

Skullpoint Mining & Quarry Inc.



Skull Point, Cuyuni Mining District



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1.0 Project Overview

1.1 Introduction

A field visit was conducted to determine outcrop locations and the viability of the property for quarriable materials. Based on field observations 2 locations can support quarry operations. A total of 2.6 million tons of granitic material can be extracted from the area. The demand for aggregates makes this project very feasible. For this project, the developer is looking at the Feasibility of two scenarios. Scenario one is the production of Boulders only or scenario two is the production of Aggregates. Both scenarios will be looked at thoroughly. The area is very suited for quarry operations. They have been found in substantial quantity and numerous outcrops. The increasing demand for aggregates is attributed to the following factors:

- (I) Massive infrastructural development in the country, namely the hydro dam road and the Linden-Lethem road.
- (II) Sharp increase in housing and commercial construction
- (III) Export demand for crushed aggregates from Guyana

1.2 Property Description

The Skullpoint Mining & Quarry Inc. Permit is medium scale permit located on the Left bank of the Mazaruni River totaling 788 acres. The permit cover sections of the Dehalibana Creek along with several un-known tributaries. It is located on 36 SE stock sheet (Figure 2). It is filed under S-1030/MP/000/20.

Tract of state land located in the Cuyuni Mining District No. 4 as shown on Terra Surveys Topographic Map 27NE, at scale 1:50,000 with reference point 'X' located at the confluence of the Mazaruni River and the Kokerit River with geographical coordinates of Longitude **58°38'54.056"W** and Latitude **6°23'43.534"N**.

Thence at a true bearing of **298.89°**, for a distance of **2 Miles 1546.26 yards**, to the point of commencement:

Point A, located at geographical coordinates of longitude **58°41'6.205"W** and latitude **6°24'55.984"N**, thence at true bearing of **179.8°**, for a distance of approximately **1627.56 yards**, to **Point B**, located at geographical coordinates of longitude **58°41'6.036"W** and latitude **6°24'7.801"N**, thence at true bearing of **159.55°**, for a distance of approximately **1210.62 yards**, to **Point C**, located at geographical coordinates of longitude **58°40'53.436"W** and latitude

6°23'34.22"N, thence at true bearing of **52.65°**, for a distance of approximately **889.672 yards**, to **Point D**, located at geographical coordinates of longitude **58°40'32.369"W** and latitude **6°23'50.201"N**, thence at true bearing of **83.61°**, for a distance of approximately **889.894 yards**, to **Point E**, located at geographical coordinates of longitude **58°40'6.024"W** and latitude **6°23'53.135"N**, thence at true bearing of **79.15°**, for a distance of approximately **615.224 yards**, to **Point F**, located at geographical coordinates of longitude **58°39'48.024"W** and latitude **6°23'56.562"N**, thence at true bearing of **358.39°**, for a distance of approximately **1189.51 yards**, to **Point G**, located at geographical coordinates of longitude **58°39'49.018"W** and latitude **6°24'31.763"N**, thence at true bearing of **242.42°**, for a distance of approximately **157.332 yards**, to **Point H**, located at geographical coordinates of longitude **58°39'53.172"W** and latitude **6°24'29.606"N**, thence at true bearing of **248.81°**, for a distance of approximately **383.893 yards**, to **Point I**, located at geographical coordinates of longitude **58°40'3.835"W** and latitude **6°24'25.499"N**, thence at true bearing of **271.93°**, for a distance of approximately **592.475 yards**, to **Point J**, located at geographical coordinates of longitude **58°40'21.475"W** and latitude **6°24'26.089"N**, thence at true bearing of **288.89°**, for a distance of approximately **653.064 yards**, to **Point K**, located at geographical coordinates of longitude **58°40'39.882"W** and latitude **6°24'32.35"N**, thence at true bearing of **302.77°**, for a distance of approximately **415.461 yards**, to **Point L**, located at geographical coordinates of longitude **58°40'50.29"W** and latitude **6°24'39.006"N**, thence at true bearing of **313.99°**, for a distance of approximately **285.896 yards**, to **Point M**, located at geographical coordinates of longitude **58°40'56.417"W** and latitude **6°24'44.885"N**, thence at true bearing of **332.11°**, for a distance of approximately **424.177 yards**, to **Point N**, located at geographical coordinates of longitude **58°41'2.328"W** and latitude **6°24'55.984"N**, thence at true bearing of **270.0°**, for a distance of approximately **130.148 yards** to the point of commencement at **Point A**

Thus, enclosing an area of approximately **788.71 acres**, save and except all lands lawfully held or occupied.

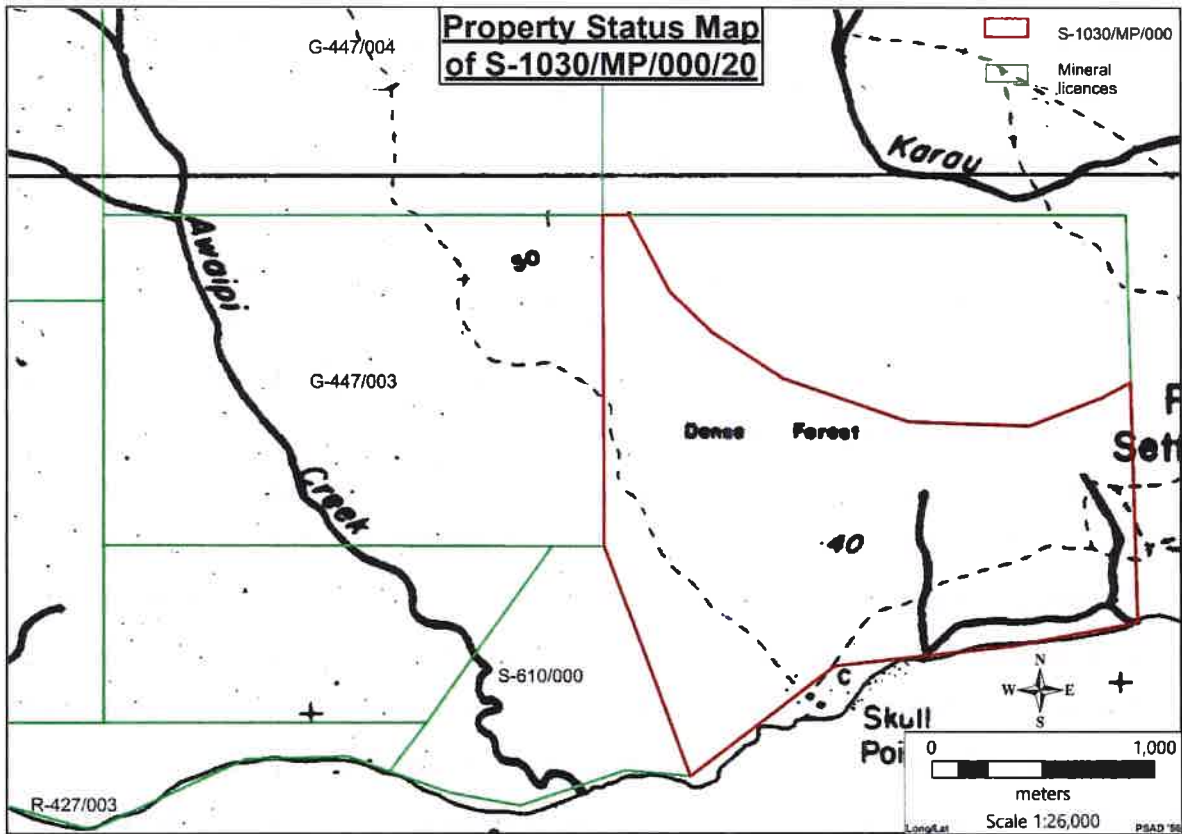


Figure 1. Property Status

2.0 Geology and Mineralization

2.1 Geology

Two distinct lithological units are found within the area (Figure 2). The oldest unit being the Bartica Gneiss complex with ages of 1.9 Ga – 1.8 Ga, then the pluton was emplaced (younger granites) approximately 1.7 Ga – 1.6 Ga ago.

Younger Granite rocks: Granodiorite is an intrusive igneous rock that has phaneritic textured. The grain sizes are visible to the naked eye. Granodiorite formation is slow cooling crystallization below Earth's surface. It is similar to granite and diorite, but It has more plagioclase feldspar than orthoclase feldspar. It appears to be a small pluton intrusion with coarse grain biotite.

Gneiss Metamorphic rocks: In that area, distinct gneisses are present but occur in narrow zones within a belt of syn-tectonic granites with amphibolitic xenoliths and amphibolite slivers.

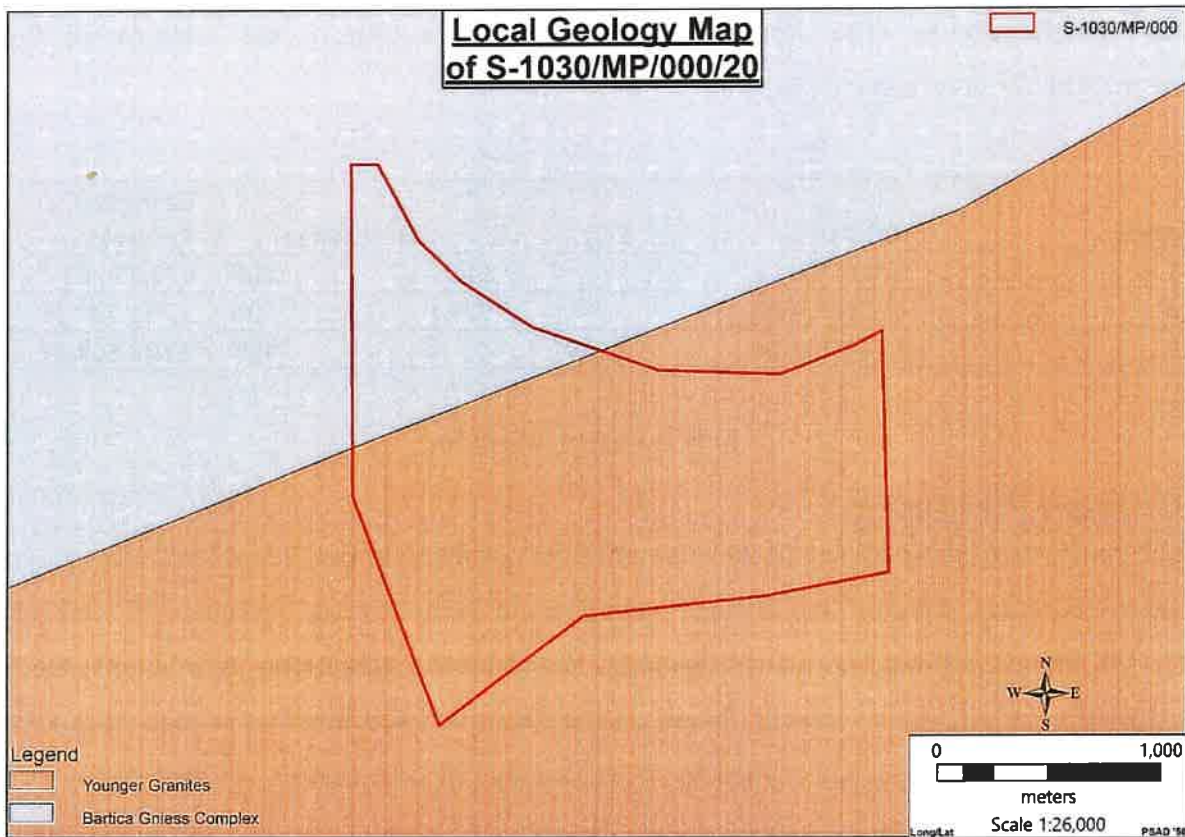


Figure 2. Showing the local Geology of the Area

2.1 Mineralization

2.1.1 Granite

The rock is uniformly massive, leucocratic muscovite granite which contains a few angular, black xenoliths of biotite hornblende hornfels (less than 1%). The rock is heavily jointed, but there is no cleavage nor is the regional foliation present

3.0 Quarry Resource Estimate

The Quarry Potential is calculated using the cut and fill method generated by the global mapper software and the srtm data. Using this information and catering for 10% overburden, along with Granite specific gravity, an inferred estimate of tonnage can be calculated. Pit one general location is 58.681W 6.4001N; it covers 8.01 acres. Pit two general location is 58.67391W 6.4054N; it covers 9.67 acres. Volumetric calculations were based on the on-site visit, the extent

of the ore body seen, and assuming geological continuity based on the structure's geological interpretation. From the outcrops seen, the geologist can safely take based on the aeromagnetic interpretation and site visit. These values are used to determine resource estimation based on the rocks' specific gravity (See Appendix). The rocks were sent to the Ministry of Public Infrastructure for geotechnical analysis.

Property	Volume	S.G	Overbuden	Estimated Reserves
Pit 1	574,875.00	2.525	40%	870,935.63
Pit 2	1,156,256.00	2.525	40%	1,751,727.84
Total	1,731,131.00	2.525	40%	2,622,663.47

Table 1. Reserve Estimation

4.0 Open Pit Mining

Skull Point Quarry has planned all its work activities for the next five years. This quarry intends to supply boulders, gabions, and crushed aggregates in the following fractions 7/8", 3/4", 5/8", 1/2", 1/4" minus, sifting, and quarry cleaning. Based on the volumetric calculations, the total tonnage of each pit was calculated. Based on the Pit production timeline, a total of quarriable material for each year was determined by the percentage of time (months of production for that fiscal year) multiply by the pit's total tonnage. Besides, the various size fractions production was also predetermined by the supply and demand of the market. Using all this information, a quarry resource estimate was made and estimated production of quarriable material from the proposed Quarry. A total of 2.6 million tons of Granitic material is available for road construction, sea defenses and aggregates.

4.1 Geotechnical

The pit design process consists of designing ramp access to the bottom of the pit using the geotechnical recommendations guiding the bench geometry. The ramp access will slope at 30 degrees. There are final pits for each quarry pit. All pits in a sector were considered a single pit that will be mined bench by bench.

The ramp for each pit was located on the lowest wall to minimize the hauling distance and reduce activities along the high wall. Mining the stone was designed with the same geotechnical parameters as granite. However, since this type of material is found near the surface, the mining

will be done by a dozer that will pile the material and then by the loading equipment that will load the material. This technique will respect the overall slope angle of 50 degrees.

4.2 Pit Optimization

Pit optimization is based on a USD 30/ton aggregate price to create a series of quarry blocks for analysis. Quarry design is based on a conventional surface mine using 76mm blast holes, 4.2m³ front end loaders and 1.5m³ excavators for stone and waste loading; and haulage by a fleet of 43.5-ton capacity trucks. The ultimate pit design incorporates pit slope geometries (bench face angles, inter ramp angles and berm widths) for various rock types and pit sectors, includes haulage ramps, and takes into account minimum mining width based on the mining equipment selected.

4.3 Annual Production

For this project, it is estimated that not less than 300,000 tons of rock will be produced per year for the first established production phase. The annual production for the first few years during the consolidation of operations will be 300,000 tons of aggregate. After the recovery of a substantial portion of the capital investment, the second phase of investment and expansion will increase production. The quarry will see a capital investment of not less than USD 4,178,744 and will have an initial workforce of at least 45 (local) employees.

4.4 Stockpile Control

10,000 Ton stockpile will be placed at the mobile crusher to accommodate smooth operations. The Trucks will dump the quarry material to the stockpile site, where a dozer will feed directly into the mobile crusher. A jackhammer will be utilized to fragment oversize to the necessary screen size to allow easy processing.

4.5 Staffing

The open-pit workforce will total 45 personnel. See table below:

NO	STAFF	NO OF EMPLOYEES
1	Quarry Master/Manager	1
	Engineers	
2	Mining	2
3	Mechanical/ Mechanic	2
	Supervisors and others	
4	Compressor operator	2
5	Excavator Operator	2
6	Drill operator	1
7	Heavy duty operator	4
8	Heavy duty drivers	4
9	Store Keeper	1
10	Electrician	2
11	Laborers	12
	Services	
12	Blasting Services	4
	Auxillary Staff	
13	Cooks	1
14	Cleaners	2
15	Police officers	2
16	Security	1
17	Medic	2
Total		45

Table 2. Personnel Distribution

5.0 Production Schedule

The overall open quarry production schedule was developed in order to produce 300,000 tons of aggregates per year. Removal of overburden will be done first followed by Blasting then excavation. The open pit production schedule is summarized in Table 3 below:

PIT 1

ITEM	PERCENTAGE	Year 1	Year 2	Year 3	Year 4	Year 5
1ST Grade Crusher Run	10%	30000	30300	30603	30909	31218
2nd Grade Crusher Run	2%	6000	6060	6121	6182	6244
7/8" Aggregate	2%	6000	6060	6121	6182	6244
3/4" Aggregate	45%	13500 0	13635 0	13771 4	13909 1	14048 2
5/8" Aggregate	2%	6000	6060	6121	6182	6244
1/2" Aggregate	15%	45000	45450	45905	46364	46827
Sifting	4%	12000	12120	12241	12364	12487
Underlayer	10%	30000	30300	30603	30909	31218
Sand	5%	15000	15150	15302	15455	15609
Boulders	5%	15000	15150	15302	15455	15609
Total	100%	30000 0	30300 0	30603 0	30909 0	31218 1

Table 3 Production Schedule for 2022-2026

The open pit is scheduled to operate 350 days a year, two 12 hours shift per day, and the mill which will operate for 24 hours per day. An allowance of about 15 days per year, or the equivalent of 0.5 hours of loss time per shift has been allowed for weather delays.

6.0 Mineral Processing

For this project, it is estimated that not less than 300,000 tons of rock will be produced per year for the first established production phase.. After the recovery of a substantial portion of the capital investment, the second phase of investment and expansion will increase production.

- The Jackhammer as the Primary source of crushing the rock after being blasted.
- 100 ton of Material can be processed in an hour.
- 521 ton trucked every day.

Development of this quarrying complex's facilities will be completed within 6 to 12 months of the License being granted (Figure 3).

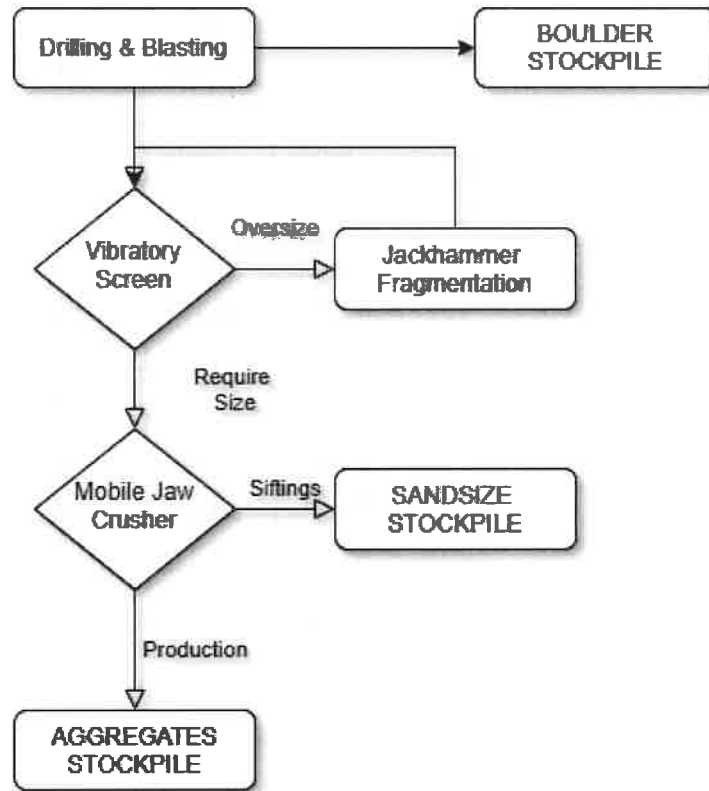


Figure 3. Mineral Processing Flowsheet

7.0 Project Infrastructure

The intentions, that the Quarry Project be a model complex with facilities comparable to other regional and international Quarry operations. The topography is ideal with housing etc., overlooking the process. The mine will have a full-time sanitation crew, and a medic will always be on-site with adequate medical supplies. Because of the threat of malaria in the area, the company will work closely with the Ministry of Health to maintain a malaria-free environment at the quarry and nearby communities. A small water treatment plant for potable water supply will be constructed near a suitable area within the quarry and water will be supplied from the treatment plant to the quarry's various sectors (Figure 4).

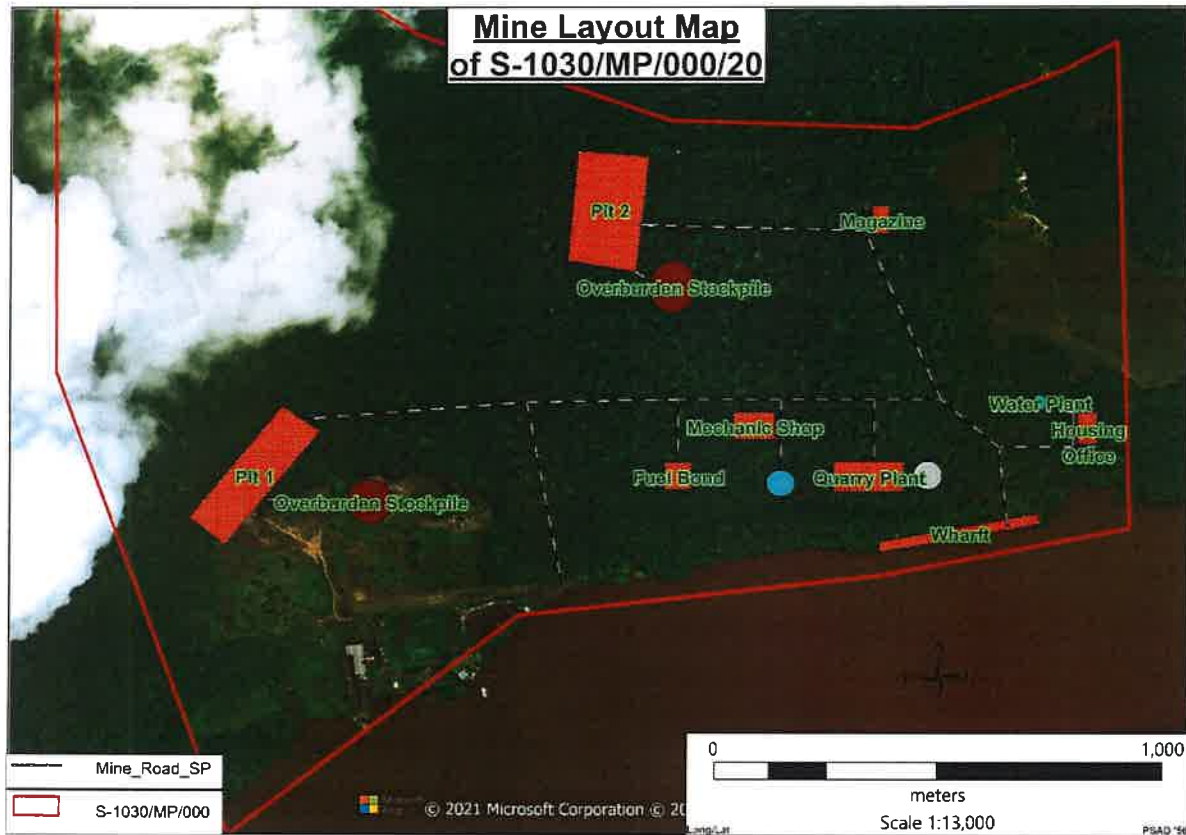


Figure 4. The layout of Proposed Infrastructure

8.0 Environmental Aspect: Ecological Environmental Impacts and Risks

The key potential ecological impacts and risks related to the Project are detailed in this section. Potential impacts and risks for the mine site and access road are detailed for the construction, operation, and closure phases of the Project. The primary intent of this assessment is to identify the potential impacts and risks that will require protective management and mitigation actions during each project phase. The protective measures and mitigations actions are expanded in the Environmental Assessment and Management Plan. This assessment considers “impacts” as consequences likely to occur during normal operations. “risks” are unlikely adverse consequences resulting from system failure or accidents. Given this consideration, loss of habitat resulting from clearing for construction is an impact, while a spill of fuel resulting from a tanker truck accident is a risk. It is important to emphasize the biological context of the Project Area of Direct Influence prior to the identification of impacts. The environment in the Skullpoint Quarry Project may result in additional ecological impacts. Most potential impacts on the biological

environment will take place during the construction phase. The potential impacts and risks are segregated by project component and phase in the section which follows:

8.1 Construction Impacts

8.1.1 Loss of Aquatic Habitats

The construction of the quarry and associated infrastructure will result in the loss of various swamp habitats within the concession area. Several of these habitats have already been affected by historical exploration and quarrying activities at the site. Surveys have not identified any of the aquatic habitats to be critical habitats based on the criteria of *International Finance Corporation (IFC) Performance Standard 6 (PS6)*. Similar aquatic habitats are common in the region. (There will be minor of aquatic habitats in the open pit area, water management pond, and other areas where major conversion of the land surface is required will be unavoidable due to the nature of the activities. These impacts will be mitigated by minimising the extent of areas cleared for diversion channels and by the installation of bypass structures, where possible, to facilitate flow in the downstream section of streams which have been diverted. Application of these mitigation measures will result in low residual impacts (low likelihood, low severity) on aquatic habitats.)

8.1.2 Loss of Terrestrial Habitat and Flora

It is estimated that approximately less than 58 acres of land will be cleared for the quarry site and associated infrastructure. The loss of terrestrial habitats and flora is unavoidable within the project footprint area. None of the terrestrial habitats in the Area of Direct Influence have been identified as critical habitat per the criteria of *International Finance Corporation (IFC) Performance Standard 6 (PS6)*. None of the plant species known to be present in the Area of Direct Influence are known to be threatened locally or to be restricted-range endemic. (The loss of terrestrial habitats in the Area of Direct Influence is considered to be a major impact (medium likelihood, high severity). With appropriate mitigations such as strict minimisation of clearing and progressive restoration, the impact rating is considered to be minor (low likelihood, low severity).)

8.1.3 Loss of Terrestrial Fauna

Some loss of small and/or slow-moving fauna will inevitably occur during land clearing and earthmoving activity. None of the invertebrate, amphibian, non-avian reptile or small mammal

species determined to be present in the Area of Direct Influence is known to be threatened or endemic. (More mobile fauna including large mammals and adult birds will very likely flee the area well in advance of any land clearing operations. The surrounding area is large enough to absorb fauna fleeing cleared areas. The loss of terrestrial fauna in the Area of Direct Influence is estimated to be a moderate impact (high likelihood, medium severity) since the area has been disturbed by prior mining and exploration activities. This impact will be mitigated by minimisation of the areas cleared. The residual impact will consequently be minor (low likelihood, low severity))

8.1.4 Increased Human Population and Activity in the Area of Influence

The construction works will lead to increased human population and increased levels of general activity in the area. The increased human presence has the potential to lead to increased impacts on flora and fauna through harvesting, collecting, hunting, fishing, disturbance, and other activities by construction workers. This impact is considered minor (low likelihood, low severity). The company will enforce a policy of no hunting and fishing by its employees and will also implement measures to ensure that no flora and/or fauna are harvested from the area or brought into the area. Implementation of these measures will result in low residual impacts (low likelihood, low severity).

8.2 Operation Impacts

8.2.1 Loss of Aquatic Habitats

The operation of the mine and associated infrastructure will impact swamp habitats within the concession area. (Impacts to aquatic habitats associated with the operation of the quarry pit area, the water management pond and other areas where major conversion of the land surface occurs will be unavoidable due to the nature of the activities. Upstream and downstream segments of streams will be affected. Water discharged from the diversion channels surrounding the waste stockpile areas will affect downstream receiving bodies and their aquatic fauna. The loss of aquatic habitats in the concession area is considered to be a minor impact (low likelihood, low severity))

8.2.2 Loss of Terrestrial Habitats and Flora

During operation, the additional loss of habitats and flora will not affect any threatened or restricted-range endemic species of flora and fauna. (Much of the fauna will have likely already

left the affected habitats due to disturbance during the construction phase. This impact is rated as moderate (medium likelihood, medium severity). These impacts will be minimised by implementation of the following:

- Minimisation of the Project footprint;
- Initiating restoration as soon as practicable in temporary work areas.

Implementation of these measures will result in minor residual impacts (low likelihood, low severity).

8.2.3 Loss of Terrestrial Fauna

During the operation of the mine, most of the larger animals would have already abandoned the area during the construction phase. Only small fauna accustomed to disturbed environments are likely to remain in or enter mining areas and other work sites. It is likely that small numbers of small animals such as amphibians and snakes will experience mortality due to equipment and vehicle use. The loss of terrestrial fauna during the mining operations phase is rated as moderate (high likelihood, low severity). These impacts will be mitigated by implementation of the following:

- Minimisation of the Project footprint; and,
- Performance of preclearance surveys.

8.2.4 Introduction or Promotion of Alien Invasive Species

The movement of people, equipment, and materials to the mine has the potential to cause the introduction of alien invasive species of both plants and animals. The disturbance and clearing of natural habitats can also promote the growth or colonisation of alien invasive species. This impact is rated as moderate (high likelihood, low severity). These impacts will be mitigated by implementation of the following mitigation measures:

- Monitoring of biodiversity;
- Control of invasive species.

Implementation of these measures will result in minor impacts (low likelihood, low severity).

9.0 Key Sociocultural and Socioeconomic Impacts and Risks

There are no communities within the vicinity of the concession. The social impact assessment also considered an indirect area of influence (IAI). The IAI incorporates areas beyond the operational boundaries of the project. It includes areas providing goods and services, including labour, to the project and logistical corridors to be used for effective implementation of the project. The IAI also incorporates communities indirectly affected by interaction with the project in spite of their physical distance from the project site. Several of the social issues, detailed in this document, are in fact risks associated with project implementation. The social impacts and risks, likely to be associated with the project, are detailed in the following sections. The impacts and risk are identified and segregated by project component and phase.

9.1 Construction Impacts

The construction phase of the project is projected to extend over 6 months. During the construction period, the project is likely to have a positive impact on economic conditions of some communities. Impacts of the project on overall socio-economic conditions of communities will include generation of employment and increased demand for some goods and services and it is expected that at the peak of construction activities, the project will provide work for approximately 25 individuals. These will be direct hires by the Skullpoint Quarry and its sub-contractors. This will represent an increase in regional jobs.

9.2 Operation Impacts

Quarrying projects create a 'boom and bust' economic cycle. The demand for labour, goods and services will be high during the construction period. This demand will decrease significantly during the project operational phase. Workers and subcontractors sourced from Communities may become economically vulnerable during the project operational phase. Some areas may thus be more affected economically than others and there may be widespread and sudden unemployment, loss of supply and contracts and assured sources of income. There is likely to be a decline in the demand for construction workers as the project shifts into the operation phase. The demand for skilled quarrying workers will however increase. It is expected that the number of skilled quarrying workers will be less than the number required for the construction phase.

9.3 Closure Impacts

The Project as currently envisaged has a projected total life of 5 years from the start of production. Closures of projects of such scale typically have significant impacts on the national socio-economic conditions. Depending on the scale of total employment provided by the project over its lifecycle, there could be a decrease in employment due to project closure. This may disproportionately affect one area of the country over another. All of the service providers and suppliers to the project could be severely impacted, especially if the bulk of their business came from the project. The closure of the project will also result in decreased revenues to the Government in the form of taxes and royalties. This in turn may negatively impact the GDP of the country. The impacts of closure are therefore considered to be potentially major. The project proponents in partnership with the Government and its workforce along with suppliers/contractors need to carefully plan for eventual closure. A carefully formulated forward looking closure plan should be commissioned to address the socio-economic impacts of closure.

9.4 Landscape and Visual Resources

The project will alter the vertical dimensions of the landscape and the materials present therein. In addition, the colour, reflectivity and visible emissions will be changed slightly from current levels since the operations will be shielded by surrounding vegetation. Landscape and visual impacts will result from creation of the access road from and to the quarry site. These impacts will be minor (low severity, low likelihood). These impacts will not be mitigated. Additional landscape and visual impacts will result from clearing of greenery, quarrying and for facility construction. The scale of the area to be cleared is however relatively small in comparison to the overall area and would be shielded and adsorbed by the adjacent forest. The impacts of clearing will be minor (low severity, low likelihood). These impacts will not be mitigated.

9.5 Heritage

Removal and destruction of artefacts currently in the project area will compromise the quality of these artefacts. In additions, if artefacts exist below ground in the project area, removal of the ground cover may alter the pressure required to maintain the integrity of these artefacts. Changes in water conditions may also compromise the quality of any artefacts located below ground in the project area. If artefacts are present in the area their quality may be compromised. These are

moderate impacts (medium severity, low likelihood). These impacts will be mitigated by preparing an archaeological watching brief for implementation during earth moving, excavation and blasting. Archaeological evidence would be recorded and artefacts should be removed or preserved in place after consultations with the Guyana National Trust. The mitigation measures will result in insignificant impacts (low severity, low likelihood).

9.6 Land Use

The primary land use activities in the area are quarrying and forestry. The land will be initially used for quarrying and will be reconverted to forestry after mine closure. The project will result in no impacts on land use. These impacts will be mitigated.

9.7 Low Carbon Development Strategy

Approximately less than 100 acres of tropical forest will be cleared for the quarry, widened roadway and related facilities. The total life of mine is approximately 5 years. Deforestation rates will therefore approximate to 15 acres per year over the life of the mine. The Guyana Forestry Commission document “Terms of Reference for Developing Capacity for a National Monitoring, Reporting and Verification System to Support REDD+ Participation of Guyana” indicates that Guyana has approximately 16 million ha of land area covered by forest. Further deforestation rates in Guyana are relatively low at 0.1 to 0.3% per year. Nationally that rate equates to 16,000 to 48,000 ha per year. The deforestation rate of this project will add a total of 2.8 ha per year to those values which equates to less than 0.00583-0.00175 % increase in the national deforestation rate. This increase is very tiny and would have no impacts on national deforestation rates.

10.0 Reclamation and closure

Reclamation at the Skullpoint Quarry will proceed concurrently with quarrying wherever possible and shall be conducted in accordance with reclamation guidelines. As valuable material is mined out, those areas not to be affected by future quarrying operations will be reclaimed. Although it will be impossible to restore the land surface to its exact original configuration, it should be possible to reclaim the disturbed surface. It closely matches the natural surface expression of adjacent undisturbed land. At closure, most pit walls will be reduced to a safe slope by such mechanisms as illustrated in the figure below:

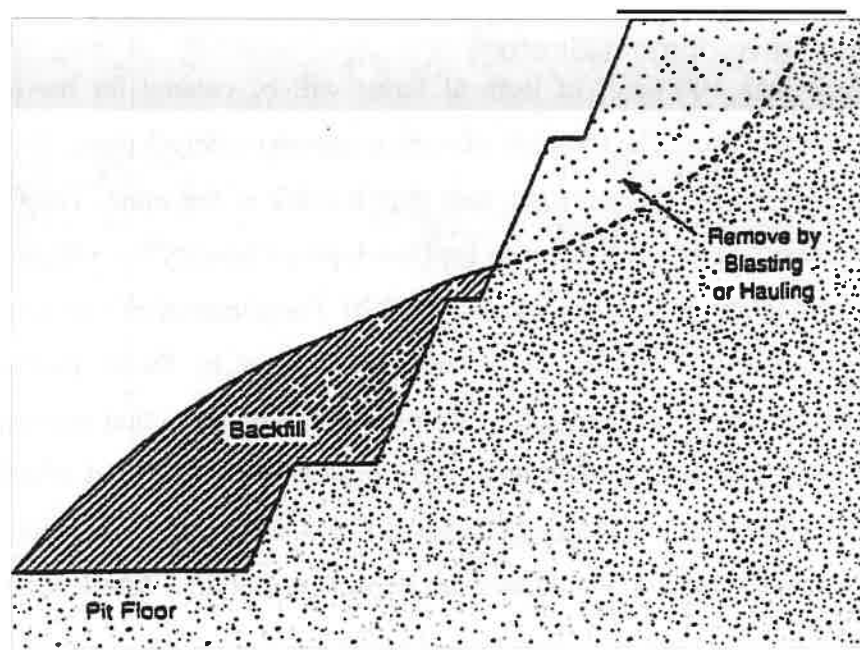


Figure 5. Example of Limited Backfilling

11.0 Capital and Cost Estimates: Scenario One- Boulders

11.1 Capital Cost Estimates

Life-of-Mine (LOM) Project Capital is summarized in Table 4. Initial capital Costs is USD \$4.178 Million.

ITEM	COST (GUY\$)
Plant, Machinery and Equipment	\$600,000,000.00
Mine development expenses	\$50,000,000.00
Building and civil works	\$12,000,000.00
Furniture and Fixtures	\$10,000,000.00
Reclamation & Closure	\$20,000,000.00
TOTAL	\$692,000,000.00
NET INITIAL WORKING CAPITAL	\$173,000,000.00
PROJECT COST	\$865,000,000.00
USD COST	\$4,178,744

Table 4. Initial Capital Cost

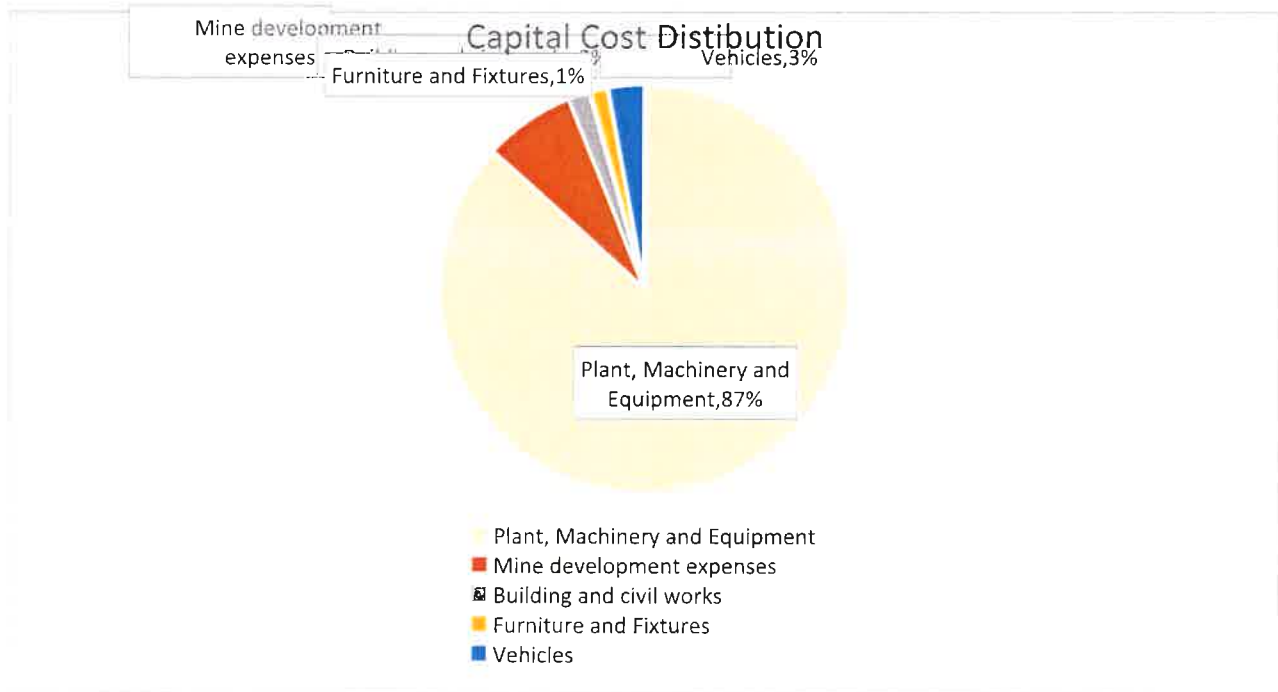


Figure 6. Capital Cost Distribution

11.2 Operating Cost Estimates

LOM operating costs are summarized in Table 5. Operating costs are estimated at USD 16.29 million. Open pit mining will average USD 1.92/ t ore and waste moved. Processing is estimated at USD 1.36/ t ore crushed. G & A costs are estimated at USD 4.75/t ore and waste moved.

Cost Item	LOM Costs \$USD	Unit Cost \$/ton-moved (USD)	Unit Cost \$/ton- crushed (USD)
Open Pit Mining	2,934,870.83	1.92	
Open Pit Drilling & Blasting	2,280,149.24	1.49	
Processing	2,086,008.03		1.36
G & A	7,261,428.57	4.75	
Totals	14,562,456.67	8.15	1.36

Table 5. Operating Cost: Boulders

Open pit mining costs are estimated for total amount of saprolite and fresh rock mined. Open pit drilling and blasting costs had to be separated from these costs and applied to total fresh rock mined.

11.3 Financial analysis

Economic Results are summarized in Table 6; the analysis suggests the following conclusions assuming no gearing:

Mine Life: 5 Years

Pre-Tax NPV_{1%}: USD

29,147,619

Post Tax NPV_{1%}: USD

20,414,111

Pay-Back Post Tax: 1 year

Total Taxes Paid: USD \$8,744,580

Peak Funding of Initial Project Capital: USD 14,562,465

	Year 1 (GUY\$)	Year 2(GUY\$)	Year 3 (GUY\$)	Year 4 (GUY\$)	Year 5 (GUY\$)
SALES	\$ 1,800,000,000.00	\$ 1,818,000,000.00	\$ 1,836,180,000.00	\$ 1,854,541,800.00	\$ 1,873,087,218.00
Open pit mining	\$ (181,916,125.00)	\$ (200,464,050.00)	\$ (219,021,362.00)	\$ (237,588,154.87)	\$ (256,164,523.42)
Operating cost	\$ (72,766,450.00)	\$ (80,185,620.00)	\$ (87,608,544.80)	\$ (95,035,261.95)	\$ (102,465,809.37)
GROSS PROFIT	\$ 1,545,317,425.00	\$ 1,537,350,330.00	\$ 1,529,550,093.20	\$ 1,521,918,383.18	\$ 1,514,456,885.21
Administration, Rehabilitation and other expenses	\$ 304,980,000.00	\$ 304,980,000.00	\$ 304,980,000.00	\$ 304,980,000.00	\$ 304,980,000.00
NET PROFIT BEFORE TAX	\$ 1,240,337,425.00	\$ 1,232,370,330.00	\$ 1,224,570,093.20	\$ 1,216,938,383.18	\$ 1,209,476,885.21
Provision for taxation 20%	\$360,000,000.00	\$363,600,000.00	\$367,236,000.00	\$370,908,360.00	\$374,617,443.60
PROFIT / (LOSS) AFTER TAX	\$ 880,337,425.00	\$ 868,770,330.00	\$ 857,334,093.20	\$ 846,030,023.18	\$ 834,859,441.61
USD PROFIT/LOSS After tax	\$ 4,192,082.98	\$ 4,137,001.57	\$ 4,082,543.30	\$ 4,028,714.40	\$ 3,975,521.15

Table 6. Cash Flow Analysis at \$30 USD per ton

12.0 Capital and Cost Estimates: Scenario Two- Aggregates

12.1 Capital Cost Estimates

Life-of-Mine (LOM) Project Capital is summarized in Table 7. Initial capital Costs is USD \$4.178 Million.

ITEM	COST (GUY\$)
Plant, Machinery and Equipment	\$600,000,000.00
Mine development expenses	\$50,000,000.00
Building and civil works	\$12,000,000.00
Furniture and Fixtures	\$10,000,000.00
Reclamation & Closure	\$20,000,000.00
TOTAL	\$692,000,000.00
NET INITIAL WORKING CAPITAL	\$173,000,000.00
PROJECT COST	\$865,000,000.00
USD COST	\$4,178,744

Table 7. Initial Capital Cost

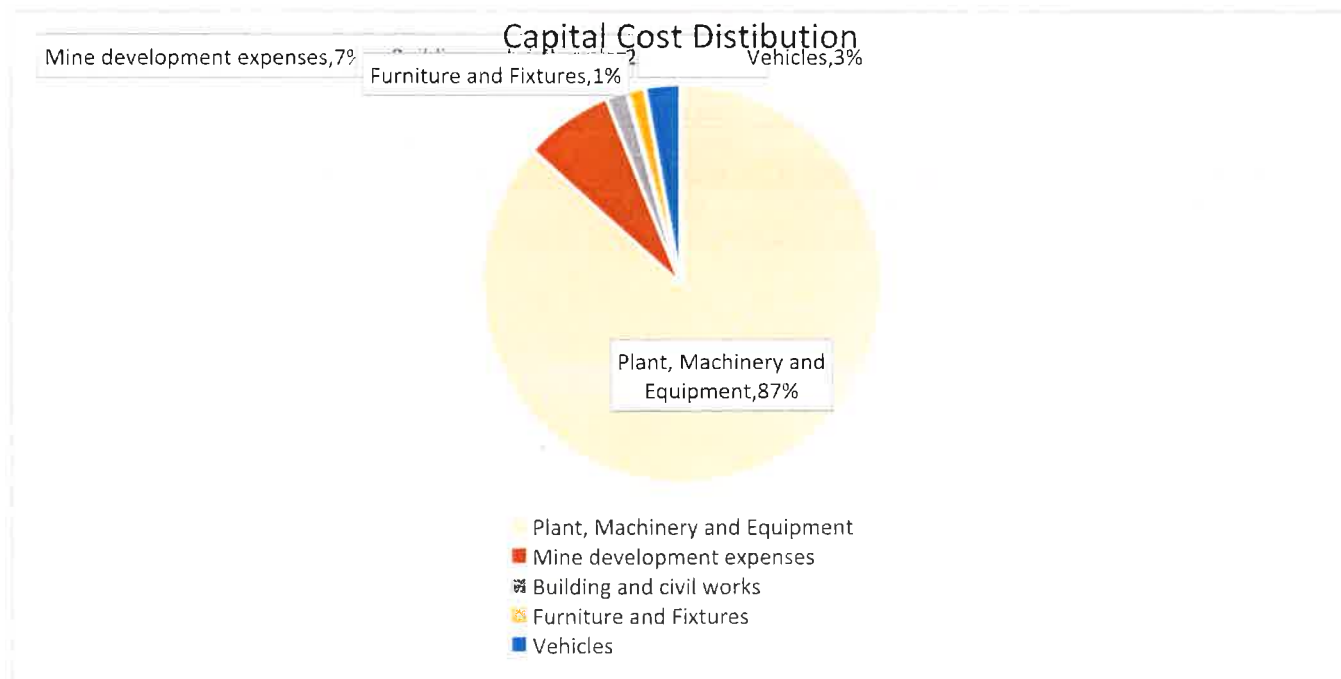


Figure 7. Capital Cost Distribution

12.2 Operating Cost Estimates

LOM operating costs are summarized in Table 8. Operating costs are estimated at USD

15.79 million. Open pit mining will average USD 2.29/ t ore and waste moved. Processing is estimated at USD 1.36/ t ore crushed. G & A costs are estimated at USD 2.33/t ore and waste moved.

Cost Item	LOM Costs \$USD	Unit Cost \$/ton-moved (USD)	Unit Cost \$/ton- crushed (USD)
Open Pit Mining	2,934,870.83	1.92	
Open Pit Drilling & Blasting	2,280,149.24	1.49	
Processing	2,086,008.03		1.36
G & A	7,261,428.57	4.75	
Totals	14,562,456.67	8.15	1.36

Table 8. Operating Cost: Aggregates

Open pit mining costs are estimated for total amount of saprolite, and fresh rock mined. Open pit drilling and blasting costs had to be separated from these costs and applied to total fresh rock mined.

12.3 Financial analysis

Economic Results are summarized in Table 9; the analysis suggests the following conclusions assuming no gearing:

Mine Life: 5 Years

Pre-Tax NPV_{1%}: USD

27,338,343

Post Tax NPV_{1%}: USD

18,595,763

Pay-Back Post Tax: 1 year

Total Taxes Paid: USD \$8,744,580

Peak Funding of Initial Project Capital: USD 16,290,052

	Year 1 (GUY\$)	Year 2(GUY\$)	Year 3 (GUY\$)	Year 4 (GUY\$)	Year 5 (GUY\$)
SALES	\$ 1,800,000,000.00	\$ 1,818,000,000.00	\$ 1,836,180,000.00	\$ 1,854,541,800.00	\$ 1,873,087,218.00
Open pit mining	\$ (235,496,750.31)	\$ (254,580,481.57)	\$ (273,678,957.88)	\$ (292,792,326.71)	\$ (311,920,736.98)
Operating cost	\$ (94,198,700.13)	\$ (101,832,192.63)	\$ (109,471,583.15)	\$ (117,116,930.68)	\$ (124,768,294.79)
GROSS PROFIT	\$ 1,470,304,549.56	\$ 1,461,587,325.81	\$ 1,453,029,458.96	\$ 1,444,632,542.60	\$ 1,436,398,186.23
Administration, Rehabilitation and other expenses	\$ 304,980,000.00	\$ 304,980,000.00	\$ 304,980,000.00	\$ 304,980,000.00	\$ 304,980,000.00
NET PROFIT BEFORE TAX	\$ 1,165,324,549.56	\$ 1,156,607,325.81	\$ 1,148,049,458.96	\$ 1,139,652,542.60	\$ 1,131,418,186.23
Provision for taxation 20%	\$360,000,000.00	\$363,600,000.00	\$367,236,000.00	\$370,908,360.00	\$374,617,443.60
PROFIT / (LOSS) AFTER TAX	\$ 805,324,549.56	\$ 793,007,325.81	\$ 780,813,458.96	\$ 768,744,182.60	\$ 756,800,742.63
USD PROFIT/LOSS After tax	\$ 3,834,878.81	\$ 3,776,225.36	\$ 3,718,159.33	\$ 3,660,686.58	\$ 3,603,813.06

Table 9. Cash Flow Analysis at \$30 USD per ton

13.0 Conclusion

Exploration work was professionally managed, and field procedures generally met accepted guidelines and will be continuously updated with a drilling program. The current production data is a clear indication of the quarry potential in the area. The area is very suited for quarry

operations. They have been found in substantial quantity and numerous outcrops. The Granite has an estimated reserve of 3.78 Million tons of aggregates in the Proposed Project Area. The general objective in planning for the provision of these materials is to ensure that the supply is managed in a sustainable way, so the best balance is obtained between environmental, ecological, economic, human welfare and social considerations.

