ASX ANNOUNCEMENT

By e-lodgement

15 December 2016

PRE-FEASIBILITY STUDY COMPLETED
US$1.31 BILLION PRE-TAX NPV
PAYBACK 1.4 YEARS

HIGHLIGHTS

- **PFS concludes robust technical and financial viability of the Namangale Project, delivering high quality, large flake, high TGC product**
- **Pre tax NPV of US$1.31B, 87% IRR and pay-back of 1.4 years based on 22-year mine life.**
- **JORC Mineral Resource Estimate update of 461Mt @ 4.9% TGC**
- **Maiden JORC Ore Reserve of 127Mt @ 4.4% TGC**
- **Forecast annual production of 170kt/y of graphite concentrate, with non-binding MOUs for 100kt/y from three China based end-users**
- **Blended basket price of US$1,684/t against US$536/t OPEX (FOB Mtwara), translates to average annual US$195M EBITDA**
- **Relatively low US$173M CAPEX for Project development, due to Namangale's close proximity to infrastructure and sealed roads to Mtwara port**
- **Volt's Board endorses the Project Consultant's recommendation to immediately progress the Namangale Project and undertake a Definitive Feasibility Study ("DFS") in 2017, paving the way for finalising off-take agreements and project finance**
- **DFS will target additional high quality large flake size graphite from Namangale South**

SUMMARY

Volt Resources Limited's (ASX: VRC) ("Volt" or the "Company") is delighted to announce the release of its Pre-Feasibility Study ("PFS") which confirms strong technical and financial viability of the Namangale Project in south-east Tanzania, with an 87% IRR and pre-tax NPV of US$1.31B.

This is based on 3.8Mt of ore being processed annually at an average 4.7% TGC, with a 1.4 waste-to-ore ratio to produce 170kt/y of graphite over a 22-year mine life. The proportions of the resource underpinning the production target in this announcement are 10% Measured, 61% Indicated and 29% comes from Inferred Mineral Resource. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that production target itself will be realised. However, in preparation of the production target and associated NPV each of the modifying factors was considered, and has therefore passed the economic test.

Other key conclusions from the PFS include:

- Two products will be produced with Namangale South producing a premium quality larger flake.
- Annual OPEX is estimated at US$93M which equates to LOM average of US$536/t (FOB Mtwara), which translates to annual US$195M EBITDA.
- Total initial CAPEX for the processing plant and all other required infrastructure requirements such as road upgrades and port warehousing are estimated at US$173M; this is relatively low due to Namangale's close proximity to critical existing infrastructure.
- Project-specific risks such as staffing, securing offtake agreements/finance and finalising access to an adequate water source will be mitigated as the project progresses.

Consultants, BatteryLimits, which project managed and authored the PFS, made the following recommendations to Volt's Board:

- The Namangale Project's business case is commercially and technically viable, and warrants Volt proceeding with a Definitive Feasibility Study (DFS).
- Additional focus during the DFS phase to be on environmental and community work leading to approvals that will facilitate the Namangale Project moving forward.
- Continue drilling at Namangale North and South, to achieve the following:
    - increase the confidence level of resource & reserve to support DFS level planning; and
    - increase resource size for coarse-flake ore.
- Progress generating bulk samples of graphite concentrate for intensive downstream processing testwork and to generate marketing samples.
- Maintain and expand the current intensive product marketing program including a heightened focus to convert the MOUs for product sale into binding offtake agreements.
- Opportunities for project improvement and de-risking to be continuously reviewed for further investigation and optimisation.

KEY PRE-FEASIBILITY STUDY ASSUMPTIONS AND FINDINGS

Financially robust project

The PFS represents a combination of inputs from numerous sources and is a holistic view of the Namangale Project's commercial viability. The base case production profile and price assumptions deliver an attractive prospective financial performance (Table 1).

Table 1: Key project financial parameters

Key Financial Parameters	Units	Metric
IRR - before tax	(%, real)	86.9%
IRR - after tax	(%, real)	66.5%
NPV @ 10.0% - before tax	(US$ M, real)	1,310
NPV @ 10.0% - after tax	(US$ M, real)	890
Payback Period from 1st ore to process plant	(years)	1.4

Based on this analysis, it is readily apparent the Namangale Project should continue to be developed and a DFS undertaken. Note, refer to the Appendix for greater detail on the project's background.

The project's key parameters are detailed in Table 2. The main highlights include a 22-year mine life, annual throughput of 3.8Mt @ 4.7% TGC resulting in annualised production of 170kt/y of graphite concentrate.

Table 2: Nominal key project parameters

Parameter	Units	Design
Mine Life	Y	22
Nominal ore feed tonnes	Mt	83.4
Average grade TGC	%	4.7
Oxide ore	%	40
Fresh and transition ore	%	60
Nominal strip ratio	Waste : Ore	1.4
Process throughput	Mt/y	3.8
Recovery	%	93
Concentrate grade TGC (average)	%	95
Average graphite production	kt/y	170

Ore Reserve Classification

Ore reserves at the Namangale Project are derived from Measured and Indicated Resources. . Ore Reserves have had all appropriate environmental & economical exclusions applied.The Mineral Resource estimate is inclusive of the Ore Reserves. (refer to Tables 3 & 4)

Material Assumptions for Key Project Parameters

The Namangale Project is a greenfield project and has been examined to a Prefeasibility Study (PFS) level completing the study in December 2016.

All mining assessments in this report include economic ore material from all mineral resource classifications, Measured, Indicated and Inferred. The sources of economic material within the pits includes 10% from Measured, 61% from Indicated and 29% from Inferred mineral resources.

The economic pit designs has been estimated at 83.4 Mt @ 4.7% TGC at a LOM waste to ore ratio of 1.4. This equates to providing a 22 year mine life. Volt's strategy to develop the Project will be to initially develop the oxide ore at Namangale North and Namnagale South's Nam 2, which can be cost-effectively mined at lower strip ratios, and to then develop the transition and fresh ore zones. To extract early value from the coarse-flake ore at Namangale South, ore feed to the plant will be 50/50 Namangale South / Namangale North from the start, until Namangale South is exhausted. Namangale South ore will be initially supplied from Namangale 2, and when that is exhausted, Namangale 3, for a total of 8 years.

Volt will operate the processing and power plant, and manage a mining contractor, product fleet transport and logistics functions.

Mining Method

The ore zones at Namangale are relatively wide, tabular deposits which are favourable for mining as dilution will be low and this dilution is likely to carry economic graphite material. Dilution and recovery of the ore zone were estimated at 5% and 95% respectively. Therefore the Namangale deposits are suited to conventional open pit mining methods, of drill & blast, load & haul. Separate fleets will be used for Namangale North and South due to the distance between the mining areas.

Based on the material movement volumes, each pit could be mined using a small fleet of machinery on a 24/7 operation. A 120-tonne excavator and 100 tonne payload trucks could move around 15 to 17,000 tonnes per day which would be sufficient to meet the requirements of the schedule.
At Namangale North, an option would be to run a similar sized excavator and a fleet of 50 tonne articulated trucks. Whilst these have a slightly higher running cost per tonne, they have the flexibility of being used for waste placement to build infrastructure such as the tailings dam if these activities happen concurrently with mining.

Pells Sullivan Meynink (PSM) undertook the pre-feasibility geotechnical assessment. The proposed inter-ramp angles (IRA) were 36 degrees for oxidised material and 49 degrees for fresh transitional and fresh rock material. As PSM proposed an IRA only, these angles were reduced slightly to allow for the effect of pit ramps in the optimisation process.

A ROM pad would be established at each open pit location near the pit exits. For operations at Namangale South for each of Namangale 2 and Namangale 3, the ore material would then be re-handled into road trucks and transported to the processing facility at Namangale North.
At Namangale 1, the ROM pad would be built adjacent to the processing facility, the open pit haul trucks would haul directly from the pit to the ROM Pad, where the material would be re-handled by front end loader into the crusher. The ROM pad at Namangale 1 will need to be of sufficient size to handle ROM ore from Namangale 1 as well as that trucked from Namangale South.

At each location, small stockpiles of ore material would need to be established to allow for any delays in either road haulage to the processing facility or any delays in the open pit mining operations.

Waste dumps have been designed to hold all waste rock material within the pit designs. The waste dumps are designed, as a final landform with an overall slope angle of 20 degree, with height to nominally not exceed 50m and thereby tie in with the natural landforms as much as possible

The conventional open cut mining operation is planned to be undertaken by a mining contractor. An experienced mining contractor will be utilised to undertake the mining operation and associated activities and the ore will be hauled to a ROM pad at the processing plant and waste will be stored in waste dumps at the mine.

The pit optimisation, mine design and scheduling was undertaken by Optiro Mining Consultants. The optimisation runs costed trucking Namangale South economic material to a processing facility at Namangale North. Mining costs were sourced from Optiro's internal database based on recently obtained budget contractor costs sourced for similar sized operations.

Ore Processing

BatteryLimits has undertaken metallurgical test work and created a process flow sheet, pre-feasibility level processing plant design and associated capital and operating costs. The processing recoveries and costs from the BatteryLimits work has been utilised in the pit optimisations.

The processing will be by well-proven crushing, grinding and flotation methods. Ore will be fed to the processing plant at a nominal rate of 3.8 Mt/y to produce a nominal LOM average 170 kt/y graphite concentrate averaging 95% TGC at a nominal 93% recovery. The plant design and equipment selection has been based on metallurgical testwork from the diamond drill core samples, testpits and orebody composite samples. The product will be filtered, dried, and bagged onto 1t bulka bags and then trucked approximately 150 km to the port at Mtwara in south east Tanzania for shipping to market. Tailings will be stored in a nearby tailings dam at Namangale North on the mining lease.

The ore processing facility will be a fit-for-purpose plant that can process oxide, transition and fresh ore.

Cut-off Grade

The cut-off grade for each pit is the processing cut-off grade, thus material is treated as ore if the recovered revenue exceeds the processing cost. This calculation excludes mining costs as these are already sunk when the decision is made to process or place material on the waste dump.

Ore material is selected based on a processing cut-off which varies by deposit (different product specifications dictate different financial parameters and distance from the mill dictate varying trucking costs, both of which alter cut-off grade), the processing cut-off grade is:

- 1.29% TGC for Namangale 1,
- 1.52% TGC for Namangale 2,
- 1.76% TGC for Namangale 3.

Estimation Methodology

The PFS as reported in this report uses material within the ore deposits from all three Mineral Resource categories (measured, Indicated and Inferred) that are optimised above the true economic cut-off grade in the optimisation, design, scheduling and financial evaluation of each ore deposit identified within the PFS.

Basket prices that could be realised for the three different deposits, were based on pricing data from benchmarking on the estimated revenue for each flake size (supplied by Volt) and the flake size distribution data based on metallurgical test work.

The calculated average basket prices for the purpose of pit optimisations were:

- $1,260 per tonne of concentrate from Namangale 1
- $1,800 per tonne of concentrate from Namangale 2
- $1,630 per tonne of concentrate from Namangale 3.

Material Modifying Factors

The mine schedule strategy from the pit optimisations primary objectives were to achieve the desired nominal 3.8 Mt/y of mill feed, and thereby achieve a nominal 170 kt/y of saleable graphite product, with a smooth overall material movement as much as possible to keep stripping ratio managed. Four schedule scenarios were examined. An assessment of the most suitable schedule was made based on financial metrics, (NPV, IRR and payback period), and the desire to make the largest flake product in the early years of the project, resulting in the schedule that mines both Namangale North and South concurrent from the commencement of operations.

No significant infrastructure currently exists at the project site. The infrastructure required was designed and costed by BatteryLimits Pty Ltd as part of the PFS and these assumptions remain valid. Current regional infrastructure is essentially limited to the national highway that runs through the Namangale leases to Mtwara and the deep water port at Mtwara. All CAPEX and OPEX estimates have been coordinated by BatteryLimits on this basis and the financial modelling undertaken by Modulus Capital Pty Ltd.

A Scoping level Environmental and Social Impact Assessment (ESIA) has been undertaken with the main aim of establishing the terms of reference for a full ESIA to be undertaken. This will enable the granting of mining licences to be applied for following the completion of the prefeasibility study, consideration will be given to both Mining Licence and Special Mining Licence application processes. To date, no fatal flaws that could potentially cause significant delay or cost to environmental approval have been identified.

Largest JORC compliant resource in Tanzania

Volt recently completed a JORC Compliant Mineral Resource Estimate for the project of 461Mt @ 4.9% TGC (Table 3) which updates the 446Mt @ 5.01% TGC announced on 12 Oct 2016. The update resulted from lowering the resource cutoff grade to more closely reflect the economic cut off grade at Namanagle South. Management believes this is the largest in Tanzania among peers. The updated Mineral Resource Estimate was completed by ROM Resources in accordance with the guidelines of the JORC Code (2012 edition). Note, the Mineral Resource Estimate appropriately reflects the view of the competent persons from Volt and ROM Resources.

Table 3: JORC resource estimate for Namangale project

Namangale Project	Mt	TGC (%)
Inferred		
North	264	5.0
South	23	3.6
Total Inferred	**286**	**4.9**
Indicated		
North	122	5.2
South	33	4.3
Total Indicated	**155**	**5.0**
Measured		
North	**20**	**5.3**
Total Resource	**461**	**4.9**
Note: Namangale North previously Nam 1; and Namangale South previously Nam 2 & 3 The Mineral Resource is inclusive of the Ore Reserve		

Ore Reserve

The Ore Reserve for the Namangale Project is stated in Table 4.

Table 4: Namangale Project Ore Reserve Statement as at December 2016

Ore Reserve Classification	Ore (Mt)	TGC (%)	Contained Graphite (Mt)
Proved			
Namangale 1 (North)	19.3	4.32	0.8
Namangale 2 (South)	-	-	-
Namangale 3 (South)	-	-	-
Subtotal – Proved	**19.3**	**4.32**	**0.8**
Probable			
Namangale 1 (North)	95.8	4.40	4.2
Namangale 2 (South)	6.4	5.11	0.3
Namangale 3 (South)	5.8	3.05	0.2
Subtotal - Probable	**108.1**	**4.37**	**4.7**
Total Ore Reserve	**127.4**	**4.36**	**5.6**
Note: Namangale North previously Nam 1; and Namangale South previously Nam 2 & 3			

Notes accompanying the Ore Reserve Statement:

1. *The Ore Reserves are based on a processing cut-off which varies by deposit (different product specifications dictate different financial parameters and distance from the mill dictate varying trucking costs, both of which alter cut-off grade), the processing cut-off grade is:*

    - *1.29% TGC for Namangale 1,*
    - *1.52% TGC for Namangale 2,*
    - *1.76% TGC for Namangale 3.*

2. *It should be noted that the Ore Reserve process has demonstrated that the cut-off grade for economic material is significantly lower than the cut-off grades used in reporting the Mineral Resource. As such there is material, (in the measured and Indicated Mineral Resource categories) that is in the Ore Reserve that has the appropriate geological confidence to be reported as such, that is not included in the numbers tabulated for the public release of the Mineral Resource dated 12th October 2016.*

3. *The Ore Reserves optimisations are based upon average basket prices of (different product specifications dictate different financial parameters):*

    - *$US 1,259 per tonne of Graphite concentrate for Namangale 1,*
    - *$US 1,800 per tonne of Graphite concentrate for Namangale 2,*
    - *$US 1,631 per tonne of Graphite concentrate for Namangale 3,*

    Slight variations of this price structure exist in the financial analysis due to a different forward estimate of graphite pricing. This however is not considered material nor expected to yield a different outcome. This material would still be considered for the purposes of an Ore Reserve at either revenue estimate.

Basket price

Volt will produce a nominal 170kt/y of natural flake graphite concentrate, consisting of two products, with Namangale South producing a premium quality larger flake. The blended basket price has been calculated at US$1,684/t, based on the weighted average of Namangale North (previously Nam 1) and South (previously Nam 2 and 3) that is shown in Table 5.

Table 5: Flake distribution and basket prices for Namangale North and South deposits

Size		Namangale 1		Namangale 2		Namangale 3	
		Weight	Price*	Weight	Price*	Weight	Price*
(µm)	Label	(%)	US$/tonne	%	US$/t	(%)	US$/tonne
+500	Super Jumbo	1	3,968	9	3,968	5	3,968
300	Jumbo	13	3,220	29	3,220	26	3,220
180	Large	29	2,070	29	2,070	30	2,070
150	Medium	12	1,389	8	1,389	10	1,389
75	Small	27	1077	16	1077	19	1077
-75	Fine	18	403	9	403	11	403
Total			**1,594**		**2,205**		**2,032**

*Source: Pricing based on BMI, IMR, Macquarie Investments and discussion with end-users

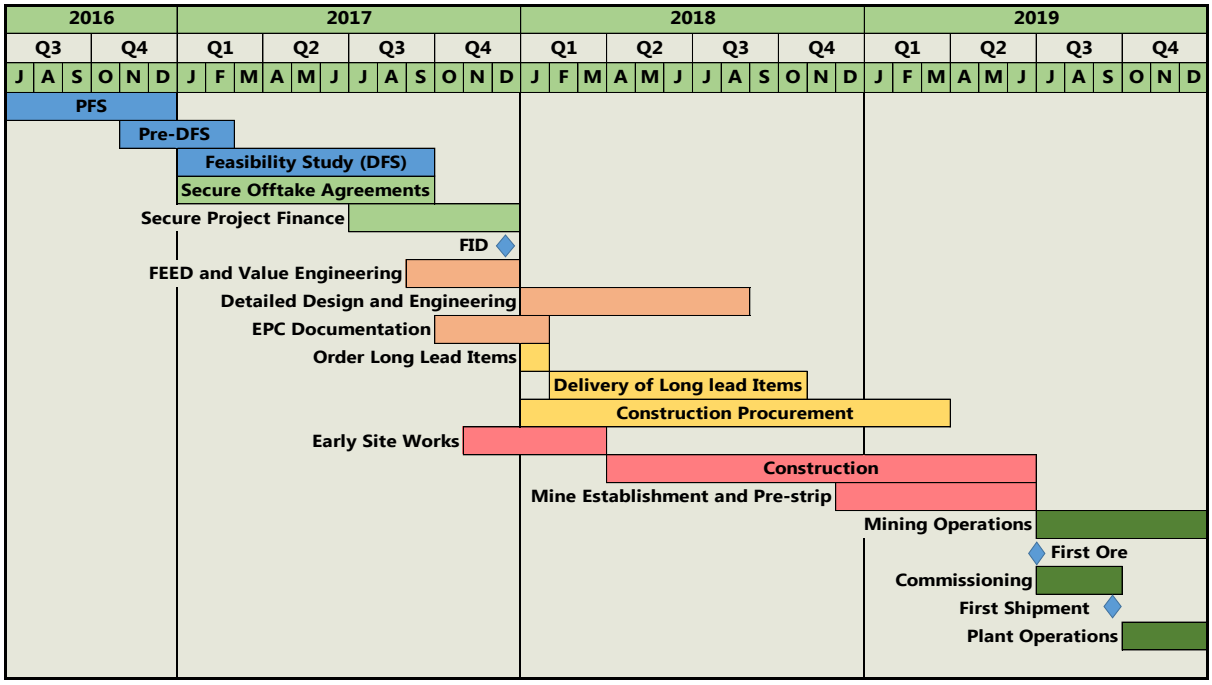
Securing off-take agreements is a key risk to developing the project. However, management have had extensive engagement with end users, traders and intermediaries across China, Japan, Korea, Europe and North America. Of these, China is a critically important market with three MOUs signed with end-users for the potential sale of graphite concentrate totaling 100kt/y. Going forward, a key priority will be converting these to binding off-take agreements. For the North American and European markets, Volt's in-house marketing expertise has been bolstered with the appointment of an advanced materials specialist as Vice President Business Development based in New York.

Implementation schedule

Volt has adopted a seamless approach to its study stages that accommodates change through the PFS and into the DFS work flow. This form of project management reduces the development schedule as there is less 'gating' to pass through; however, it may involve more risk that is ultimately mitigated during execution phase.

On completion of the DFS, the project implementation plan will be developed to provide certainty of strategy and design. Further, this will aim to ensure the project is delivered to schedule and the ramp up capacity to full production is achieved in an efficient and productive timeframe (Figure 1).

Figure 1: Project implementation schedule



Capital and operating cost estimate breakdown

The capital and operating cost estimates have been prepared to an accuracy of ±25%. To build the processing facility and supporting infrastructure to VRC's specifications, the capital cost is estimated at US$173M (Table 6), which is relatively low due to the Namangale project's close proximity to infrastructure and sealed roads to Mtwara port.

Table 6: Capital cost estimate summary

Description	Capital Cost (US$M)	% of TOTAL
Process Plant	65	37
Power	19	11
Water	11	6
Site Infrastructure	24.5	15
Indirect Costs	31	18
Contingency	22.5	13
TOTAL	173	100
Note: Excludes sustaining sustainable capex		

Based on assessing fixed and variable cost elements for producing 170kt/y of graphite flake concentrate, the operating cost estimate is US$536/t over the mine life (Table 7).

Table 7: Operating cost estimate summary

Annual Operating Costs	Total US$'000/y	Total Cost %	Feed US$/t	Product US$/t
Technical Services and Mining	42,100	45%	11.2	243
Processing	31,500	34%	8.37	182
Total General & Administration	6,000	7%	1.58	34
Product Logistics	13,300	14%	3.35	77
Total	**92,900**	**100%**	**24.7**	**536**

Executive Chairman, Stephen Hunt commented: "Volt has a very robust project. The task from here is to focus on our high quality product and to fast-track into production. Leveraging off incoming CEO Trevor Matthews' extensive experience in project development ensures we are well positioned to achieve our corporate objectives."

For and on behalf of Volt Resources Limited

Stephen Hunt
Volt Resources Limited
Executive Chairman

Disclosure
The Company confirms that it is not aware of any new information or data that materially affects the information included in this document and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Competent Person's Statement
The information in this report that relates to Exploration Targets, Exploration Results is based on information compiled by Mr Matt Bull, a Competent Person who is a member of Australian Institute of Geoscientists. Mr Bull is a Director of Volt Resources. Mr Bull has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Matt Bull consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Mark Biggs, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mark Biggs is a Director of ROM Resources Pty Ltd. Mark Biggs has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mark Biggs consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

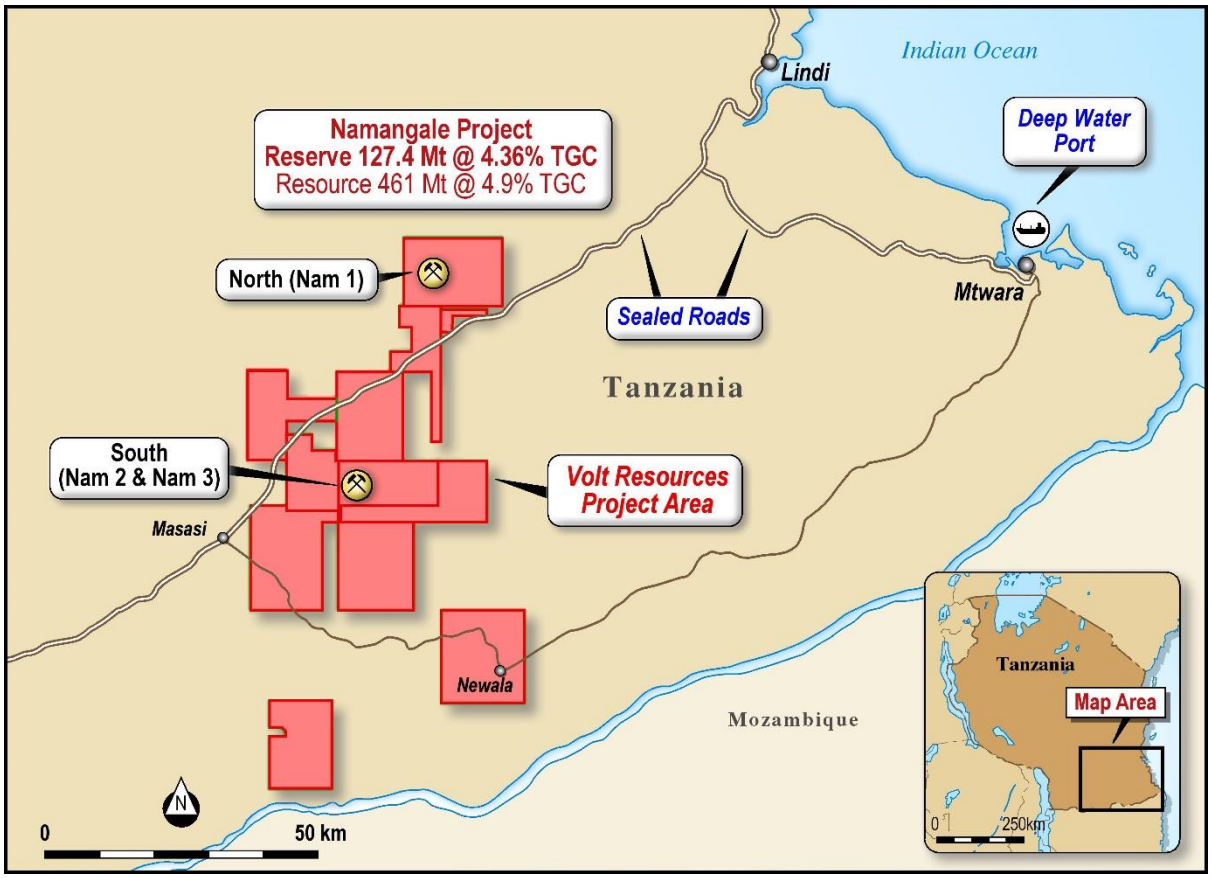
The information in this report that relates to Ore Reserves is based on information compiled by Mr Andrew Law, a Competent Person who is a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy. Mr Law is a Director of Optiro. Mr Law has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves'. Mr Law consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix A: Project description and philosophy

Background and process

This PFS reviews Volt Resources mining and processing plant to produce coarse flake graphite from its 100%-owned Namangale Project located south east Tanzania (Figure A).

Figure A: Location map for the Namangale graphite Project



The total resource (Measured, Indicated and Inferred) of 461Mt at 4.9% TGC has been estimated to JORC 2012 reporting guidelines for the combined Namangale North (Nam 1) and Namangale South (Nam 2 and 3) resource. Volt's initial resource at Namangale North & South was based on: 82 RC holes and 4,472m drilled; 10 DD holes and 535m drilled in 2015. This has been expanded substantially in 2016 (Table A).

Table A: Drilling program for 2016

Deposit	RC		DD		Total	
Nam North	15	1,776m	15	1,385m	30	3,161m
Nam South	43	4,183m	7	447m	50	4,631m
Total	58	5,959m	22	1,832m	80	7,791m

Figures B and C show layouts of the Namangale North and Namangale South areas, and Figures D, E, and F give typical cross sections through the Namangale 1, 2 and 3 deposits highlighting the continuity between the mineralised units.

Figure B: Namangale North Project Layout

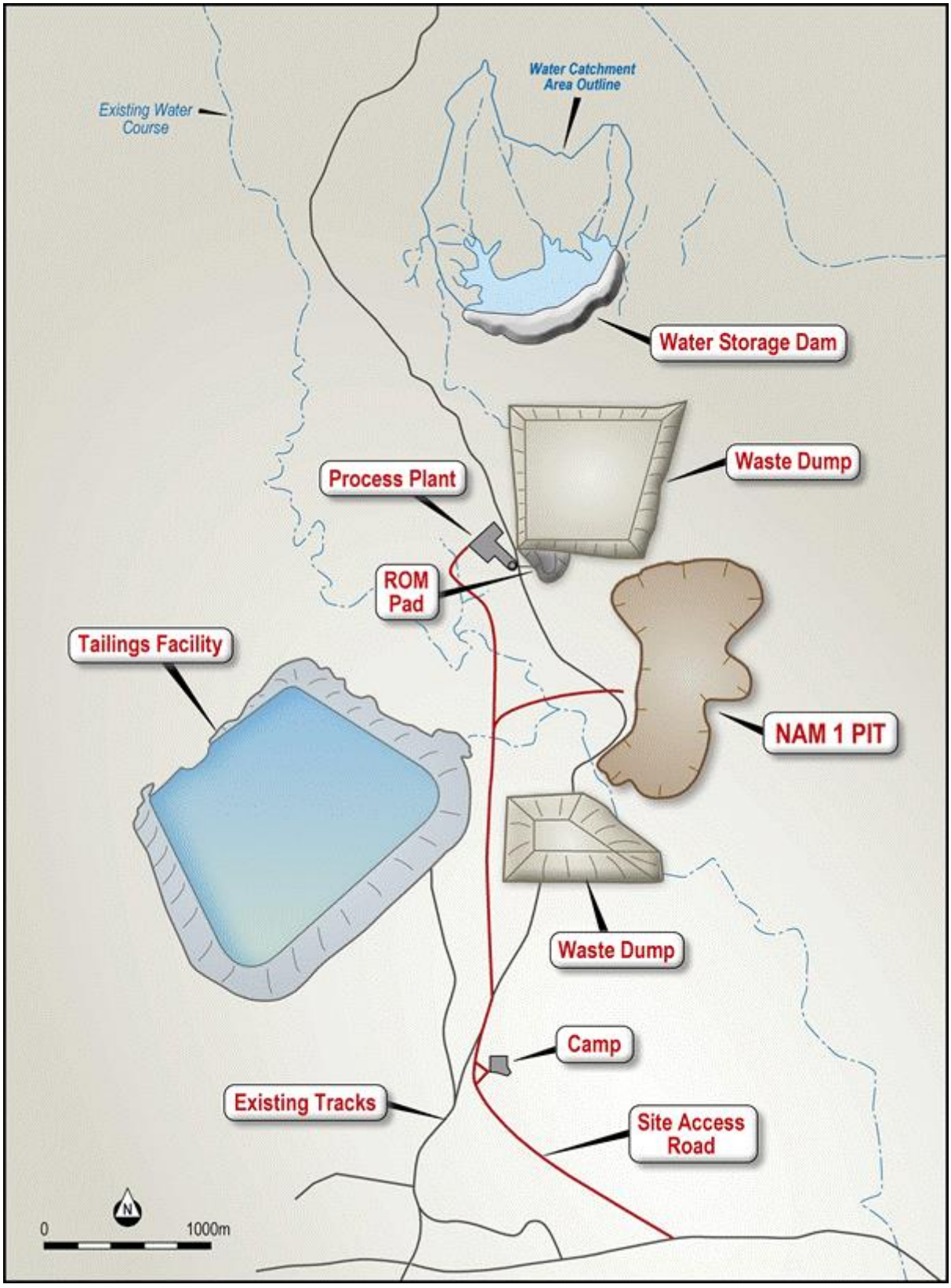
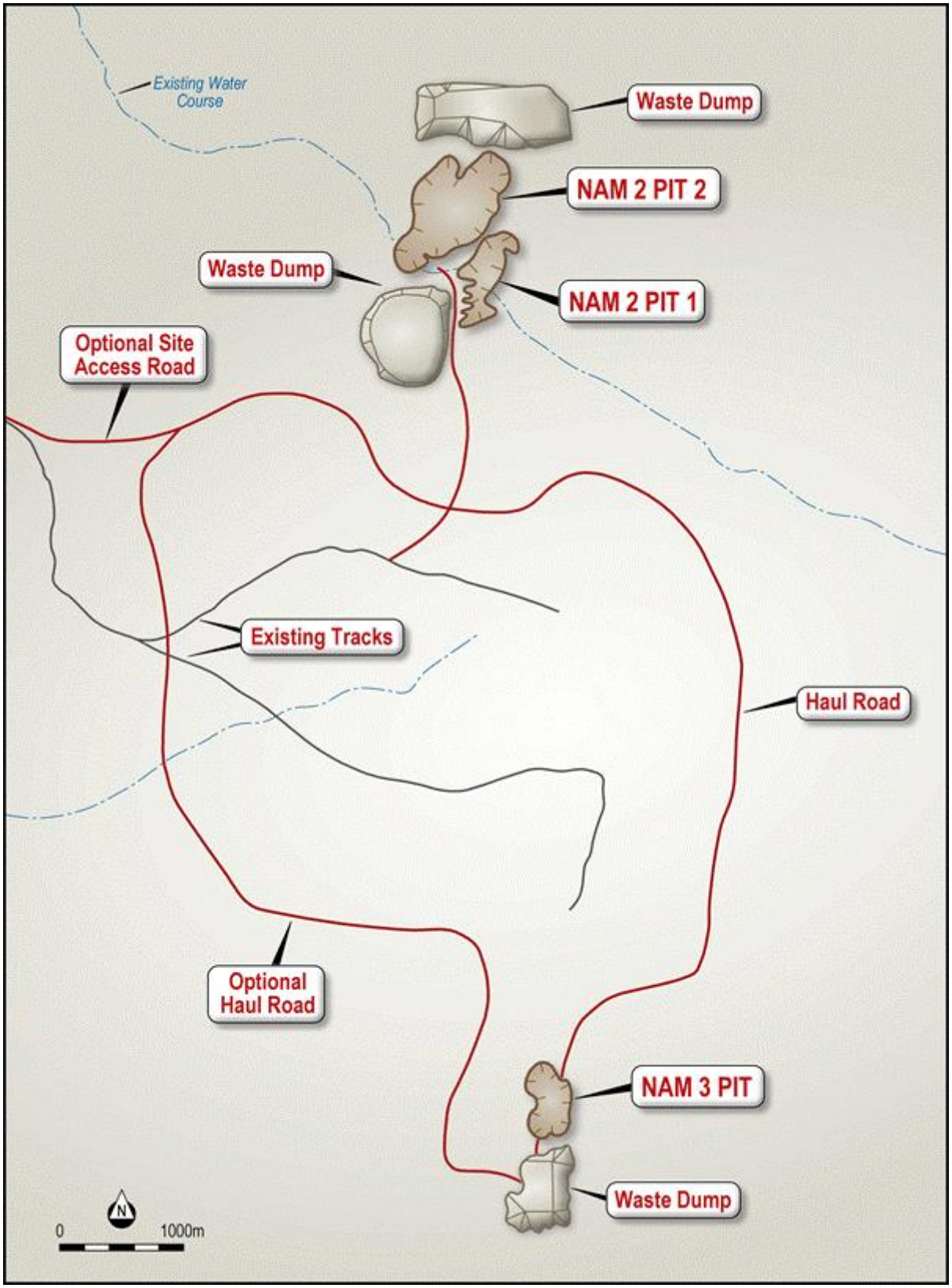
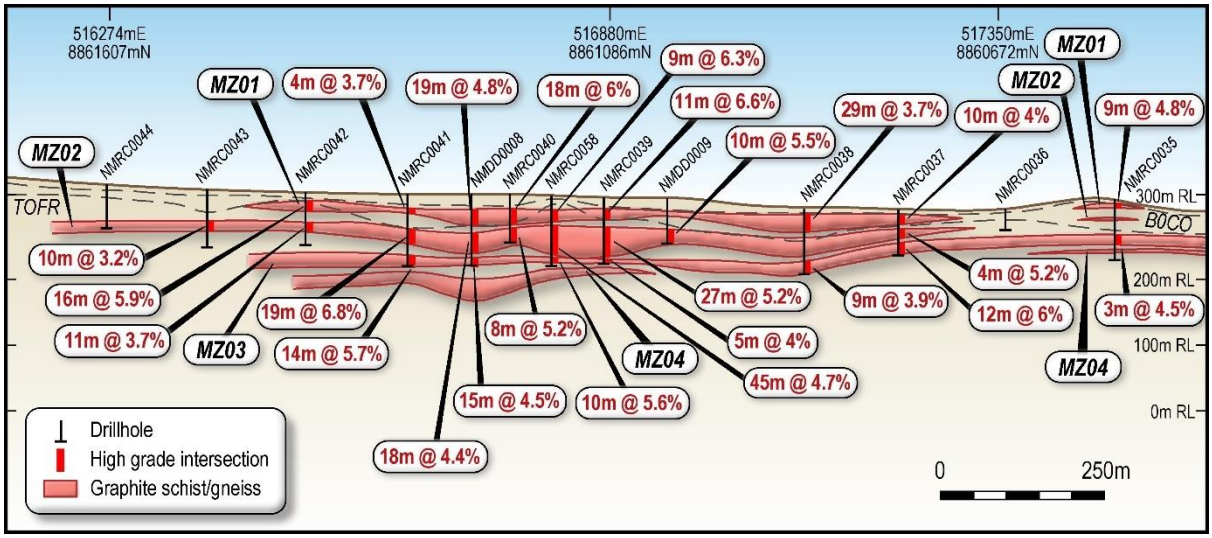
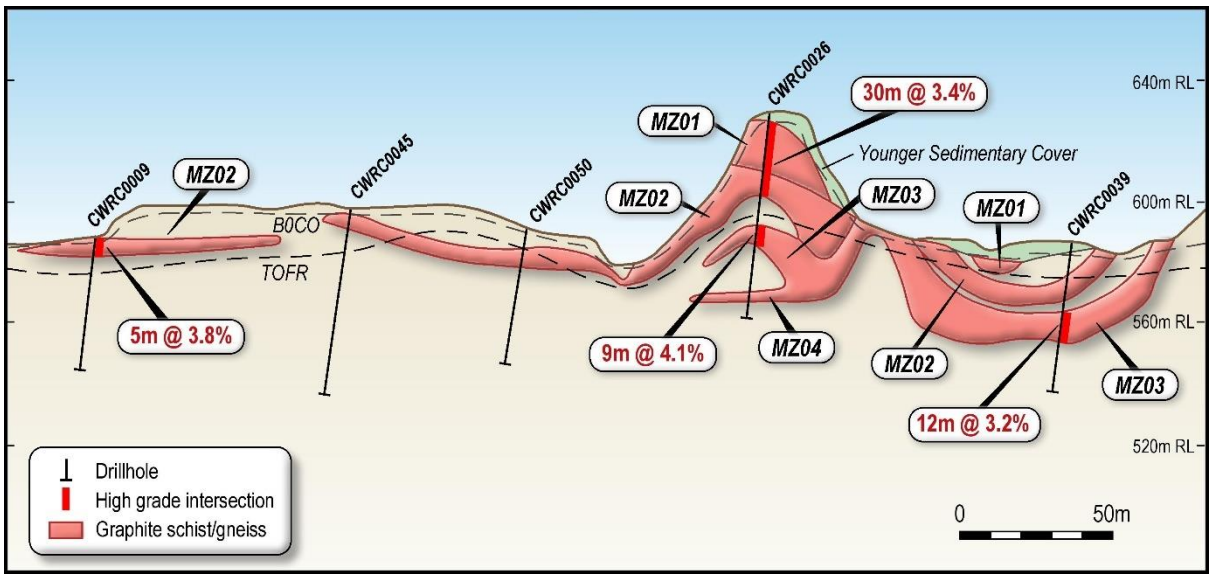


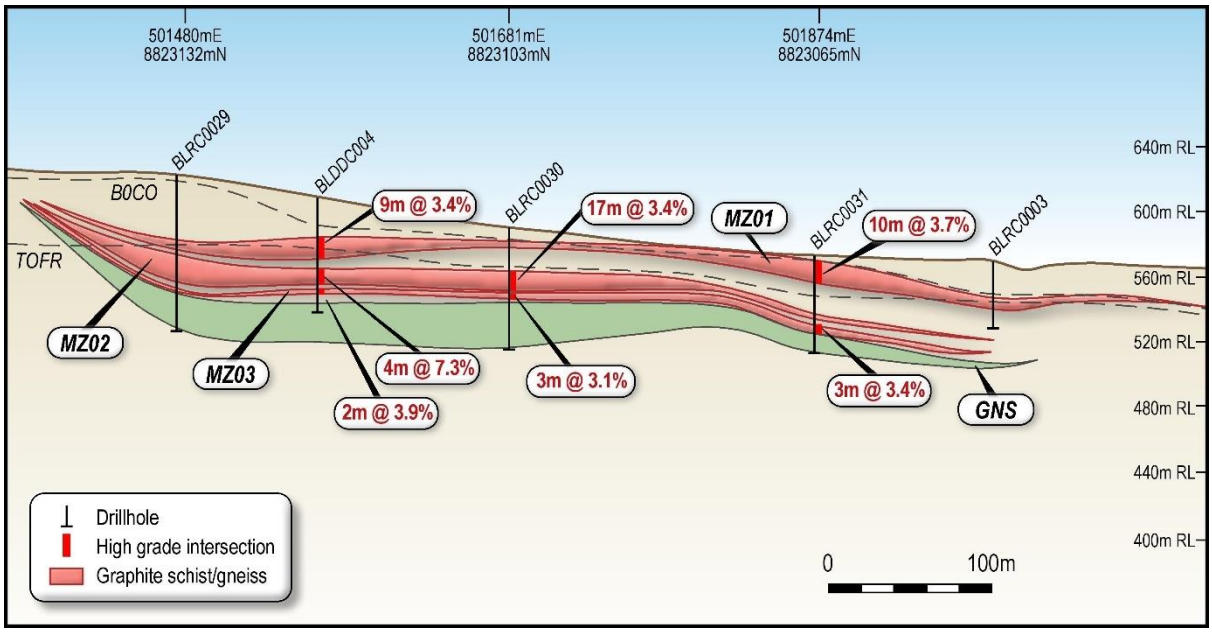
Figure C: Namangale South Project Layout



Figures D, E & F: Cross sections through Nam North and South deposits showing typical mineralised units and general topography

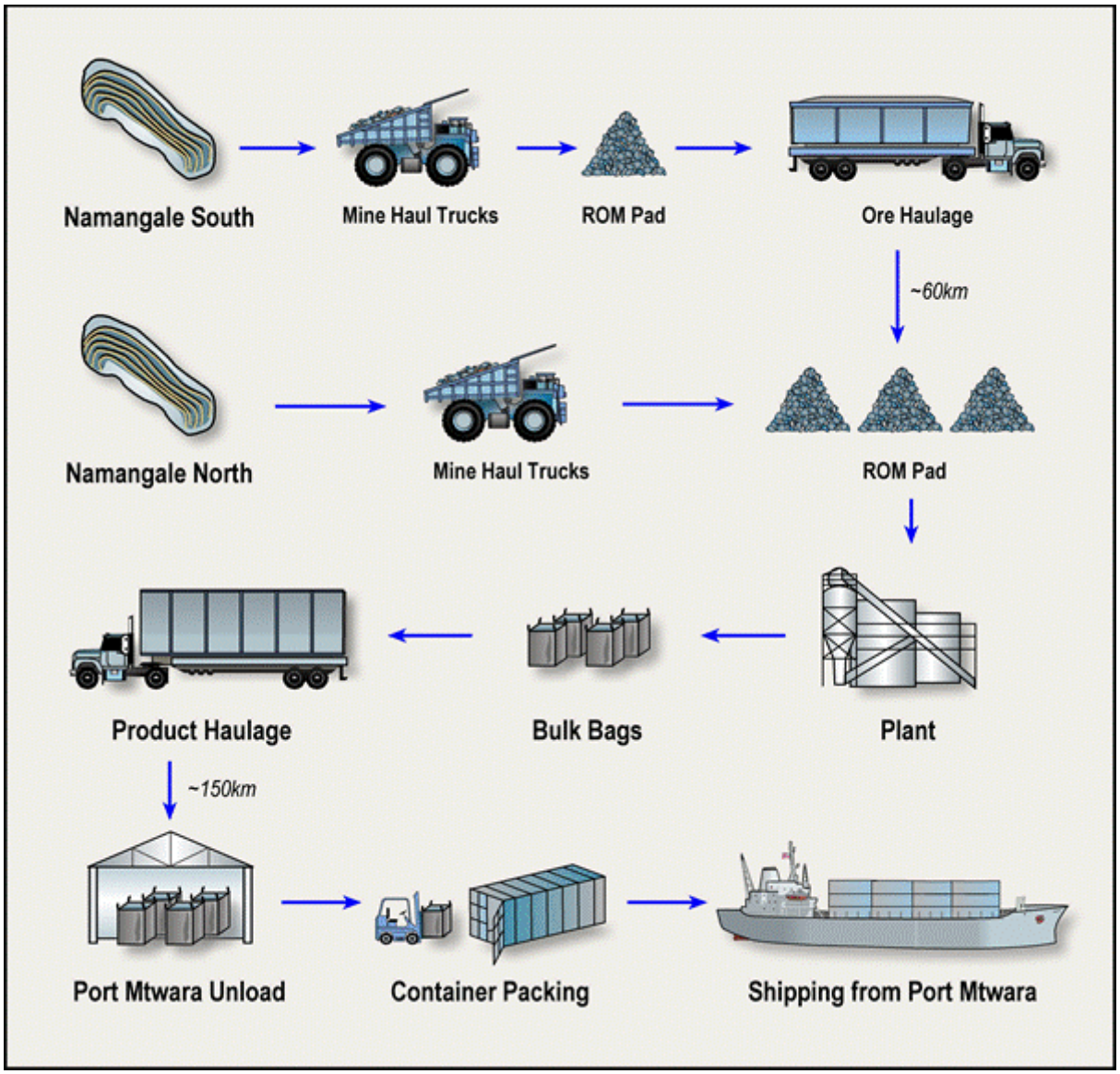






Mining will be by conventional open cut techniques undertaken by a contractor. Ore will be hauled to a ROM pad at the processing plant and waste will be stored in dumps at the mines (Figure G).

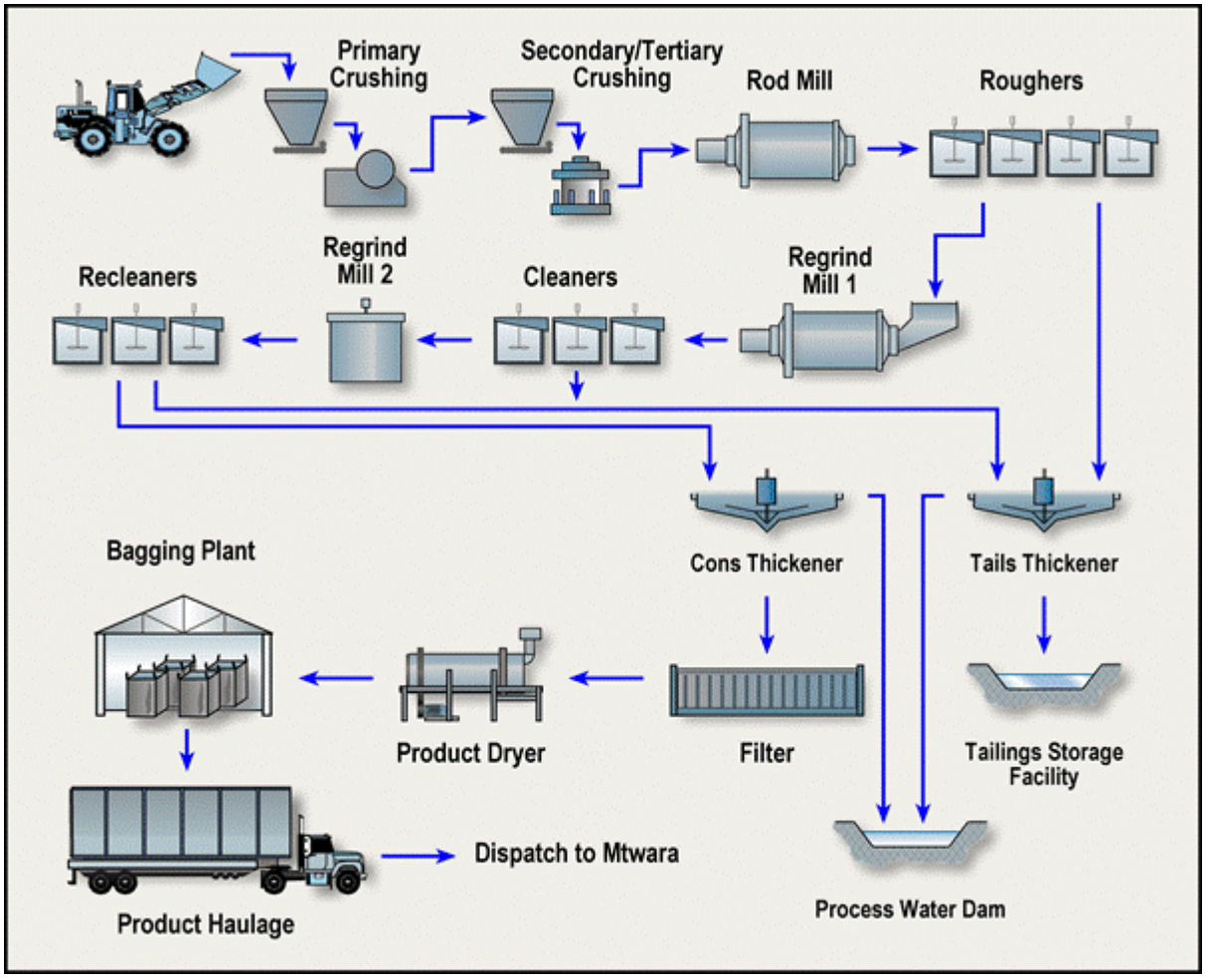
Figure G: Outline of ore movement from pit to market



Processing will be by well-proven crushing, grinding and flotation methods (Figure H). Ore will be fed to the processing plant at a nominal rate of 3.8Mt/y to produce a nominal life of mine average 170kt/y graphite concentrate at a nominal 93% recovery rate averaging 95% TGC. The product will be filtered, dried, and bagged then trucked circa 150km to the port at Mtwara in south east Tanzania for shipping to market. Tailings will be stored in a nearby tailings dam on the mining lease.

The processing facility will be a fit-for-purpose plant that can process oxide, transition and fresh ore. Volt will operate the processing and power plant, and manage a mining contractor, product fleet transport and logistics functions.

Figure H: Outline of ore processing to produce final graphite concentrate



Regulatory

The prospecting licences for the Namangale Projectwere granted in 2015/16 and remain valid until 2019/20. Under the Tanzanian Mining Act (2010), which is administered by the Ministry of Energy & Minerals, a Mining Licence (ML) or Special Mining Licence (SML) may be issued after the applicant has submitted:

- a feasibility report;
- an environmental certificate after approval of an Environmental and Social Impact Assessment (ESIA);
- an Environmental Management Plan (EMP);
- plans for local procurement of goods and services; and
- plans for the employment and training of Tanzanians.

Environment, Social and Community Resources

The project has been registered with the Tanzanian government and a Rapid Social and Environmental Assessment Report (RAR) for the Namangale graphite project has been conducted, with the objective being to form a basis for developing Terms of Reference for the ESIA. The RAR was prepared and submitted in early December 2016. This will assist Volt in developing an effective environmental monitoring program.

During the ESIA, an EMP will be prepared to identify impacts of the project, and develop management plans to mitigate their effects. The plan will address impacts including relating to process plant location, dust suppression, water supply, recycle and management, waste management, sewage disposal and drainage systems, and weed management.

Further, the ESIA will address social issues including a comprehensive stakeholder engagement program. This includes national and local stakeholders, mine workers, and local community issues such as physical and economic displacement, the expected population influx, community health and safety, and cultural heritage impacts.

Under the prospecting licences granted for the Namangale project, there will be a training program that ensures on-the-job training and employment opportunities for Tanzanian citizens. Where an expatriate is employed, a localisation program will be developed to ensure a smooth transition to local employment. All expatriates will require a working permit.

APPENDIX B: JORC CODE, 2012 EDITION – Table 1 – NAMANGALE NORTH AND SOUTH DEPOSITS

Section 1: Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	• Sampling was carried out using RC Drilling using 1m sample intervals. The full 1m interval was collected, weighed then riffle spilt into samples weighing approximately 1.5kg. • All samples were geologically logged by a suitably qualified geologist and mineralized intercepts selected for assay at SGS in Johannesburg South Africa, and ALS Laboratories in Brisbane Australia. • For the diamond core drill holes sampling was carried out by cutting HQ diamond core into quarters with 1m intervals sent for assay. Assay data from the diamond drill core was incorporated into the Resource model. From the remaining core composites were then selected based on both the lithology as logged by a suitably qualified geologist and the with assay results from the 1m intervals. These composites select were used for metallurgical test work.
Drilling techniques	• RC Drilling is being conducted by JCIL Drill and Coreworthy Drilling. Bit diameter was 4.5 inches (114mm) face sampling bit. • Diamond Drilling was conducted by JCIL drill using HQ core diameter triple tube (63mm).
Drill sample recovery	• RC recovery was recorded by weighing the recovered sample before splitting. Sample size was recorded in the company database and found to be consistent. • Diamond drill recovery was excellent (>90%) and is therefore not expected to influence grade.
Logging	• Logging was carried out on each of the samples including lithology, degree of weathering by a suitably qualified geologist. • Data is initially recorded on paper logging sheets and is then transferred to Excel logging sheets. • Logging is semi-quantitative based on visual estimation.
Sub-sampling techniques and sample preparation	• RC samples were taken at 1m intervals and then split into 1.5kg samples with a reference sample also taken. • All RC intervals were geologically logged and mineralised intervals selected for sampling at SGS in Johannesburg or ALS in Brisbane. • For the diamond core, the quarter core was cut into 1m sections before being assayed at ALS in Brisbane. • Duplicate samples were taken at a ratio of 1 in 20 by retaining the final riffle split. • QC measures also include blank samples and certified standards both of which are inserted at a ratio of 1:20. SGS and ALS also have their own internal QA/QC controls to ensure assay quality. • All sampling was carefully supervised with ticket books containing pre-numbered tickets placed in the sample bag and double checked against the ticket stubs and field sample sheets to guard against a loss of sample integrity.
Quality of assay data and laboratory tests	• Blanks, duplicated and certified standards were inserted by the company at a ratio of 1:20. • The samples were sent to Mwanza in Tanzania for sample preparation before being were sent to South Africa or Australia for analysis for Total Graphitic Carbon (TGC) using the method GRAP_CSA05V LECO Total Carbon. • The TGC analysis has been carried out by an industry accepted and recognized laboratories – SGS and ALS Minerals who bot used established standards and are NATA-registered. • TGC is the most appropriate analysis method of Analysis for graphitic carbon. • SGS and ALS inserted its own standards and blanks.
Verification of sampling and assaying	• Data was recorded by the sampling geologist and stored in the company's master spreadsheet. The samples are transported to the SGS Lab in Mwanza for initial preparation before SGS transported for Assay at their lab in Johannesburg, South Africa. Samples from the 2016 drilling program were sent to ALS n Mwanza before being couriered to Brisbane for Analysis.
There Location of data points	• A hand-held GPS was used to identify the position of all samples (X and Y horizontal error of 5 metres) and reported using ARC 1960 grid and UTM datum Zone 37 south. Before being used in the resource estimate collars were surveyed using DGPS to considerably improved the accuracy of the collar locations, especially the Height Datum of the drillhole ground collar. Positional accuracy is given as <1.5m error in X and Y. New topographic contours from a specially-flown aerial survey will soon be available to aid mine planning efforts.

Data spacing and distribution	• Drill spacing was mostly carried out on a pattern of 200m by 160m with some areas of wider spacing of 400m by 320m at Namangale North. • Drill spacing at Namangale South was carried out on a 200m by 80m grid. • The data spacing is considered close enough to establish a good degree of geological confidence and will be used to calculate all Resource categories to the 2012 JORC standard at Namangale North and an Indicated and Inferred Resource within the more densely-drilled main areas of Namangale South. • No compositing has been applied for the RC drilling. • Compositing according to material type was carried out for diamond drilling for metallurgical test work only. • Diamond drilling was used to twin six holes at Namangale North, with nineteen (19) in total. Total HQ diamond core drilling is nine (9) holes were used to target outcropping mineralisation at Namangale South. The diamond core was cut into quarters and samples for TGC in one metre intervals to compare with the adjacent RC twin holes. The results of these samples show a high degree of correlation. Metallurgical sampling was carried out compositing the mineralized intervals.
Orientation of data in relation to geological structure	• Surface mapping and interpretation of ground EM data was used to orient the drill lines to get the most unbiased sampling of the mineralisation. • Drilling was planned to intersect the mineralization as close as possible to right angles. Results indicate the drillholes intersect the mineralisation at between 70-90 degrees.
Sample security	• Transportation is carried out by company staff driving the samples to the preparation Lab in Mwanza directlfrom site.
Audits or reviews	• No audits or reviews have yet been under taken

Section 2: Reporting of Exploration Results

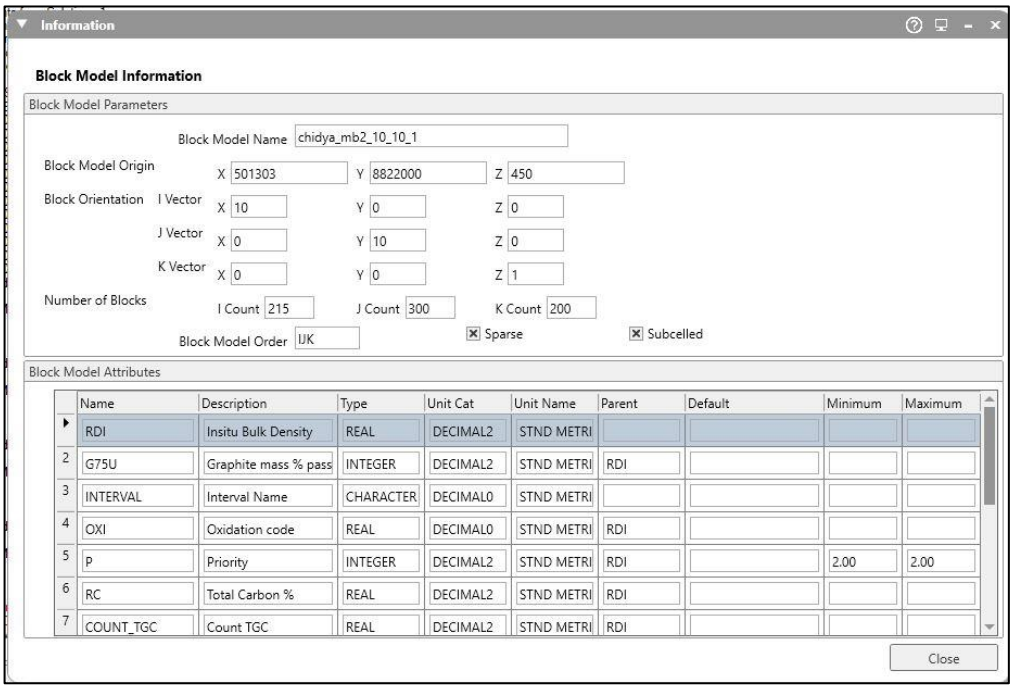
(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	• The prospecting license PL10644 containing the Namangale 2 deposit was granted on the 9th of July 2015 for a period of four years for the exploration of Graphite. The area covered by the prospecting licenses is 198.02km^2. PL10644 License is situated in the Ruangwa and Masasi districts. The PL's straddle the boundary of the Lindi and Mtwara regions of south-east Tanzania. The prospecting license PL10718 containing the Namangale 1 Prospect was granted on the 18th of July 2015 for a period of four years for the exploration of Graphite. The area covered by the prospecting license is 239.17km^2. The License is situated in the Ruangwa District. The License is located within the Lindi region of south-east Tanzania. While the prospecting license PL10717 containing the Namangale 3 Prospect was granted on the 18th of September 2015 for a period of four years for the exploration of graphite. The area covered by the prospecting license is located within the Mtwara region of south east Tanzania. The area covered by this prospecting license is 142.84km^2. • The PL's are held by Nachi Resources Ltd, which in turn is 100% owned by Volt Resources. The surface area is administered by the Government as native title. The area is rural, with wilderness areas and subsistence farming occurring on the PL's. The Tenements are subject to a 3% royalty on production to the previous owners of Nachi Resources, which can be reduced to 1.5% under an agreement with the previous owner. There are no other known issues that may affect the tenure.
Exploration done by other parties	• There is no written record of previous exploration available for this area that is known to Volt Resources. The location of some graphite outcrops on the PL's was known by the previous owners.
Geology	• The exploration targets occur in Archean basement rocks of the Mozambique belt system which principally comprise metamorphic rocks ranging from schist to gneisses including marbles, amphibolite, graphitic schist, mica and kyanite schist, acid gneisses, hornblende, biotite and garnet gneisses, quartzite, granulite, and pegmatite veins. Initial exploration has focused on areas where there no or minimal overlying younger sedimentary sequences remaining (mostly Cretaceous sandstones and conglomerates).
Drill hole Information	• All significant results have been previously reported on ASX releases most recently on the 11th of October. The resource update is the result of using a lower cut-off grade. Maps for each of the deposits are shown in these releases and in the modelling and in the CP report which show the location of all of the samples reported in this announcement over the mapped geology of each of the deposits. • All drillholes, trenches, and pits were incorporated into the model where appropriate.
Data aggregation methods	• All RC results are from 1m sampling and no weighting was applied. • Cut-off grade of 4% was used at Namangale North and 2.5% for South was used. Where the intervals contained lower grades zones this was not removed but incorporated into the significant intercept.
Relationship between mineralisation widths and intercept lengths	• Drill lines are planned to be as close as possible to right angles to the mapped mineralization. • The width of mineralization ranges from close to 100% of the intercepts to approximately 85% of the interval as the mineralization is gently folded. Closer spaced drilling is required to find the exact relationship.
Diagrams	• A drill-hole plan is provided in various ASX releases and in the CP report for Namangale North and South. • Cross sections at various orientations across the strike of the mineralisation have been provided in the CP report and previously in several ASX releases in September and October 2016 showing the orientation of drilling relative to the interpreted geology for Namangale.
Balanced reporting	• All assays were loaded to the Access database. All assay values were loaded to the model. • All significant intercepts have been reported for all three deposits.
Other substantive exploration data	• Previous results from Namangale North and South include Ground EM surveys, mapping, trenching, rock chip sampling all of the results of this work were previously reported. Recent ASX announcements also includes a simplified geological map of the area showing all significant intercepts (October 2016).
Further work	• Upcoming drilling programs will include programs designed to obtain more geotechnical and hydrological data as inputs into the bankable feasibility study. • Additional drilling is also planned to obtain more representative samples for metallurgical test work.

Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
Database integrity	• Data used in the Mineral Resource estimate is sourced from an export out of the Volt Resources Corporate Access Database. Relevant tables from the data base are exported to MS Excel format and converted to csv format for import into Minescape Stratmodel and Block Model software for use in the Mineral Resource estimate. • Validation of the data import includes, amongst others, checks for drillhole collar discrepancy against topography, overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars.
Site visits	• The Competent Person (CP) for Mineral Resources has not visited the Namangale sites. It is anticipated that this will occur during the next planned drilling program. Considerable information and insight has been provided by Volt's Matt Bull who has been a regular site visitor.
Geological interpretation	• The initial modelled intervals were coded based on the field geologist's descriptions of average flake size, which generally uniformly vary as a stratiform deposit, possibly mimicking the original sedimentary bedding structure. Size domains do repeat and these were handled in the Minescape schema through assignment as non-conformable or transgressive intervals. • Assay data has been used to generate mineralisation domains based on a cut of grade of 4% for Namangale North and 2.5% for Namangale South. These cut off grades coincided well with geological continuity, was selected on the basis of a clear inflexion point on the probability curve of all assay data. • Intervals of internal waste (gneiss, pegmatite, and quartz) where unsampled, have been included at an assigned value of 0.02% TGC within the mineralisation envelopes, where intrusive gneisses are too narrow to exclude. Rock type subdivisions applied in the interpretation process are based on geological logging. Mineralogy has been used to assist interpretation of the lithological subdivisions using epidote and chlorite alteration in the high grade graphitic schists and muscovite/ biotite alteration to define the footwall gneiss unit. • Mineralised domains and footwall gneissic intrusives were modelled in Minescape and found to be generally subparallel.
Dimensions	• This Mineral Resource in the Namangale North Deposit remains open to the north and south. It covers an area of 3.4 km along strike, 1.6km across strike and a drilled depth of approximately 130 m below surface. • At Namangale South the modelled deposits are smaller, and strike west-northwest of sizes around 1km x 2km dimensions
Estimation and modelling techniques	• For grade estimation and interpolation into the block model inverse distance squared, with the nearest neighbour method was used as a check estimate was completed. • Namangale North and South were modelled separately due to the fact Namangale North is some 35km distant to the north-east. • ABB Enterprises Minescape Block Model software was used to load, validate and interpolate graphitic carbon, total carbon, sulphur, graphite intensity and sulphur intensity into blocks. The estimation of graphitic carbon was based on derived semi-variograms. Drill grid spacing ranges from 80 m to 400 m. Drillhole sample data was flagged using domain codes generated from lithological intervals and oxidation surfaces. Sample data was composited by 1m fixed-length intervals. The very few sample intervals coded as NS (Not Sampled) in the assay file were assigned nominated background waste values to account for unsampled waste intervals captured within the mineralization envelopes. • The presence of outliers was determined using a combination of top-cut analysis tools (grade histograms, log probability plots, and CVs). No outliers were identified in graphitic carbon, total carbon, and sulphur sample populations and these did not have any top-cuts applied. • As stated above, it was noted that unsampled intervals were present within the mineralisation domains. These intervals represent internal waste zones which were too narrow and not able to be wireframed separately. It should be noted, that given the current drill spacing, these may smear the overall interpolation to blocks. This may be attributed, in part, to data spacing, and may not be a true reflection of grade continuity. • No assumptions have been made regarding by-products. • The non-grade element estimated is total carbon (TC%) and total sulphur (S%). Sulphur is considered a deleterious element in some graphite deposits and may bear and impact on metallurgical processing. The sulphur values, where tested, can also be used as a check on the determination of the BOCO. Some 1m samples from eleven (11) randomly selected drillholes were tested for a comprehensive suite of trace elements. Vanadium ranged from 135 to 937ppm. • Typical block model parameters for Namangale South are shown below:

Criteria	Commentary
	 • No selective mining units were assumed in this estimate. • The comparison of lithology and mineralisation wireframes showed generally good correlation, but some zones were coded with gneissic material based on the dominant lithology observed in the interval. The use of Stratmodel to validate some intersections resolved most issues. Geological modelling of the graphitic gneiss and schist units in Voxler 4 software produced models that intercalated and compared well with the mineralisation domains in the Minescape Blocks. • Validation of the block model carried out a volumetric comparison of the resource wireframes to the block model volumes. Validating the estimate compared block model grades to the input data using tables of values, and swath plots showing northing, easting and elevation comparisons showed that the estimate honoured the raw data. Visual validation of grade trends and distributions was carried out. • No mining has taken place; therefore, no reconciliation data is available.
Moisture	• The tonnages are estimated on an air dried basis.
Cut-off parameters	• Blocks were generated with grades ranging from 0-35% TGC, with subsequent grade cut-off grade for reporting of 2.5 % and 4% graphitic carbon. This modelling cut-off grade represents a clear inflexion in the log probability curve of the whole assay data set at the respective deposits and also corresponds with continuous interpreted geological zones defined within the blocks.
Mining factors or assumptions	• Mining of the Namangale deposits will be by surface mining methods involving standard truck and haul mining techniques. The geometry of the deposit will make it amenable to mining methods currently employed in many surface operations in similar deposits around the world. No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Initial mineralogical and assay test work from SGS South African laboratory have returned head grades of up to 16% TGC. There is not a strong presence of Vanadium within the graphitic samples, only obtaining grades up to 0.093% V_2O_5 has also been confirmed. Average graphite flake size distribution for Namangale North and South are reported in this release;
Environmental factors or assumptions	• No assumptions have been made and these will form part of a scoping study.
Bulk density	• An appropriate number of relative density measurements are contained in the project database for the mineral resource estimation. The data were derived using the Archimedes method of weighing drill core in air and water, which is considered appropriate for the rock type. The results of the density samples were incorporated into the block model to estimate the density of the mineralisation. Where there was insufficient sampling an average density of 2.65 t/m^3 was used across the deposit which is considered conservative for these style of graphite deposits. No density data were collected from the trench samples.
Classification	• The Mineral Resource classification at Namangale North on both the good geological and grade continuity and the drill spacing. Areas drilled on a 200m by 80m spaced drillhole density in the core of the deposit where classified as Measured and Indicated with areas drilled on a 200m by 160m or in some cases a spacing of 400m by 320m were classified as Inferred. • Drill spacing's at Namangale South was carried out on a 200m by 80m grid. • Estimation parameters including relative standard error and search passes have been utilised during the

Criteria	Commentary
	classification process. • Inferred Mineral Resources were defined using a combination of sampled and geologically constrained wireframes, search radius of 1,500m and good continuity of geology. • Indicated and Measured Mineral Resources were defined based on criteria originally set up in the May 2016 geostatistical study at Namangale North, previously reported. The input data is comprehensive in its coverage of the geology of the mineralisation. The drill program was completed immediately prior to the resource estimate was commissioned. All drillholes had been logged for geology and visual graphitic carbon estimates and have been incorporated into the Resource model. • Volt Resources notes that the visual estimates of graphite mineralisation had excellent correlation to the returned assays as the program progressed with minor adjustment of the mineralisation domains required to correct intervals of incorrect logging. The definition of mineralised zones is based on a good level of geological understanding to produce a geologically driven model of mineralised domains. Key reference markers are the Footwall gneiss (quartzose-feldspathic zone). This model is not considered to favour or misrepresent in-situ mineralisation and will continue with further infill drilling to support the maiden Mineral Resource. • The Mineral Resource estimate appropriately reflects the view of the Competent Persons.
Audits or reviews	• The block model has been provided to Optiro who have conducted some pit design and optimisations in Datamine. Some discussions have taken place regarding block definition which has subsequently improved the model parameters and definition.
Discussion of relative accuracy/ confidence	• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code (2012 Edition). • The statement relates to global estimates of tonnes and grade. • The confidence intervals have been based on estimates at the parent block size. Relative errors of ±10% for the Measured; 15% for Indicated and ±25% for Inferred Resources are consistent across Namangale North and South. • No production data is available.

Section 4: Ore Reserve Modifying Factors

Ore Reserve estimates have been based on Measured and Indicated Resource estimates.

Ore Reserves have had all appropriate environmental & economical exclusions applied.

Estimation and Reporting of Ore Reserves		
Criteria	**JORC Code explanation**	**Commentary**
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• The Mineral Resource Estimate used is classified a JORC 2012 Mineral Resource statement by Volt Resources Ltd, the Namangale Project Mineral Resource estimate was completed by Mark Biggs (the Competent Person for Estimation and Reporting of Mineral Resources) of ROM Resources Pty Ltd. • The Mineral Resources are reported inclusive of the Ore Reserves It should be noted that the Ore Reserve process has demonstrated that the cut-off grade for economic material is significantly lower than the cut-off grades used in reporting the Mineral Resource. As such there is material that is in the Ore Reserve that has the appropriate geological confidence to be reported as such, that is not included in the numbers tabulated for the public release of the Mineral Resource dated 12th October 2016.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Site visit undertaken from the 10th to 14th August 2016 by Andrew Law of Optiro Pty Ltd (the Competent Person for Estimation and Reporting of Ore Reserves) with the purpose of the visit being to assess the requirements for evaluating the Ore Reserve.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• A Pre-feasibility study has been undertaken and the results released publicly in December 2016. • This Ore Reserves report leverages off the work of the many sub-consultants from the pre-feasibility study, and has undertaken a revised mine optimisation, design, scheduling and financial analysis in order to report an Ore Reserve for the Namangale deposit on the basis of Measured and Indicated Mineral Resource categories (the PFS included Inferred material and as such no Ore Reserve was reported at that time).
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• The cut-off grade for each pit is the processing cut-off grade, thus material is treated as ore if the recovered revenue exceeds the processing cost. This calculation excludes mining costs as these are already sunk when the decision is made to process or place material on the waste dump. • Reserves are based on a processing cut-off which varies by deposit (different product specifications dictate different financial parameters and distance from the mill dictate varying trucking costs, both of which alter cut-off grade), the processing cut-off grade is: ▪ 1.29% TGC for Namangale 1, ▪ 1.52% TGC for Namangale 2, ▪ 1.76% TGC for Namangale 3.
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-	• The mining method is conventional truck and shovel open pit mining. • The Namangale Deposits are suited to conventional open pit mining methods, the primary reasons being: ▪ The deposit virtually outcrops with limited overburden, ▪ The deposit dips at ~ 30 to 40 degrees which allows one wall of the pit to follow the footwall (minimal waste dilution), ▪ There are multiple parallel lenses that fall

Estimation and Reporting of Ore Reserves		
Criteria	**JORC Code explanation**	**Commentary**
	strip, access, etc. • The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	within the pit boundary resulting in low stripping ratios, ▪ The width and dip of the ore zones would be problematic for underground extraction. • Optimisations have been run to determine the economic extents of each pit using the costs detailed in the mining section of this report. • Appropriate factors have been applied to the Mineral Resource to derive the Ore Reserves, including: ▪ 5% Ore loss, ▪ 95% Mining Recovery, ▪ The minimum mining width is set by the smallest block resolution in the model, which is currently 10m. • Mine designs have been undertaken using the PFS geotechnical parameters and the mine scheduled based on achievable production rates for the specified size of mining fleet. • Geotechnical parameters have been supplied by Pells Sullivan Meynink as part of the PFS and are detailed in the mining section of the report. These were utilised for both the optimisation and mine design purposes. • No inferred mineral resources have been used in the determination of the Ore Reserve.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	• The processing plant will be designed to recover graphite concentrate by froth flotation. Ore will be crushed followed by grinding and graphite flotation. The final graphite concentrate will be filtered, dried and bagged for transport and subsequent loading onto ships in sea containers. • A key objective of the plant design is to produce a marketable high-grade graphite concentrate at the largest possible graphite flake size to maximise the value of the concentrates produced. • The proposed flowsheet has been developed based on the metallurgical testwork undertaken to date and derived basic Process Design Criteria. The process plant design is based on a metallurgical flowsheet with unit operations that are conventional and well proven and aligned with current graphite industry practice. • The metallurgical testwork program conducted on Namangale 1, Namangale 2 and Namangale 3 deposits used composite samples produced from drill core. An initial metallurgical testwork program managed by BatteryLimits Pty Ltd was undertaken at ALS Laboratory (ALS) in Perth to assess the ore's amenability to beneficiation by froth flotation. Later, variability testwork was conducted on drill core samples and bulk oxide trench samples from all three Namangale ore bodies. A bulk flotation test conducted on one trench oxide sample produced 14 kg final concentrate suitable for preparation of initial marketing samples.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• A Scoping level Environmental and Social Impact Assessment (ESIA) has been undertaken with the main aim of establishing the terms of reference for a full ESIA to be undertaken. This will enable the granting of mining licences in due course. To date, no fatal flaws that could potentially cause significant delay or cost to environmental approval have been identified.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• No significant infrastructure currently exists at the project site. The infrastructure required was designed and costed by Battery Limits Pty Ltd as part of the pre-feasibility study and these assumptions remain valid, and were used in the estimation of the Ore Reserve • Current regional infrastructure is essentially limited to the national highway that runs through the

Estimation and Reporting of Ore Reserves		
Criteria	**JORC Code explanation**	**Commentary**
		Namangale leases to Mtwara and the deep water port at Mtwara.
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• The capital cost estimate has been compiled by BatteryLimits based on the design, supply, fabrication, construction and commissioning of a new graphite plant in Tanzania and includes supporting infrastructure and indirect costs. Mine establishment and infrastructure costs are included, but the cost of the mining fleet and associated infrastructure is financed by the mining contractor and covered by operating expenses (Opex). • The estimate for the process plant is based on the preliminary process design as documented in Process Design Criteria, process flowsheet, equipment list and plant plot plan. The plant estimate has been based upon budget price quotations for major equipment, in-house data from recent projects, preliminary MTO estimates for steel and concrete, and industry standard estimating factors for ancillary equipment and other installation costs. • The estimate incorporates direct costs and indirect costs but excludes the costs of escalation, pre-implementation studies, financing, taxation, land access and mining rights, rehabilitation and closure. • The operating cost estimate for the project includes all costs associated with mining, processing, infrastructure and site-based general and administration costs. The operating costs have been developed in US$ unless otherwise stated and unit rates and prices included have a base date of Q3 2016 with no allowance for escalation or inflation. • The operating costs have been compiled from a variety of sources, including: ▪ Budget quotations received from vendors, ▪ Operating cost database, ▪ Wages and salaries developed from industry sources, ▪ Estimates based on industry standards from similar operations, ▪ First principle estimates based on typical operating data. • Most equipment costs were quoted in SA Rand or US$, and infrastructure costs were most commonly in US$. All costs were converted to US$ based on the exchange rates below which were current when the estimate was prepared. ▪ US$1.00 = A$1.32, ▪ US$1.00 = 2,200 TSh (Tanzanian Shilling), ▪ US$1.00 = 14 ZAR (South African Rand), ▪ US$1.00 = € 0.90. • A 3.0% revenue royalty has been allowed for in the financial evaluation.
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• Product revenue has been determined after market research by Industrial Minerals Research and Benchmark Mineral Intelligence, and discussions with end users. • As each deposit contains different proportions of each saleable flake size, an average basket price per deposit has been calculated from the metallurgical testwork on size distribution and the assumed product revenues. • Sensitivity analysis has been conducted which is assumed to cover a sufficiently large range of potential revenue streams, all of which demonstrate a positive result for the Ore Reserve.
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis	• Market research by Industrial Minerals Research and Benchmark Mineral Intelligence • Because of the demand for spherical graphite, Industrial Minerals Research (IMR) expects a steady appreciation in graphite prices over the

Estimation and Reporting of Ore Reserves		
Criteria	**JORC Code explanation**	**Commentary**
	along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	next five years • Benchmark Mineral Intelligence (BMI) expects many of the largest battery manufactures to announce major expansion plans, spending US$20 B on a dozen mega-and-giga battery factories by 2020. • For the emerging East African natural graphite suppliers, other factors in their favour are: ▪ Most battery manufacturers prefer naturally sourced graphite flake concentrate as it is less costly and more environmentally friendly than synthetic graphite, ▪ Natural graphite production in China peaked at 800,000 tonnes some years ago, and will be down 40% on that level in 2016. • Securing offtake agreements has been viewed as a key risk to development of the Project. Volt has had dialogue with end users, traders and intermediaries across China, Japan, Korea, Europe and North America. China has been identified as a target market for Volts' product with Memoranda of Understanding (MOU) signed with leading end-user groups in China: ▪ Shenzhen Optimum-Nano Battery Co Ltd, signed 60,000 t/y MOU for 5 years with a further 5-year mutual option, ▪ Huzhou Chuangya Power Battery Materials Co. Ltd, signed 20,000 t/y MOU for 5 years with a further 5-year mutual option, ▪ Shenzhen Sinuo Industry and Development Co Ltd, signed 20,000 t/y MOU for 5 years with a further 5-year mutual option.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• The Ore Reserve schedule has been evaluated by Modulus Capital Pty Ltd using the same financial model as the pre- feasibility study. This demonstrates the ore reserve pits generates positive cash flows and acceptable return on investment over and above the capital and operating costs of the project. • Sensitivity analysis has been undertaken which shows the project remains economic over an appropriate range of input parameters, given the accuracy of the study on which this is based
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• Nachi Resources Limited started with stakeholder consultations on 27th September, 2016. This stakeholder engagement process will continue during the ESIA process. Overall the reception to mining in the area has been positive and Volt Resources will continue to work with local communities to minimise disruption and where this is not possible relocate and compensate appropriately
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• No identifiable naturally occurring risks have been identified to impact the Ore Reserves. • There are no current legally binding contracts / offtake agreements though MOU which demonstrate that sales of the products can be commercially achieved. • Whilst mining licences are not currently in place Volt Resources considers there are reasonable grounds for it to believe that any remaining approvals will be granted.

Estimation and Reporting of Ore Reserves		
Criteria	**JORC Code explanation**	**Commentary**
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• Mineral Resources converted to Ore Reserves as per JORC 2012 guidelines, i.e. Measured Resource to Proven Ore Reserve , Indicated Resource to Probable Ore Reserve. No downgrading in category has occurred for this project. • The result reflects the Competent Person's view of the deposit. • There is no portion of "probable" Ore reserves derived from Measured Mineral Resources.
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• No Audits or reviews of the Ore Reserve have been undertaken to date.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• As there is no current mining at Namangale, reconciliation of this Ore Reserve with production data cannot be undertaken, • This Ore Reserve is the direct result of a pre-feasibility level study, the confidence of which is commonly accepted to be +/- 25%. • Nothing in the work undertaken to evaluate this Ore Reserve suggest that the Ore Reserve would not exist should key sensitivity factors be influenced 25% in a negative direction.