles south west of the capital city of Georgetown and the closest town is Mahdia, some 42.7 miles to the west. Bartica is located 67.8 miles north and Linden 45.4 miles northeast of the project area. The northern boundary of Great Falls 58 Miles Amerindian Titled Lands is just west of the project area. The area can be accessed by road to transport supplies and personnel. The main road linking the project to Georgetown is the Linden- Soesdyke Highway and the Linden-Mabura Road.

3.0 LOCAL GEOLOGY

The project area is approximately 2,797 acres that almost entirely encompasses rocks of the Avanavero Suite. These are igneous intrusive rocks of dikes and sills emplaced in the mid-Proterozoic period, between 1.65 and 1.85 billion years ago. In this process, magma was pushed up from deep within the earth into any cracks or spaces it could find, sometimes pushing existing rocks out of the way.

Dykes, by definition, are hard, intrusive rocks with formations of a vertical nature. These are usually extremely resistant to weathering and erosion. Traverses in the area has revealed BMS assemblages and some Granites in addition to the Avanavero rocks which constitutes the bulk of the rocks found.

As expressed above, Gabbro was the major rock type collected, some specimens of Gneiss and Granite were also found

4.0 EXPLORATION

A total of 16 outcrop samples were mapped with 9 grab samples of gabbro and 5 grab samples of gneiss (mostly weathered) and 2 of granites. Massive outcrops of Gabbro are common throughout the project area, sometimes partially eroded by small creeks. Large hills, boulders and smaller outcrops could be found from just a few miles from the Linden-Mabura road all the way south to the Demerara River.

After acquisition of the property, an updated resource estimate will be made using the full drilling dataset. The reserve calculations will be updated once further exploration work has been carried out on the block.

5.0 GEOTECHNICAL CONSIDERATIONS

Based on recent work by the company, samples collected were tested for engineering properties. The uniaxial compression strength of the granite is about 50-60 MPa, porosity of approximately 20% and permeability 10-4 cm/s. the Aggregate Abrasion Value, Aggregate Crushing Value and Aggregate Impact Value reside about 30-35%.

For the design of the pit, it was assumed that the pit slopes and benching will follow the permitted conditions of a 1.15H: 1V pit slope, a maximum bench height of 7.5 m and a minimum catch bench width of 5 m. The pit will have an overall strip ratio of 0.153:1. The proposed stone quarrying will involve three horizontal benches, a maximum 22.5 m quarry face height and a 37^0 slope. The quarry faces are proposed to set back at least minimum 10 m (working terrace width) for safe operation of loading and hauling equipment.

6.0 ORE RESERVE ESTIMATION AND PROODUCTION SCHEDULE

Based on existing information, the estimated mineable reserve is 3,450,000 tons of quarriable rocks.

Proposed Production Schedule:

Product (Tons)	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Total
Aggregates	80,000	150,000	150,000	150,000	150,000	680,000
Boulders	80,000	150,000	150,000	150,000	150,000	680,000
Total	**160,000**	**300,000**	**300,000**	**300,000**	**300,000**	**1,360,000**

Tonnage per month: 25,000 tons per month

Tonnage per day: 1,250 tons blasting production per day

Total Projected production in first five years- 1,360,000

7.0 HAUL ROAD

A main haul road is proposed so as to provide access to individual quarry benches, mainly in the western and northern part of the deposit. As the pit progresses downwards, pit roads and ramps would be established along the eastern to western side of the pit. Ramps will have slope angles of 2.5% and be 13 meters wide to accommodate haulage equipment.

8.0 STRIPPING

The volume of overburden is estimated at 178,455 tons. The characteristics of the soil include vegetative cover, top soil, saprolite and clay. The top soil will be stripped and stored for rehabilitation purposes. The overburden will also be stripped and stockpiled for rehabilitation purposes. Berms will be constructed around overburden spoil heaps to prevent run-offs and sedimentation of natural drainage systems. Overburden spoil piles will be located in areas of poor stone reserves.

9.0 QUARRYING

The primary fragmentation of rocks will be done by single row or multi row bench blasts. A hydraulic hammer or secondary blasting will be used to fragment oversized boulders.

After blasting, excavators or wheel loaders will be used to load blasted rocks into high capacity dump trucks.

10.0 DRILLING AND BLASTING

The target is to blast approximately 25,000 tons of material per month with effective fragmentation of 90-94%.

Blast parameters:

- 30ft depth
- Blast hole diameter- 3 inches
- 100 tons liberated per blast hole
- Magnafrac 2.5'' * 16'' selected as primary explosive

- SG of explosive 1.1 g/cc
- Pounds of explosives per hole is 53.84
- Powder factor- 1.21 lbs./y^3
- 20 millisecond delay between each blast row
- 10 millisecond delay between holes
- Burden- 6ft
- Spacing -8ft
- Sub drill- 2ft
- Stemming Length- 4ft
- Explosive Column length- 22ft

11.0 MAGAZINE FOR EXPLOSIVES

A plan for the general construction and management of the magazine was included.

12.0 CRUSHING

The primary crushing circuit consists of a Hopper, a vibrating feeder and a Nordberg C200 59 x 79 Jaw Crusher. The primary crusher is capable of handling 695-985 tons per hour. Blasted rock at a max weight of 900 Kg will be loaded into the 79- inch gape of the crusher with an output aggregate size of approximately 7" x 3". This crusher will operate single shift, unless productivity requires a second shift.

The secondary crusher is a Nordberg Symons 7 ft. STD cone crusher. This crusher will handle 337 tons per hour. The tertiary crushing circuit consists of a Nordberg Symons 7 ft. Short Head Cone Crusher as well as a Nordberg Symons 5.5 ft. Short Head Cone Crusher.

13.0 STAFFING

The proposed quarry is expected to employ 26 permanent employees working 12 hour shifts 7 days a week.

The proposed staffing accommodation and infrastructural works seems to adequately cater for the efficient daily operations of the business.

The proposed staff list is as follows:

Designation	Number of Employees
Quarry Manager	1
Safety officer	1
Mining Engineer	1

Mechanic	2
Administrative	2
Excavator operator	4
Cooks	2
Heavy duty drivers	4
Store keeper	1
Electrician	1
Maintenance	1
Security	2
Plant Foreman	1
Blasters	1
Drillers	2
Total	**26**

14.0 EQUIPMENT SELECTION

Detailed descriptions and specifications of equipment for all facets of the operation was not discussed. However, the equipment list presented seems satisfactory and will be able to adequately allow for efficient mining, hauling, processing and transportation operations.

Mining Equipment	
Equipment	***Manufacturer***
Atlas Copco DM 25-SP	Atlas Copco
Aircore	Aircore
990 Loader	Caterpillar
990 Loader	Caterpillar
775F Haul Truck	Caterpillar
320 D Excavator	Caterpillar
320 D Excavator	Caterpillar
D6 Bulldozer	Caterpillar

740 Truck	Caterpillar
320 D Excavator	Caterpillar
320 D Excavator	Caterpillar
Hilux 4x4 Pick Up	Toyota
Hilux 4x4 Pick Up	Toyota
Hilux 4x4 Pick Up	Toyota
Bob Cat S185 Skid steer	Ingersoll-Rand
1000 KW Generator	Caterpillar

15.0 FINANCIAL ANALYSIS

The initial cost of the project has been estimated as follows:

Capital Expenditures						
Mining Equipment						
Type of Equipment	Make Model	Qty	Cost Per Unit	Total Cost	Replacement (Yrs)	Depreciation (Yrs)
Drilling Equipment						
Production Drill	Atlas CopcoDM 25-SP	1	USD 156,800.00	USD 156,800.00	0	5
Exploration Drill	Aircore	1	USD 280,000.00	USD 280,000.00	0	5
Loading Equipment						
Production Loader	Cat 990	2	USD 377,192.00	USD 754,384.00	0	5
Production Excavator	Cat 320 D	2	USD 153,440.00	USD 306,880.00	0	5
Haulage Equipment						
Haul Truck	Cat 775 F	1	USD 784,000.00	USD 784,000.00	0	5
Haul Truck	Volvo FH	32	USD 112,000.00	USD 3,584,000.00	0	5
Support Equipment						
Stripping & Rehabilitation	Cat D6RIILGP Bulldozer	1	USD 258,720.00	USD 258,720.00	0	5
Production Excavator	Cat 320 D	2	USD 153,440.00	USD 306,880.00	0	5
Transportation	Toyota Hilux 4x4	2	USD 22,400.00	USD 44,800.00	0	5
Stemming Holes	Ingersoll-Rand Bobcat S185 Skidsteer	1	USD 20,832.00	USD 20,832.00	0	5
Power Admin	Miller 4KW Generator	1	USD 5,600.00	USD 5,600.00	0	5
Water Supply	Cat 613CII water Truck	1	USD 160,160.00	USD 160,160.00	0	5
Sales	Cat 980H Loader	1	USD 224,000.00	USD 224,000.00	0	5
Transport Explosive	4 x 4 Toyota Pick Up truck	1	USD 28,000.00	USD 28,000.00	0	5
Power Procesing Plant	CAT 1000 KW Generator	1	USD 100,000.00	USD 100,000.00	0	5
Haulage	CAT 740 Truck	1	USD 156,800.00	USD 156,800.00	0	5
Maintenance	Lincoln Air 500 Welding Plant	1	USD 16,800.00	USD 16,800.00	0	5

Total			USD 3,010,184.00	USD 7,188,656.00	

16.0 ENVIRONMENTAL MANAGEMENT

An environmental management plan in accordance with Regulation 226 91) was submitted and sufficiently outlines the potential environmental impacts and mitigating measures. The environmental management plan also details the monitoring and reporting mechanisms in place for both operational and closure phases.

Some of the critical areas discussed in the EMP are as follows:

- Topsoil and Overburden management strategy
- Surface water quality
- Ground water quality
- Waste management strategy including solid, hazardous and sanitary
- Air quality
- Noise and vibrations
- Ecological

17.0 OCCUPATIONAL HEALTH AND SAFETY

Occupational health and safety is indispensable in the modern industrial workspace. This was discussed in the document submitted.

18.0 RECLAMATION AND MINE CLOSURE

A reclamation and closure plan was submitted and sufficiently outlines the parameters below.

- Re-profiling of dump area as appropriate
- Remove or maintenance of surface water management features
- Natural re-vegetation of mine waste facilities, with assistance as necessary
- Backfilling of pits where practical and economically feasible, replacing topsoil and natural re-vegetation
- Demolition and removal of all buildings and infrastructure
- Removal of scrap and rubbish
- Dealing with old Access roads and bridges

19.0 EMERGENCY RESPONSE

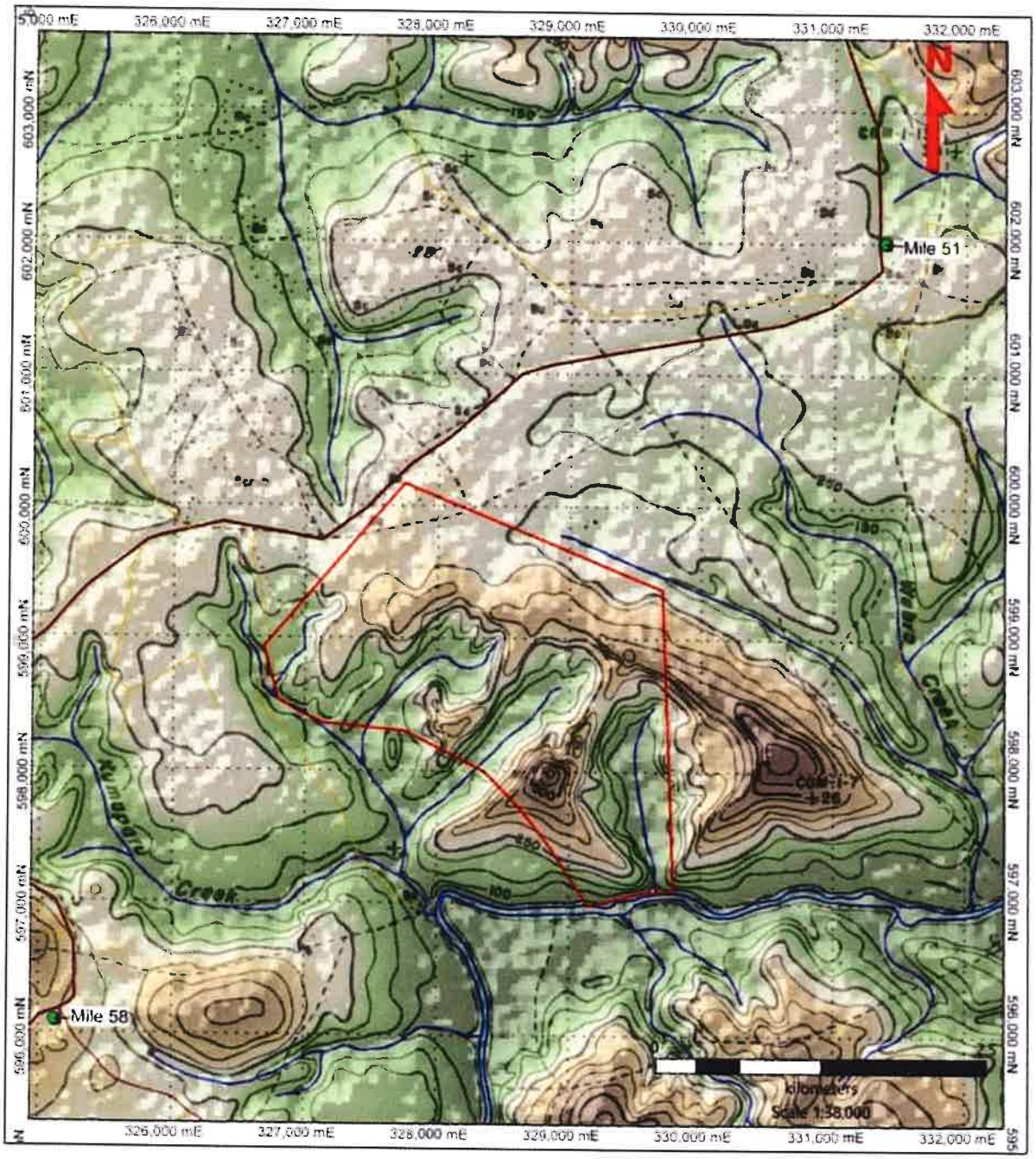
An Emergency Response Plan was submitted. This described the protocols in place for various emergencies.

Issues discussed includes:

- Clearly defined roles and responsibilities
- Summoning emergency services
- Dealing with injuries and fatalities
- Raising the alarm and evacuation
- Assembly point locations
- Procedure to deal with fire and explosions
- Fuel oil spill management
- Emergency Contact Details
- Emergency Procedures
- Description of an emergency
- Scenario Description and Response
- Materials Inventory
- Incident Reporting

20.0 CONCLUSIONS

The Wabra Creek Quarry Plan, Environmental Management Plan, Emergency Response Plan, Rehabilitation and closure plan, has shown that the Quarry Project is manageable and feasible. There are provisions for Environmental Management, Occupational Health and safety and Rehabilitation and closure. The cost for Rehabilitation and closure has also been budgeted. Plans and personnel for dealing with contingencies and emergencies have been clearly defined and designated.



LEGEND

- places
- Road
- Rivers/Creeks
- Boundary

MAP TITLE	**MAP SHOWING TOPOGRAPHY OVER SRTM DATA AND LOCATION FOR THE PROPOSED WABRA QUARRY PROJECT**
PROJECTION	Provisional South American (PSAD) 56 UTM
SCALE	1:38,000