

# MANONO TAILINGS LITHIUM AND TIN PROJECT, DEMOCRATIC REPUBLIC OF THE CONGO

NI43-101 TECHNICAL REPORT

Author

Nico Scholtz *Pr. Sci. Nat*  
M.Sc. Geology

15 February 2019

Effective date: 15 February 2019

Issue date:

Completed for:

**TANTALEX RESOURCES CORP.**

# MANONO TAILINGS LITHIUM AND TIN PROJECT, DRC

## NI43-101 TECHNICAL REPORT

Prepared by *Nico Scholtz* on behalf of:

***Tantalex Resources Corp.***

---

Author                      Mr Nico Scholtz (M.Sc. Geology *Pr. Sci. Nat.*)

Effective date:            15 February 2019

Job Number:              *G19-02-15*

Printed copies:           0

Client:                     0

---

Signed on 15 February 2019



.....  
Nico Scholtz (*Pr. Sci. Nat.*)

Uis

Namibia

## TABLE OF CONTENTS

1. SUMMARY .....	viii
1.1 Introduction .....	viii
1.2 Property description .....	viii
1.3 Accessibility, climate, local resources and infrastructure .....	viii
1.4 History .....	ix
1.5 Geology and mineralization .....	ix
1.6 Deposit type and model .....	ix
1.7 Recent exploration .....	ix
1.8 Exploration target .....	x
1.9 Discussion, recommendations and conclusion .....	xi
1.9.1 Database management .....	xi
1.9.2 Bulk density analyses .....	xi
1.9.3 Metallurgical testing .....	xii
1.9.4 Environmental and social factors .....	xii
1.9.5 Engineering studies .....	xii
1.9.6 Drilling .....	xii
1.9.7 Budget .....	xii
1.9.8 Conclusion .....	xii
2. INTRODUCTION AND TERMS OF REFERENCE .....	13
2.1 Terms of reference .....	13
2.1.1 Units of measurement .....	13
2.2 Independence .....	13
2.3 Sources of Information .....	13
2.4 Personal visits to Property .....	14
3. RELIANCE ON OTHER EXPERTS .....	15
4. PROPERTY DESCRIPTION AND LOCATION .....	16
4.1 Background information on the DRC .....	16
4.2 Property Location .....	17
4.3 Mineral Tenure .....	18
4.3.1 Mining code .....	18
4.3.2 Royalties and taxes .....	19
4.4 Property boundary demarcation .....	19
4.5 Agreements, licence numbers and rights on the property .....	19
4.6 Environmental liabilities and permits .....	20
4.7 Social aspects .....	20
5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY .....	21
5.1 Climate .....	21

5.2 Physiography .....	21
5.3 Access .....	21
5.4 Operating season .....	22
5.5 Vegetation.....	22
5.6 DRC resources .....	22
5.7 Infrastructure and availability of exploration requirements .....	23
5.7.1 Site Infrastructure .....	24
5.7.1.1 Water.....	24
5.7.1.2 Power .....	24
5.7.1.3 Roads.....	25
5.7.1.4 Railway.....	25
6. HISTORY .....	26
6.1 Prior ownership of the Soris Project .....	26
6.2 Previous exploration .....	26
6.3 Historical Mineral Resources and Reserves.....	26
6.4 Production.....	26
7. GEOLOGICAL SETTING AND MINERLIZATION .....	27
7.1 Regional geology .....	27
7.2 Local geological setting .....	28
7.3 Mineralisation.....	30
8. DEPOSIT TYPE .....	32
8.1 Regional Environment .....	32
8.2 Physical description of deposits.....	32
8.3 Geophysical characteristics .....	32
8.4 Mineralogical characteristics.....	32
8.5 Supergene ore characteristics .....	33
8.6 Geochemical characteristics.....	33
8.7 Environment of mineralisation .....	33
9. EXPLORATION.....	34
9.1 Grab sampling .....	34
9.1.1 QP opinion.....	36
9.2 Handheld GPS survey .....	37
9.2.1 QP opinion.....	37
9.3 Bulk sampling .....	38
9.3.1 QP opinion.....	38
9.4 Access route investigations .....	38
10. DRILLING.....	39
11. SAMPLE PREPARATION, ANALYSES AND SECURITY.....	40
11.1 Grab sampling .....	40



11.1.1 Methodology.....	40
11.1.1.1 Geochemical analysis and sample preparation .....	40
11.1.1.2 Sample preparation.....	40
11.1.1.3 Sample analyses.....	40
11.1.1.4 Sample security.....	40
11.1.1.5 Quality control .....	40
11.1.1.6 QP opinion .....	41
11.2 Tantalex bulk sampling .....	41
11.2.1 Methodology.....	41
11.2.1.1 Geochemical analysis and sample preparation .....	41
11.2.1.2 Sample security.....	41
11.2.1.3 Quality control .....	41
11.2.1.4 QP opinion .....	41
12. DATA VERIFICATION .....	42
13. MINERAL PROCESSING AND METALURGICAL TESTING.....	43
14. MINERAL RESOURCE ESTIMATES .....	43
15. MINERAL RESERVE ESTIMATES .....	43
16. MINING METHODS .....	43
17. RECOVERY METHODS .....	43
18. PROJECT INFRASTRUCTURE .....	43
19. MARKET STUDIES AND CONTRACTS .....	43
20. ENVIRONMENTAL STUDIES, PERMITTING, SOCIAL AND COMMUNITY IMPACT .....	44
20.1 Environmental studies .....	44
20.2 Permitting.....	44
20.3 Social and community impact.....	44
21. CAPITAL AND OPERATING COSTS.....	44
22. ECONOMIC ANALYSIS.....	44
23. ADJACENT OR NEARBY PROPERTIES.....	44
24. OTHER RELEVANT DATA AND INFORMATION.....	44
25. INTERPRETATION AND CONCLUSIONS.....	45
25.1 Interpretation.....	45
25.2 Exploration Target .....	45
25.2.1 Lower and upper range calculations .....	46
25.2.1.1 Database.....	46
25.2.1.2 Compositing and grade capping .....	46
25.2.1.3 Wireframe construction .....	46
25.2.1.4 Block models.....	48
25.2.1.5 Cut off grade .....	48
25.2.1.6 Bulk density.....	48

25.2.2 Exploration target .....	48
25.3 Conclusions .....	48
25.4 Risks .....	48
26. RECOMMENDATIONS.....	49
26.1 Database management .....	49
26.2 Manono tailings resource estimation .....	49
26.2.1 Drilling.....	49
26.2.1.1 Tailings Dump A.....	51
26.2.1.2 Tailings Dump B.....	52
26.2.1.3 Tailings Dump C.....	53
26.2.1.4 Tailings Dump D.....	54
26.2.1.5 Tailings Dump E.....	55
26.2.1.6 Tailings Dump F.....	56
26.2.1.7 Tailings Dump H.....	57
26.2.1.8 Tailings Dump I.....	58
26.2.1.9 Additional proposed holes on tailings terraces .....	59
26.2.2 DGPS .....	60
26.2.3 Density.....	60
26.2.4 Metallurgical .....	60
26.3 Engineering studies .....	60
26.4 Environmental.....	60
26.5 Proposed budget .....	60
26.5.1 Stage 1 (Year 1) (AC drilling) .....	60
26.5.2 Stage 2 (Year 2) (Metallurgical test work).....	60
26.5.3 Exploration program budget.....	61
27. REFERENCES.....	62
27.1 Online reference .....	62
28. CONSENT, DATE AND SIGNATURE OF AUTHOR.....	63
28.1 Certificate of Author (Qualified Person).....	63
APPENDIX A: Grab sample results in database (from SGS laboratories in South Africa).....	64
APPENDIX B: Recommended Aircore drillholes .....	66

## LIST OF FIGURES

Figure 4.1 Location of the Manono Tailings Project in the Democratic Republic of the Congo (DRC) ( <a href="http://services.arcgisonline.com/arcgis/services">http://services.arcgisonline.com/arcgis/services</a> ). .....	16
Figure 4.2 Location of the Manono Tailings Project near the towns of Manono and Kitotolo within the south central DRC showing the exclusion zone ( <a href="http://services.arcgisonline.com/arcgis/services">http://services.arcgisonline.com/arcgis/services</a> ).....	17
Figure 4.3 View of Manono tailings (a) from the air and (b) from op top (note person for scale). .....	17

Figure 5.1 Koppen Classification in the DRC showing location of the Manono Tailings Project within a humid subtropical climate ([http://koeppen-geiger.vu-wien.ac.at/pdf/Paper\\_2006.pdf](http://koeppen-geiger.vu-wien.ac.at/pdf/Paper_2006.pdf))..... 21

Figure 5.2 Vegetation types of the DRC showing the Manono Tailings Project located within the Savannah vegetation type (<http://services.arcgisonline.com/arcgis/services>)..... 22

Figure 5.3 Nearest railways and navigable waterways to the Manono tailings project (<http://services.arcgisonline.com/arcgis/services>). ..... 23

Figure 5.4 Tailings dumps on the Manono project showing location of water filled open pits fed by a natural permanent river (<http://services.arcgisonline.com/arcgis/services>). ..... 24

Figure 5.5 Location of the *Piana Mwanga* historical hydroelectric plant..... 25

Figure 7.1 Geological setting of Manono Tailings project within the DRC..... 27

Figure 7.2 Local setting of the Manono tailings project showing the Manono and Kitotolo pegmatites as well as the tailings dumps and associated tailings terraces (Note that tailing #s G, J and K are not part of the *Tantalex Minocom* agreement). ..... 28

Figure 7.3 Pegmatite from the Manono – Kitolo pegmatites showing distinct spodumene pseudomorphs set in a quartz – albite rich matrix. .... 29

Figure 7.4 One to <five mm gravel size making up most of the tailings dumps on the project area. ... 29

Figure 7.5 Lepidolite set in quartz rich pegmatite boulder from tailings dump # A. .... 30

Figure 7.6 Spodumene set in quartz rich pegmatite boulder from tailings dump # C..... 30

Figure 7.7 Spodumene set in quartz rich pegmatite boulder from tailings dump # C..... 31

Figure 8.1 Graphic representation of a zoned pegmatite field around a granitic source (Bradley *et al.*, 2017). ..... 33

Figure 9.1 Location of grab samples on 10 tailings dumps marked A to K from north to south (Note that tailings C and D comprise two dumps each and that the agreement between *Tantalex* and *Minocom* excludes tailing #s G, J and K)..... 34

Figure 9.2 Li<sub>2</sub>O grab sample results from samples retrieved by NS and *Tantalex* field teams in 2018. The northern sector shows better lithium results compared to that of the southern sector (Note that tailing #s G, J and K are not part of the *Tantalex Minocom* agreement). ..... 36

Figure 9.3 Handheld GPS tracks in the Manono tailings and terrace area used to generate preliminary topographical surface (Note that tailing #s G, J and K are not part of the *Tantalex Minocom* agreement). ..... 37

Figure 9.4 Eighteen (18) bulk sample bags (approx 50 kg each) retrieved from different locations on tailings dump # C. .... 38

Figure 25.1 Handheld GPS points were used to generate a Digital Elevation Model (DEM), which in turn was used to create a topographical geosurface which assisted in wireframe generation for volume calculations of tailings..... 46

Figure 25.2 Example of wireframe for tailings dumps *C north* and *C south* (looking north) which shows the method used to calculate volume of each tailings dump. .... 47

Figure 25.3 Surface extent of tailings terraces was obtained through handheld GPS work and mapping. Tailings terraces are estimated to be between 5 and 10 m thick on average. .... 47

Figure 26.1 Tailings dumps and terraces on the Manono Tailings Project (note that tailings C and D comprise two dumps each and that tailing #s G, J and K do not form part of the Manono Tailings agreement)..... 50

The QP regards the number of holes and collar locations for stage one (15,000 m) as a recommendation and fully understands that collar position and azimuth may change due to accessibility or subsurface conditions during drilling. .... 50

Figure 26.2 Twenty AC drillholes are proposed on tailings dump # A (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 51

Figure 26.3 Eighteen AC drillholes proposed on tailings dump # B (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 52

Figure 26.4 Fifty AC drillholes proposed on tailings dump # C (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 53

Figure 26.5 Thirty one AC drillholes proposed on tailings dump # D (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 54

Figure 26.6 Thirty one AC drillholes proposed on tailings dump # E (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 55

Figure 26.7 Twenty six AC drillholes proposed on tailings dump # F (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 56

Figure 26.8 Twenty seven AC drillholes proposed on tailings dump # H (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 57

Figure 26.9 Twenty one AC drillholes planned on tailings dump # I (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location). .... 58

Figure 26.10 Thirty-five additional AC drillholes (all vertical) planned on tailings terraces. Additional holes may be needed at Terrace #s H as well as C, D and E. .... 59

[http://koeppen-geiger.vu-wien.ac.at/pdf/Paper\\_2006.pdf](http://koeppen-geiger.vu-wien.ac.at/pdf/Paper_2006.pdf) ..... 62

## 1. SUMMARY

### 1.1 Introduction

*Nico Scholtz (NS)* has been requested by Canadian - and Frankfurt Stock exchange listed *Tantalex Resources Corp.* to prepare a National Instrument (NI) 43-101 Technical Report on the Manono Tailings Project located within central Democratic Republic of the Congo (DRC). NS is a Qualified Person (QP) under N43-101 and has completed this report for the purpose of providing technical information on the project. Additional recommendations on future work programs are also provided.

### 1.2 Property description

The Tailings Project is located within the Tanganyika Region of central DRC, near the town of Manono. The mineral rights of the Project is owned by *Minocom Mining SAS (Minocom)* and is reserved under PER 13698 (*Permis Exploitation Rejets*). *Minocom* recently signed an agreement with *Tantalex Resources'* wholly owned Congolese subsidiary *Buckell SAS* for a 65% participation in a joint venture entity named *Société des Tailings de Manono ("STM)*. PER 13698 is being transferred into the name of *STM* with the Democratic Republic of Congo Mining Cadastre ("CAMI"), such transfer with the CAMI was a condition precedent to the payment by *Buckell* of a total amount of \$US3,000,000 to *Minocom* in exchange for the assignment of its participation in *STM*.

License PER 13698 (53 km<sup>2</sup>) was issued to *Minocom Mining SAS* as a tailings exploitation license on 23 March 2017 and expires 22 March 2022. There are 13 tailings dumps spread throughout license area along 15 km strike of the various historical quarries (3 of these tailings in the southern section of the license area do not form part of this agreement). In addition to the tailings dumps, various tailings terraces underlie many of the said dumps and are regarded as part of license PER 13698. Tailings are defined by *Law 007/2002 of July 11, 2002* relating to the *Mining Code* as:

- *The sterile or material rejected from the mining exploitation or any solid or liquid residue deriving from mineralogical or metallurgical processing.*

Tailings exploitation is defined by the same law as:

- *Any activity by means of which a third party, whether an individual or a legal entity, extracts substances from a non-naturally occurring deposit, in order to process them and use them or sell them.*

### 1.3 Accessibility, climate, local resources and infrastructure

The Manono Tailings Project is located within an area that receives approx. 1,200 mm of rain per annum, mostly as afternoon thundershowers during the wet season (October to April). Although the project is accessible via air and ground routes, chartered flights to Manono from Lubumbashi (located

approx 500 km to the south) is also available (duration of flight is approximately 1.5 hours). The access route via road varies from season to season and can take approx 24 hours in the dry season (May to September) and approx one week or more in the wet season (October to April) due to poor road conditions. The project has no operating season and although work can continue year round, regional road access to the town of Manono is more difficult in the wet season. There are no rail facilities near to the project site. The nearby town of Manono does not have grid power, but does have a recently completed 1MW solar plant (with 3MWh battery storage capacity). The tailings are located nearby to permanent water sources.

#### **1.4 History**

The license is located directly on the site of the former mining operation and world-class LCT-pegmatite of the Manono-Kitotolo (MK) mine, which has been defined as the largest pegmatitic deposit of tin and coltan ever worked (Bassot et Mario, 1980). The Manono Kitotolo Tailings consist of material derived from the numerous open pit mines, which were exploited from 1919 to the mid 1980's, producing 140,000 to 185,000 tonnes of tin and 4,500 tonnes of coltan concentrate (Zairetain, 1981). Lithium (from spodumene) was not recovered and its presence within the tailings and terraces as a waste product is evident from recent field investigations by the QP. A study performed by BRGM of France in 1980 on grab samples taken from two quarries of the Mine confirmed spodumene concentrations of 26,7 % and 31 % respectively (1,7 and 2 %  $\text{Li}_2\text{O}$ ) (Bassot, Mario & Levesque, 1980).

#### **1.5 Geology and mineralization**

The zoned pegmatites at the Manono Tailings Project belong to a group of highly fractionated, tantalite-cassiterite, lithium-rich rare metal pegmatites known as Lithium-Cesium-Tantalum (LCT) pegmatites, which have intruded Proterozoic rocks of the Kilbara Belt. The Manono-Kitotolo pegmatites, with a southwesterly strike, are regarded as predominantly subvertical and associated with undeformed granites of the same age.

#### **1.6 Deposit type and model**

LCT pegmatites are normally emplaced into orogenic hinterlands i.e. they are found in cores of mountain belts where metasedimentary and granitic rocks predominate. LCT pegmatites commonly occurs as groups and are regarded as cogenetic bodies numbering tens to hundreds of individual bodies occupying an area of a number of square kilometres within a so called pegmatite district.

#### **1.7 Recent exploration**

*Tantalex* has completed the following exploration on the Manono Tailings Project to date:

- Grab sampling
- Handheld GPS survey

- Bulk sampling for metallurgical testwork
- Access road investigation on Manono tailings

Better  $\text{Li}_2\text{O}$  results from the *Tantalex* grab sampling program are noted below with corresponding  $\text{SnO}_2$  and  $\text{Ta}_2\text{O}_5$  results as well (Note that these are regarded as grab sample assay results and are not necessarily representative of the average mineralization grade of the Manono tailings).

Table. Some of the better assay results from the *Tantalex* grab sampling (derived from *SGS South Africa*) on the Manono tailings.

Grab Sample #	Sample description	Lithium	Tantalum	Tin
		$\text{Li}_2\text{O}^a$ (%)	$\text{Ta}_2\text{O}_5^b$ (ppm)	$\text{SnO}_2^c$ (ppm)
S 00124	Spodumene	6,57	10,75	411,35
S 00118	Spodumene	3,88	123,33	690,66
S 00147	Spodumene	3,79	31,63	521,81
S 00144	Spodumene	3,10	34,44	1150,26
S 00119	Spodumene	2,69	42,01	457,06
S 00108	Lepidolite	2,67	290,62	933,16
S 00146	Weathered Petalite	2,58	33,09	548,47
S 00117	Spodumene	2,50	9,52	1066,46
S 00107	Lepidolite	2,24	598,34	344,06
S 00130	Spodumene	1,93	41,64	820,16

a.  $\text{Li}_2\text{O}$  obtained by conversion factor of 2.153

b.  $\text{Ta}_2\text{O}_5$  obtained by conversion factor of 1.2211

c.  $\text{SnO}_2$  obtained by conversion factor of 1.2696

### 1.8 Exploration target

An exploration target was completed in September 2018 using the parameters as set out in *NI43-101 Section 2.3(2) (b)*. The exploration target comprises a lower and upper range based upon variable grade and volume and constant density (tailings density derived from QP experience).

Table. The Manono Tailings exploration target with different ore grades (values are rounded) (no cut offs were completed) and a conservative ore tonnage range and fixed density (density of 1.5 was used) (Completed for 10 tailings and terraces in total, excluding the southern tailing and terrace #s G, J and K).

	Li <sub>2</sub> O (%)		SnO <sub>2</sub> (ppm)	
	LOWER	UPPER	LOWER	UPPER
<b>ORE GRADE</b>	0.5	1.0	500	1,000
<b>ORE TONS (tons)</b>	60,000,000 (Sixty million tons) to 80,000,000 (Eighty million tons)			

This exploration target is conceptual in nature, with insufficient exploration completed to define a mineral resource. The QP is uncertain if further exploration will result in the target being delineated as a mineral resource. *Tantalex* is planning to complete an aircore drilling as well as topographical survey (DGPS) program which will define the volume, grade and densities in detail. Recommendations are given within the appropriate section of this report that may upgrade the target to a Mineral Resource Estimate.

### 1.9 Discussion, recommendations and conclusion

It is recommended that the below exploration program be implemented to further the Manono Tailings Project assessment process. The recommendations cover a wide variety of topics including database management, bulk density analysis, metallurgical testing, environmental and social factors as well as engineering studies and aircore (AC) drilling.

#### 1.9.1 Database management

The QP recommends that all data pertaining to the Manono Tailings Project be kept in a single master database and be managed by a database manager. A single database for the grab sampling data was created for this NI43-101 report.

#### 1.9.2 Bulk density analyses

No bulk density measurements has been completed for the Manono Tailings Project, but the QP recommends that a bulk density number be obtained during the aircore drill stage by weighing a known volume in the field, then re-weighing the samples when dried at the lab for a local humidity estimate.



### 1.9.3 Metallurgical testing

A 1 ton sample has been retrieved for metallurgical test work. The samples were retrieved from tailings # C. The sampling process was as follows:

- a. Use of 50 kg sample bags for easier handling
- b. Sample bags were filled three quarters with mined pegmatite boulders (approx fist size) or mined pegmatite gravel (approx 2 mm in size)
- c. All samples were transported from the tailings by truck to *Tantalex* warehouse in Lubumbashi for transport to laboratory in South Africa

### 1.9.4 Environmental and social factors

No environmental and social studies have been completed for the Manono tailings project.

### 1.9.5 Engineering studies

No engineering studies have been completed for the Manono tailings project.

### 1.9.6 Drilling

The QP recommends that *aircore drilling (AC)* is used to investigate the tailings material at depth. The approximate number of meters for drilling during Stage 1 (Months 0 to 6) is as follows:

- Tailings dumps: Approx. 220 to 240 AC holes for approx 14,000 m of drilling
- Tailings terraces: Approx. 35 to 50 AC holes for approx 1,000 m of drilling

Additional drilling is recommended in stage 2 (months 6 to 12) but these locations will only be known on completion of stage 1.

### 1.9.7 Budget

An initial on site budget has been proposed over 12 months for a total of USD 2,400,000.00 (spent over two stages within the 12 months) to include the following:

- Stage 1 – Initial metallurgical testing, aircore (AC) drilling and mineral resource estimate
- Stage 2 – Additional AC drilling, metallurgical work and possible EIA and PEA

### 1.9.8 Conclusion

The size of the Manono tailings project, the grade of lithium and tin mineralization as derived from the QP grab sampling program, as well as the seemingly good size distribution of historically mined and subsequently crushed particles across the tailings and terraces, results in a significant lithium and tin target which warrants additional exploration.

## 2. INTRODUCTION AND TERMS OF REFERENCE

### 2.1 Terms of reference

*Nico Scholtz (NS)* has been requested by Canadian - and Frankfurt Stock exchange listed *Tantalex Resources Corp.* to prepare a National Instrument (NI) 43-101 Technical Report on the Manono Tailings Project located within the central Democratic Republic of the Congo (DRC). NS is a Qualified Person (QP) under N43-101 and has completed this report for the purpose of providing technical information on the project. Additional recommendations on future work programs are also provided.

The primary purpose of this report is to provide technical information on the Manono Tailings Project. The following is important with regard to data used in this report:

1. All tailings XYZ locations were captured in WGS84 UTM zone 35S using a handheld GPS unit.
2. No topographic DGPS (Differential GPS) survey has been completed up to date.
3. All grab sampling was done by the QP in person or under such supervision and are from surface of tailings only.
4. All maps, models and sections are set in True North (TN) unless otherwise stated.

This report is to be filed as a Technical Report with the Canadian Securities Regulatory Authorities pursuant to the June 30th, 2011 Guidelines for contents of a National Instrument 43-101 Report, and the Standards of Disclosure for Mineral Projects.

#### 2.1.1 Units of measurement

All units of measurement used in this technical report are in metric, and the currency expressed in US dollars, unless otherwise stated.

### 2.2 Independence

*Nico Scholtz* acts as an independent geological consultant and Qualified Person (QP) according to section 1.5 of the *National Instrument 43-101 standards for disclosure of mineral projects*. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is not dependent on the results of this report.

### 2.3 Sources of Information

NS received the following documentation from *Tantalex*:

1. Boundary coordinates for PER 13698 (*Permis Exploitation Rejets*)
2. Exclusion zone coordinates (Excluding tailing #s G, J and K according to the agreement between *Tantalex* and *Minocom Mining SAS*)

Other sources of information gathering include the following:

- Historical data searches from the *DRC Ministry* archives and databases

#### **2.4 Personal visits to Property**

Nico Scholtz (NS) is a geological consultant to *Tantalex* and has investigated and visited the Manono Tailings Project on a number of occasions during 2018.

### 3. RELIANCE ON OTHER EXPERTS

Nico Scholtz (NS) prepared this report for *Tantalex Resources Corp.* The information, conclusions, opinions, and estimates contained herein are based on information available to the author at the time of preparation as received from *Tantalex Resources Corp.* NS did not rely on any other experts for the completion of this report.

## 4. PROPERTY DESCRIPTION AND LOCATION

### 4.1 Background information on the DRC

The Democratic Republic of the Congo (DRC) is a country located in Central Africa. It is sometimes referred to by its former name of Zaire, which was its official name between 1971 and 1997. The DRC borders South Sudan and Central African Republic to the north, Uganda, Rwanda, Burundi and Tanzania to the east; Zambia to the south; Angola to the southwest; and the Republic of the Congo (ROC) and the Atlantic Ocean to the west.

It is the second largest country in Africa after Algeria, (the largest in Sub-Saharan Africa) by area and the 11th-largest in the world. With a population of almost 80 million, the Democratic Republic of the Congo is the most populated officially Francophone country, the fourth-most-populated country in Africa and the 16th-most-populated country in the world (DRC survey START centre, 2017).

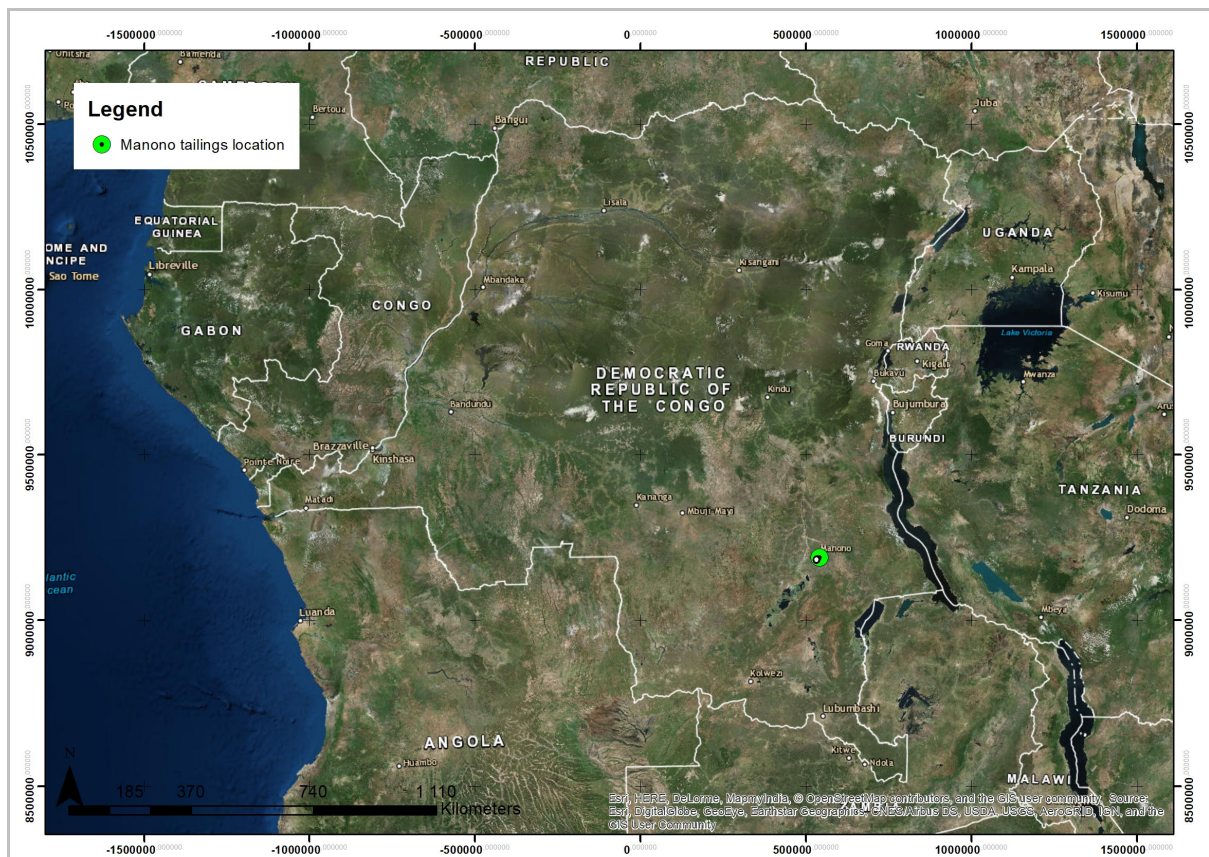


Figure 4.1 Location of the Manono Tailings Project in the Democratic Republic of the Congo (DRC) (<http://services.arcgisonline.com/arcgis/services>).



#### 4.2 Property Location

The Manono Tailings Project is located within south central DRC, approximately 500 km due north of the southern capital city Lubumbashi. The closest settlement to the Project is the Manono and Kitotolo towns located partially within the license boundary to the west and east of the tailings respectively.

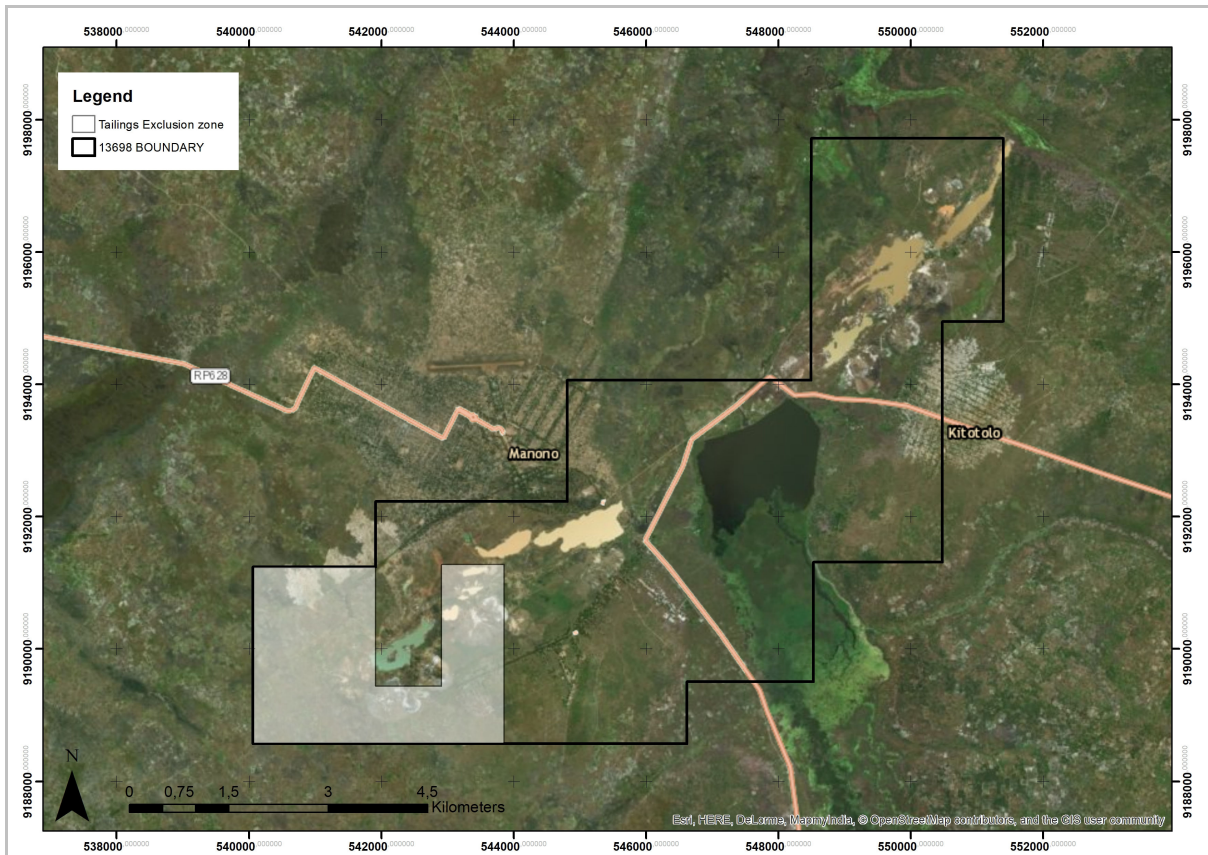


Figure 4.2 Location of the Manono Tailings Project near the towns of Manono and Kitotolo within the south central DRC showing the exclusion zone (<http://services.arcgis.com/arcgis/services>).



Figure 4.3 View of Manono tailings (a) from the air and (b) from op top (note person for scale).

The village of Manono has basic infrastructure and services, which evolved from the original mine infrastructure. Following the historical Tin Mine's closure the town fell into disarray and many houses are currently uninhabitable.

### 4.3 Mineral Tenure

The mineral rights to the Manono Tailings Project are reserved under a tailings exploitation permit (PER 13698) which was issued to *Minocom Mining SAS* (53 km<sup>2</sup>) on 23 March 2017 and expires 22 March 2022.

#### 4.3.1 Mining code

The law that governs the mining sector in the DRC is the 2002 Mining Code (Law no. 007/2002) and its revision the *2018 Mining Code*. In terms of this law, foreign natural and legal persons may own unrestricted mining rights as long as they elect domicile with a mining and quarrying agent (mandataire en mines et carrières – a sort of government-registered notary), through whom the foreign investor is obliged to act.

The 2018 Mining Code provides a comprehensive set of rules applicable to all aspects of mining, including acquisition, transfer, operation and termination of mining rights, environment protection, cultural heritage, protection of neighbouring communities, and tax and customs incentives. It also covers the quarrying activities on a self-contained basis. Two types of mining permits are available:

- Research permit - A research permit provides the exclusive right to its holder, inside its mining perimeter, to conduct exploration activities for the minerals for which the permit is awarded. The maximum mining area that can be granted for a research or exploitation permit is 400 km<sup>2</sup>, while the maximum mining area that can be held by one person and his or her affiliated companies is 20,000 km<sup>2</sup>.
- Exploitation permit - An exploitation permit provides the exclusive right to its holder to conduct exploration, development, construction and mining activities for those minerals for which the permit is given. It also allows its holder to build the installations and infrastructure required for the mining exploitation, use the water and forestry resources inside the mining perimeter, and process, transport and market the minerals extracted from the mining perimeter. There are three types of exploitation permits:
  1. Exploitation permit: It is a standard, large-scale operation permit that is granted for 25 years. It can be renewed for 15 years for as long as the deposit can be mined.
  2. Tailings exploitation permit: It is similar to the exploitation permit and is granted for five years. It can be renewed for five years for as long as the tailings can be mined.

3. Small-scale exploitation permit: It is given for investments requiring \$100,000 – \$2,000,000 for exploitable reserves having a mine life of less than 10 years and the operations of which can be mechanized. It is granted for a maximum of 10 years and cannot be renewed beyond 10 years from its date of issuance, but extension can be obtained.

#### **4.3.2 Royalties and taxes**

The increase in the royalties and taxes is among the principal innovations of the 2018 mining code. These include taxes varying from 2 to 10 percent on certain "strategic substances" which are defined as minerals which "on the basis of the Government's opinion of the prevailing economic environment, are of special interest given the critical nature of such mineral and the geo-strategical context".

Other royalty rates under the new code include the following:

- for non-ferrous metals, 3.5 percent;
- for precious metals, 3.5 percent;
- and for precious stones, 6 percent.

In addition, 10 percent of royalty payments must now be paid to a fund dedicated to future generations.

While Corporate Income Tax remains at a reduced rate of 30 percent for miners, a new 'super profits' tax of 50 percent tax has been introduced on profits exceeding 25 percent of those forecast in the mine feasibility study. Furthermore, miners must now contribute a minimum of 0.3 per cent of turnover to development projects for communities affected by the mine's activities.

#### **4.4 Property boundary demarcation**

The Manono tailings license boundaries were received from *Tantalex*. Boundary points are not marked in the field.

#### **4.5 Agreements, licence numbers and rights on the property**

The mineral rights of the Project is owned by *Minocom Mining SAS (Minocom)* and is reserved under PER 13698 (*Permis Exploitation Rejets*). *Minocom* recently signed an agreement with *Tantalex Resources'* wholly owned Congolese subsidiary *Buckell SAS* for a 65% participation in a joint venture entity named *Société des Tailings de Manono ("STM")*. PER 13698 is being transferred into the name of *STM* with the Democratic Republic of Congo Mining Cadastre ("CAMI"), such transfer with the CAMI was a condition precedent to the payment by *Buckell* of a total amount of \$US3,000,000 to *Minocom* in exchange for the assignment of its participation in *STM*.



#### **4.6 Environmental liabilities and permits**

Environmental liabilities were not investigated by the QP. It is the QPs understanding that all permits are in good standing to commence exploration on the Manono tailings project.

#### **4.7 Social aspects**

Social aspects were not investigated by the QP.

## 5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 Climate

The DRC climate is hot and humid in the river basin and cool and dry in the southern highlands, with a cold, alpine climate in the Rwenzori Mountains to the east. South of the Equator, the rainy season lasts from approximately October to May and north of the Equator, from April to November.

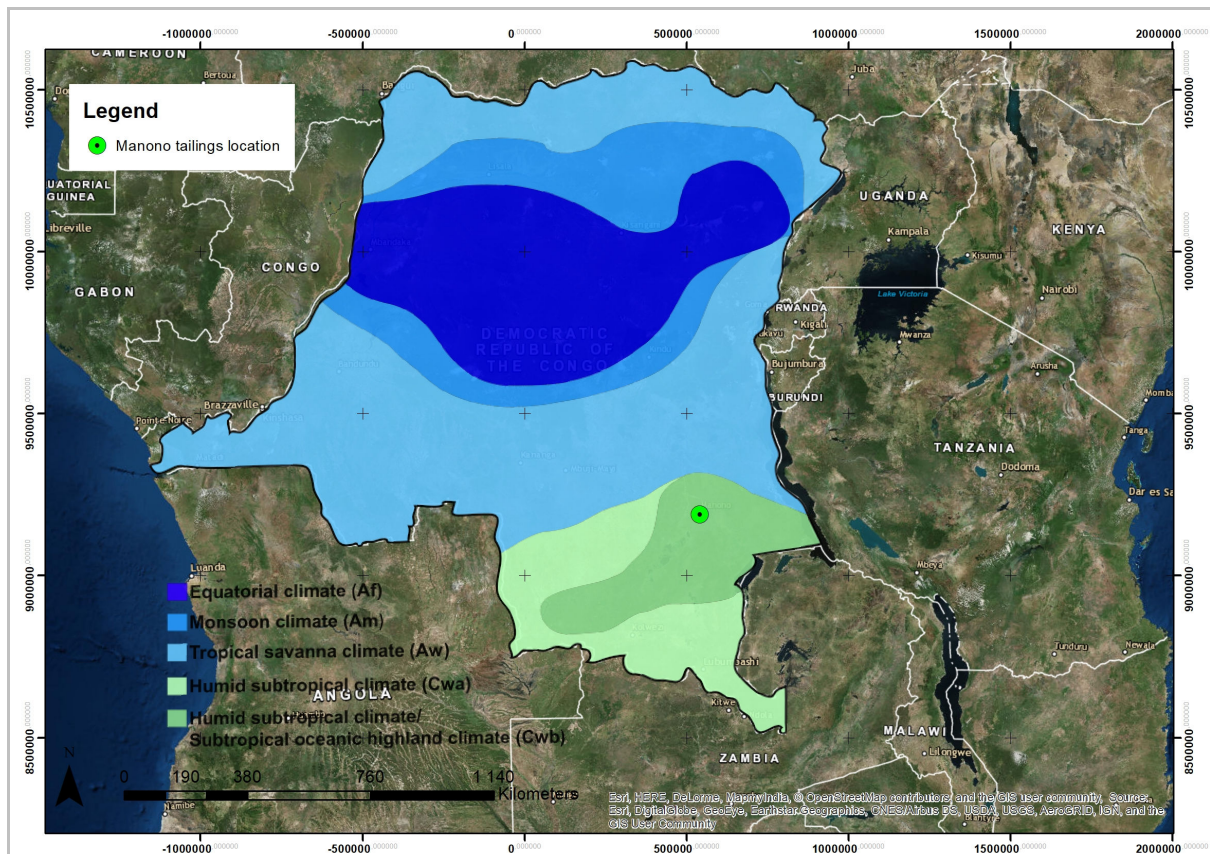


Figure 5.1 Koppen Classification in the DRC showing location of the Manono Tailings Project within a humid subtropical climate ([http://koeppen-geiger.vu-wien.ac.at/pdf/Paper\\_2006.pdf](http://koeppen-geiger.vu-wien.ac.at/pdf/Paper_2006.pdf)).

### 5.2 Physiography

The Manono tailings project comprises a flat lying topography broken by the tailings dumps dominating the skyline. These tailings dumps reach a maximum height of 700 m above mean sealevel in the southern part of the licence, which is approximately 50 to 60 m above the surrounding plains.

### 5.3 Access

Although the project is accessible via air and ground routes, chartered flights to Manono from Lubumbashi (located approx 500 km to the south) is also available (duration of approximately 1.5 hours per flight). The access route via road varies from season to season and can take approx 24

hours in the dry season (May to September) and approx one week or more in the wet season (October to April) due to poor road conditions.

#### 5.4 Operating season

The project has no operating season and although work can continue year round, road access is more difficult in the wet season.

#### 5.5 Vegetation

The Manono tailings project is located within a savannah vegetation type according to the *Koppen Classification*.

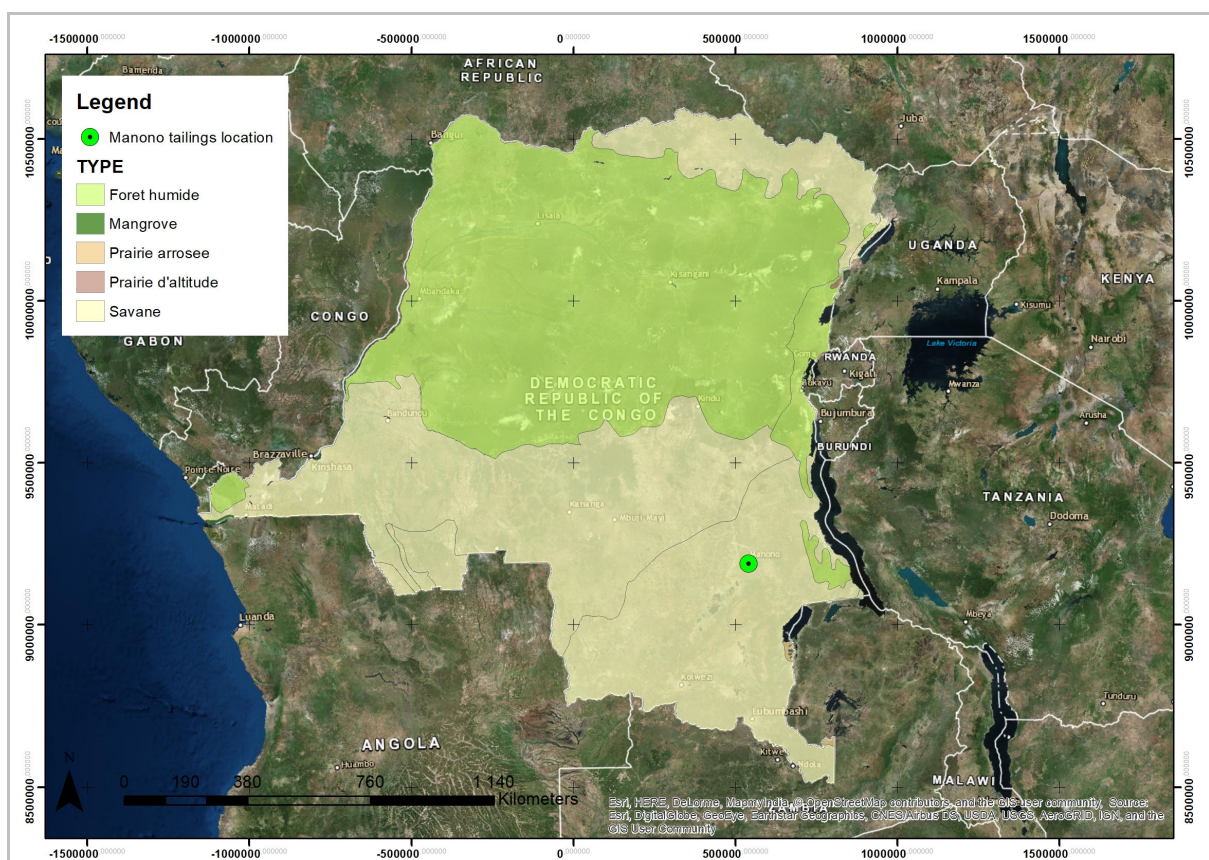


Figure 5.2 Vegetation types of the DRC showing the Manono Tailings Project located within the Savannah vegetation type (<http://services.arcgisonline.com/arcgis/services>).

#### 5.6 DRC resources

The DRC is the largest Francophone country in Africa, with vast natural resources. The country has nearly 80 million inhabitants, fewer than 40% of whom live in urban areas. With approximately 80 million hectares of arable land and a number of minerals and precious metals, the DRC has the



potential to become one of the richest countries on the continent and a driver of African growth if it can overcome its political instability (worldbank.com).

### 5.7 Infrastructure and availability of exploration requirements

The Manono Tailings Project is located 500 km north of Lubumbashi. There is no nearby rail facility or power available on the Project, but water transport is available approx 50 km to the west of the project.

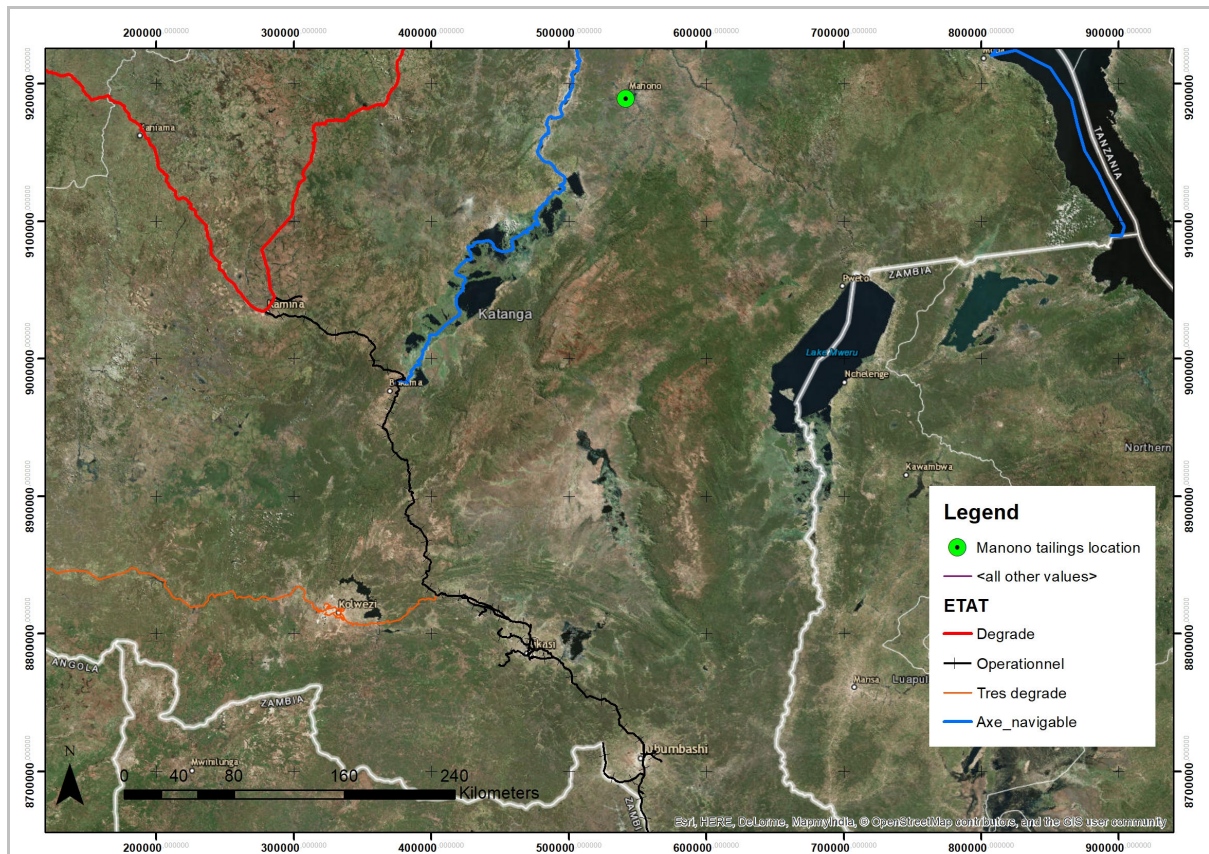


Figure 5.3 Nearest railways and navigable waterways to the Manono tailings project (<http://services.arcgisonline.com/arcgis/services>).

Unskilled labour should be available from the town of Manono and surrounding villages. Potential additional tailings storage areas, waste disposal areas, heap leach pads and potential processing plant sites can only be supplied after the completion of Environmental Investigations. Lubumbashi should be able to supply most exploration requirements and comply with all sustenance supplies. That what is not available in Lubumbashi, should be obtainable in South Africa, serviced by daily commercial flights from Lubumbashi.

## 5.7.1 Site Infrastructure

### 5.7.1.1 Water

Water is readily available from the open pits on the license area which is fed by a natural stream.

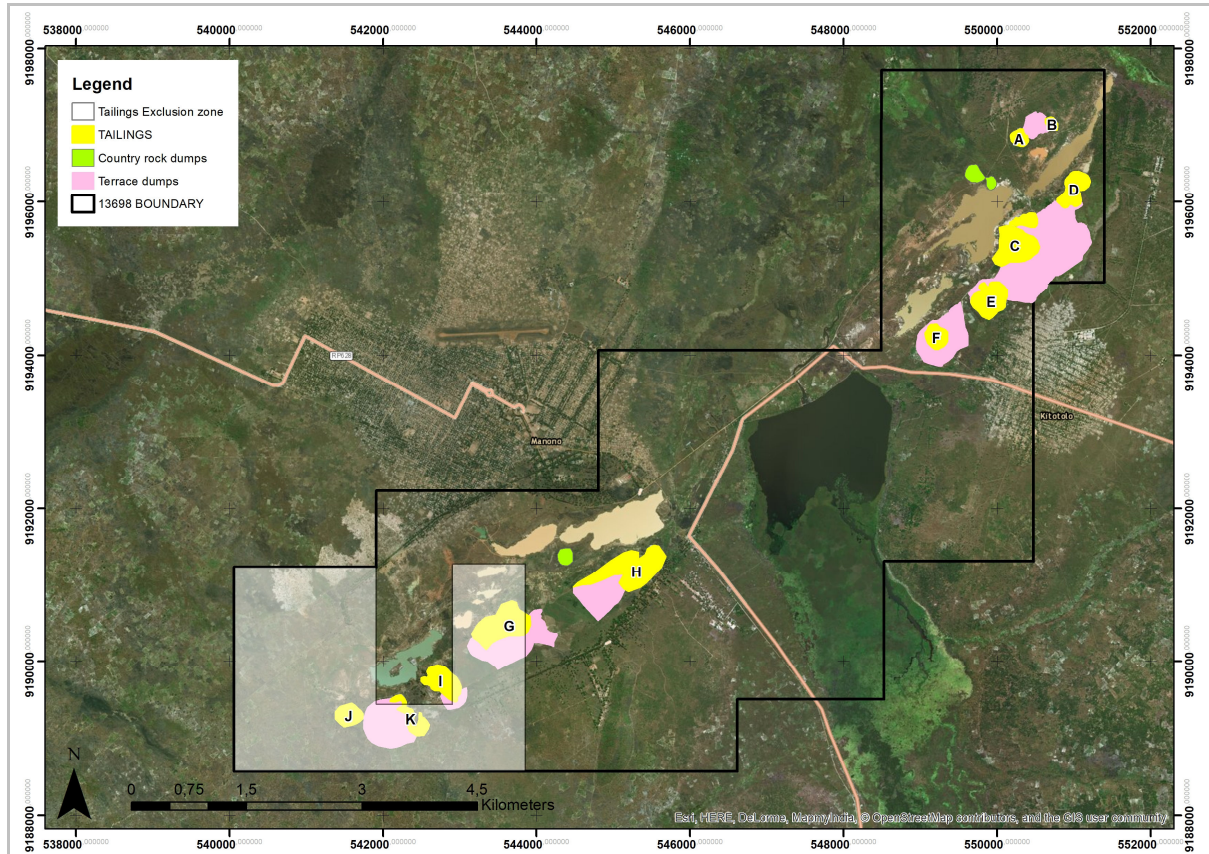


Figure 5.4 Tailings dumps on the Manono project showing location of water filled open pits fed by a natural permanent river (<http://services.arcgisonline.com/arcgis/services>).

### 5.7.1.2 Power

There is no power within the Project area and infrastructure in the Manono area is limited. Electric power generated from a newly constructed MW ground-mounted solar panel array, backed with 3 MWh batteries, should be able supply the basic needs of the Manono town. This production capacity is being coupled with several km of medium and low voltage transmission lines, in order to power street lights and households and to enhance the development of new small and medium industries in the area (Spanjers, 2017). The *Piana-Mwanga* hydroelectric plant, located 90 km east of Manono, historically provided electricity to Manono and the mining operation. The plant could be rehabilitated to once again provide industrial power to the region.



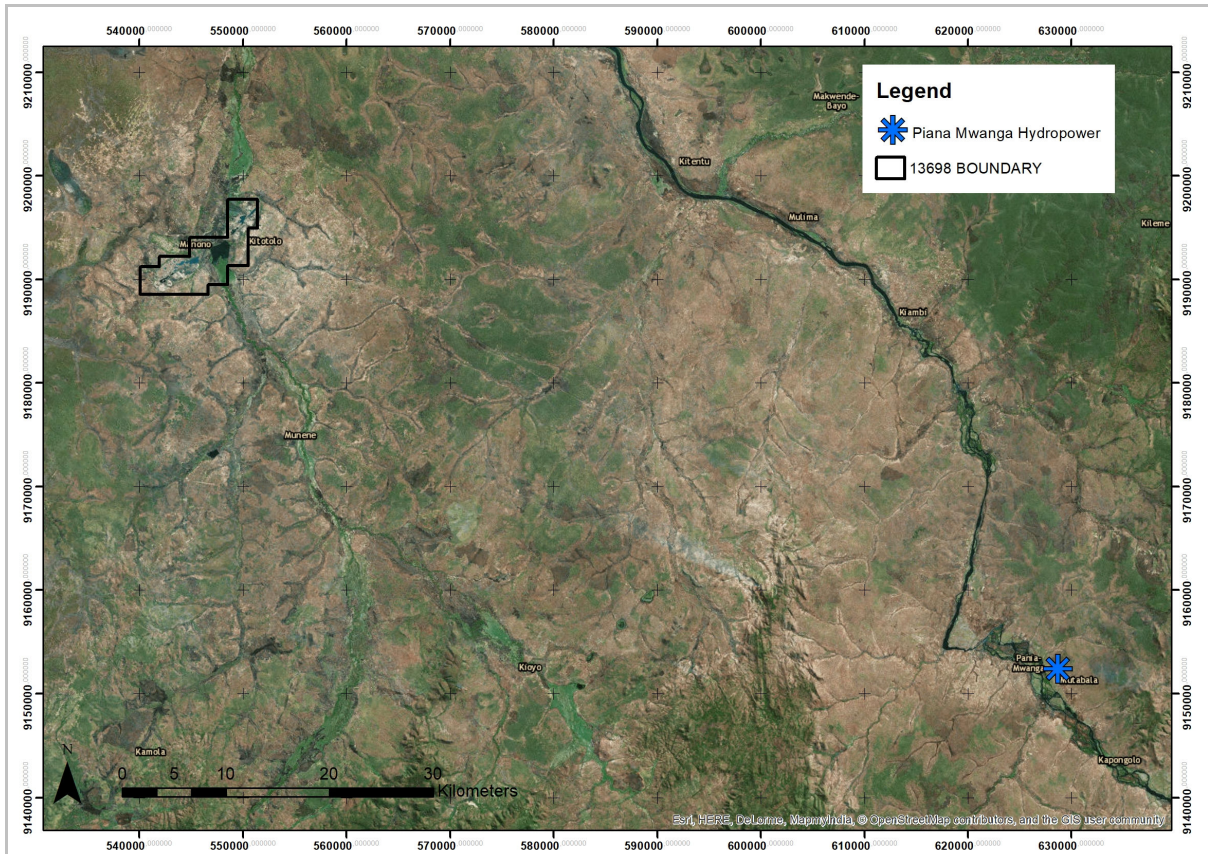


Figure 5.5 Location of the *Piana Mwanga* historical hydroelectric plant towards the east.

### 5.7.1.3 Roads

Previous mining and exploration have created some access roads, but these need to be repaired and maintained for sustained usage.

### 5.7.1.4 Railway

There is no rail infrastructure at or nearby to the Manono Project.

## **6. HISTORY**

### **6.1 Prior ownership of the Soris Project**

The license has is located directly on the site of the former mining operation and world-class LCT-pegmatite of Manono-Kitotolo (MK) mine, which has been historically defined as the largest pegmatitic deposit of tin and coltan ever worked (TTX news release, July 2018).

### **6.2 Previous exploration**

No previous exploration has been conducted on the Manono Tailings Project.

### **6.3 Historical Mineral Resources and Reserves**

No “historic” Mineral Resource or Reserves have been disclosed for the Manono Tailings Project.

### **6.4 Production**

The license is located directly on the site of the former mining operation and world-class LCT-pegmatite of Manono-Kitotolo (MK) mine, which has been defined as the largest pegmatitic deposit of tin and coltan ever worked (Bassot et Mario, 1980). The Manono Kitotolo Tailings consist of material derived from the numerous open pit mines, which were exploited from 1919 to the mid 80’s, producing 140,000 to 185,000 tonnes of tin and 4,500 tonnes of coltan concentrate (Zairetain, 1981). Lithium (from spodumene) was not recovered and its presence within the tailings and terraces as a waste product is evident from recent field investigations by the QP. A study performed by BRGM of France in 1980 on grab samples taken from two quarries of the Mine confirmed spodumene concentrations of 26,7% and 31% respectively (1,7 and 2% Li<sub>2</sub>O) (TTX news release, July 2018).

## 7. GEOLOGICAL SETTING AND MINERLIZATION

### 7.1 Regional geology

The Manono Tailings Project is located in the Central African Kilbara Belt (KIB), which together with the Karagwe-Ankole belt (KAB), forms a Mesoproterozoic (1.8-1.0 Ga) geological structure that extends from the southern part of Katanga, DRC to the southwestern part of Uganda. Separating the belts is a Ruzizian basement rise that represents the northwest extension across Lake Tanganyika of the Paleoproterozoic (>1.8Ga) Ubende belt. The KIB and the separate, but coeval KAB formed and evolved among three pre-Mesoproterozoic domains: the Archean-Paleoproterozoic Congo Craton to the west and north, the Archean Tanzania Craton to the east and the Bangweulu Block to the south (Spanjers, 2017).

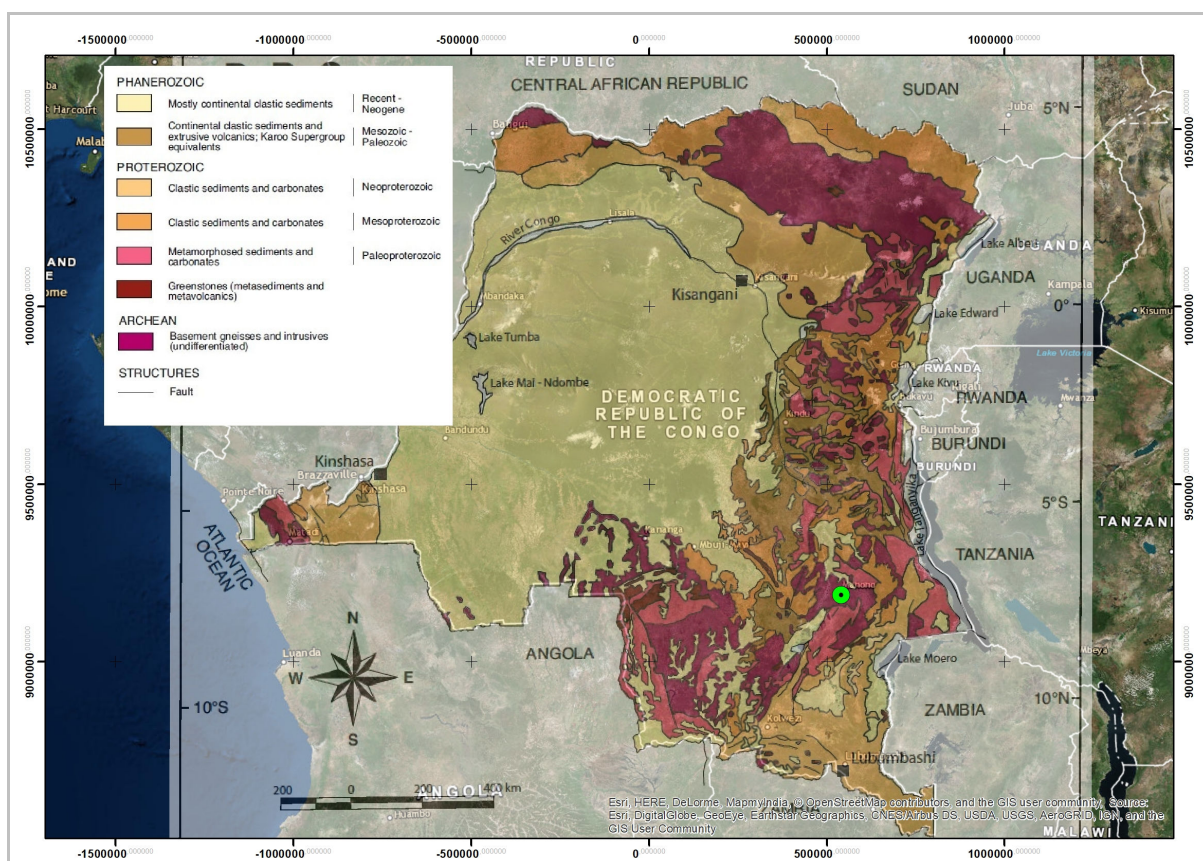


Figure 7.1 Geological setting of Manono Tailings project within the DRC.

The Kilbara belt is composed mostly of metasedimentary, with minor volcanic rocks, intruded by large volumes of Mesoproterozoic “S-type” granitoid massifs and subordinate mafic bodies. The Kilbara and Karagwe-Ankole belts host a large metallogenic province that contains granite-related Sn-W-Nb-Ta mineralization, primarily in pegmatites or quartz veins. Pegmatites may contain Nb-Ta minerals, cassiterite (Sn), amblygonite and spodumene (Li), beryl and others while cassiterite and wolframite



(W) are found in quartz veins. The pegmatites were emplaced very late during the climax of the Kilbaran orogeny, probably during the transition from orogenic collapse to extensional tectonics, based on their structural position (Spanjers, 2017 and Dewaele, 2015).

## 7.2 Local geological setting

The Manono-Kitotolo deposit (from which the Manono tailings is derived) is composed of two main highly fractionated and zoned pegmatites, Manono to the northeast and Kitotolo to the southwest. Man-made Lake Lukushi separates the two pegmatite bodies. The pegmatites were injected into phyllites, schists and metasandstones, but crosscut metadolerites in the Manono pegmatite. The pegmatite contacts are largely parallel to the regional foliation. The resultant tailings dumps and terraces are comprised of gravel, fist sized rock fragments and boulders as well as a small quantity of country rock.

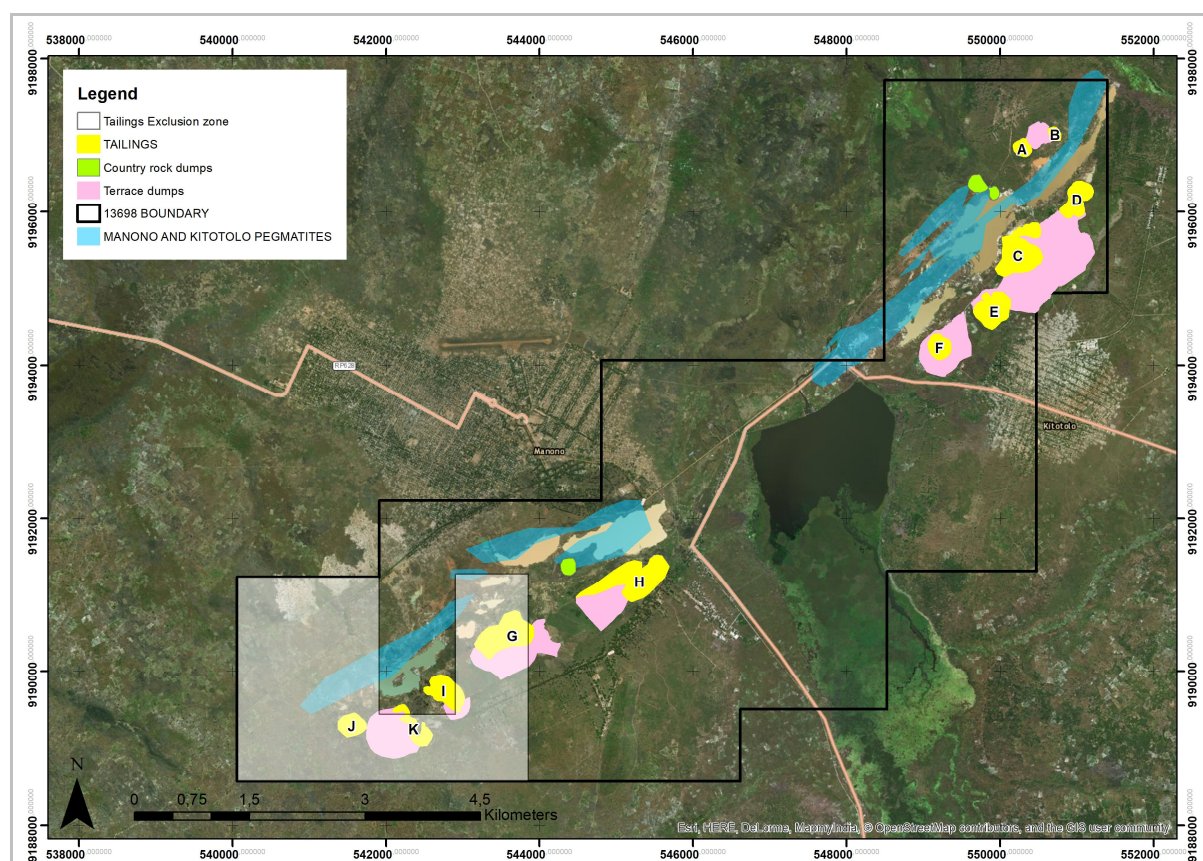


Figure 7.2 Local setting of the Manono tailings project showing the Manono and Kitotolo pegmatites as well as the tailings dumps and associated tailings terraces (Note that tailing #s G, J and K are not part of the *Tantalum Minocom* agreement).





Figure 7.3 Pegmatite from the Manono – Kitolo pegmatites showing distinct spodumene pseudomorphs set in a quartz – albite rich matrix.



Figure 7.4 One to <five mm gravel size making up most of the tailings dumps on the project area.



### 7.3 Mineralisation

Mineralisation encountered on the Manono tailings by the QP in 2018 varied from visible spodumene, spodumene pseudomorphs and lepidolite to traces of cassiterite.



Figure 7.5 Lepidolite set in quartz rich pegmatite boulder from tailings dump # A.



Figure 7.6 Spodumene set in quartz rich pegmatite boulder from tailings dump # C.





Figure 7.7 Spodumene set in quartz rich pegmatite boulder from tailings dump # C.

## 8. DEPOSIT TYPE

The Central African Mesoproterozoic Kibara belt in Katanga (DR Congo) forms a metallogenic province that hosts a variety of granite-related mineralization types, rich in minerals such as cassiterite, columbite–tantalite, wolframite, spodumene and beryl. This mineralization is mainly present in pegmatites and quartz veins that are thought to be associated with the youngest granite generation in the Kibara belt (i.e., so-called “E-group” granite generation). Manono-Kitotolo (an LCT pegmatite) is one of the world's largest Sn, Nb–Ta and Li mineralized pegmatites

### 8.1 Regional Environment

All LCT pegmatites are emplaced into orogenic hinterlands i.e. they are found in cores of mountain belts where metasedimentary and granitic rocks predominate. Many of the world's largest LCT (Lithium-cesium-tantalum) pegmatites are found in Archean and (or) Paleoproterozoic orogens. The pegmatites originated in the hinterlands of orogenic belts that have long since lost all topographic expression (Bradley *et al.*, 2017).

### 8.2 Physical description of deposits

Pegmatites do not form in isolation, but as members of larger populations. Pegmatites within a group are cogenetic bodies numbering tens to hundreds, and occupy an area of a few tens of square kilometres, defined as a pegmatite field or pegmatite district (Bradley *et al.*, 2017).

### 8.3 Geophysical characteristics

LCT pegmatites do not have a strong geophysical signature. The granitic composition of pegmatites means that their density is often only marginally different from metasedimentary host rocks and their small size would make anomalies difficult to resolve (Bradley *et al.*, 2017).

### 8.4 Mineralogical characteristics

Volumetrically, even the most evolved granitic pegmatites are composed of:

- Quartz,
- Sodic plagioclase, and
- Potassium feldspar.

Lithium mineralization within LCT pegmatites are mostly in the silicates spodumene ( $\text{LiAlSi}_2\text{O}_6$ ), petalite ( $\text{LiAlSi}_4\text{O}_{10}$ ), and lepidolite (Li-mica,  $\text{KLi}_2\text{Al}(\text{Al},\text{Si})_3\text{O}_{10}(\text{F},\text{OH})_2$ ). Tantalum mineralization pre-dominantly occurs as columbite-tantalite ( $[\text{Mn},\text{Fe}][\text{Nb},\text{Ta}]_2\text{O}_6$ ). Tin is found as cassiterite ( $\text{SnO}_2$ ). Cesium is mined exclusively from pollucite ( $\text{CsAlSi}_2\text{O}_6$ ) and occurs only in highly fractionated LCT pegmatites.

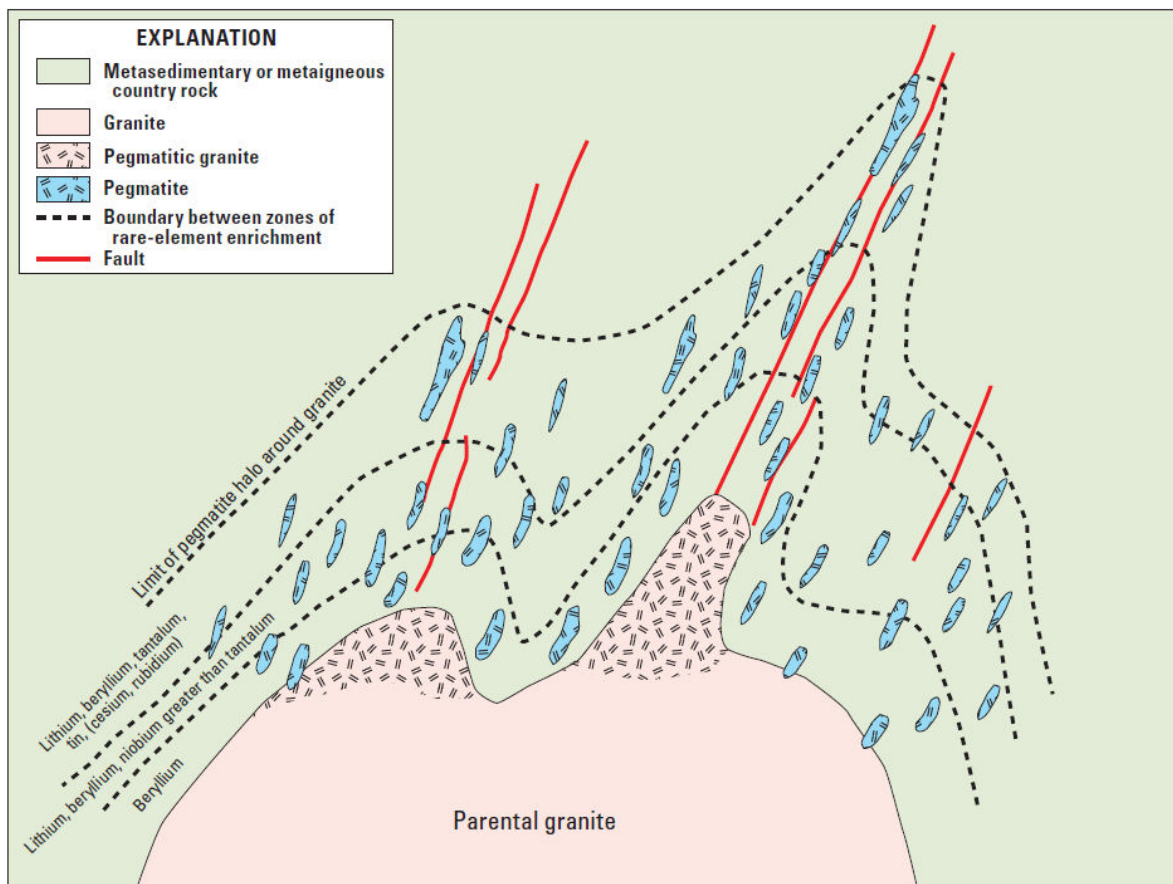


Figure 8.1 Graphic representation of a zoned pegmatite field around a granitic source (Bradley *et al.*, 2017).

### 8.5 Supergene ore characteristics

Under conditions of intense tropical weathering, the durable, heavy, resistant phases in LCT pegmatites may survive dissolution and accumulate in residual soils or placers.

### 8.6 Geochemical characteristics

LCT pegmatites take their name from their enrichments in Li, Cs, and Ta, but they also tend to be enriched in Be, B, F, P, Mn, Ga, Rb, Nb, Sn, and Hf, and locally, in U and As.

### 8.7 Environment of mineralisation

Pegmatites may intrude a wide variety of rock types, but they are most commonly found in upper greenschist to lower amphibolite facies metasedimentary and meta-igneous rocks. Pegmatites are generally emplaced within 10 km of fertile, peraluminous granites or leucogranites.



## 9. EXPLORATION

*Tantalex* has completed the following exploration on the Manono Tailings Project in 2018:

- Grab sampling and associated laboratory assays
- Handheld GPS topographical survey
- Bulk sampling for metallurgical testwork
- Road access investigations on the Manono tailings

### 9.1 Grab sampling

The QP together with the *Tantalex* field team completed a grab sampling program covering the tailings on the license area. This grab sampling program was conducted on parts of the 10 tailings dumps and corresponding tailings terraces and was completed in order to obtain a general idea of the grade of the various components of each of the tailings and terraces on the said license area.

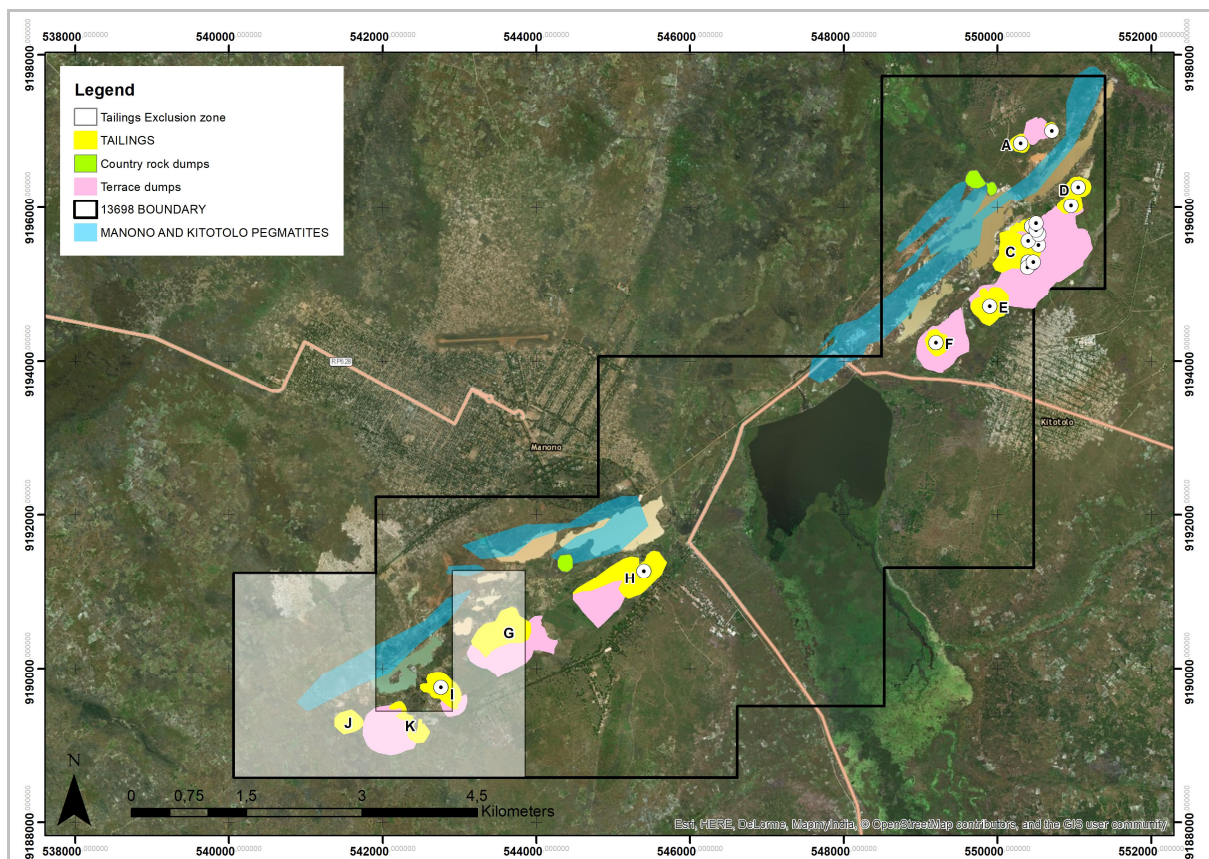


Figure 9.1 Location of grab samples on 10 tailings dumps marked A to K from north to south (Note that tailings C and D comprise two dumps each and that the agreement between *Tantalex* and *Minocom* excludes tailing #s G, J and K as per exclusion zone towards the southwest).

Better  $\text{Li}_2\text{O}$  results from the *Tantalex* grab sampling program are noted below with corresponding  $\text{SnO}_2$  and  $\text{Ta}_2\text{O}_5$  results as well (Note that these are regarded as grab sample assay results and are not necessarily representative of the average mineralization grade of the tailings).

Table 9.1 Some of the better assay results from the *Tantalex* grab sampling (cf. Appendix A for full results).

Grab Sample #	Sample description	Tailings Dump	Lithium	Tantalum	Tin
			$\text{Li}_2\text{O}^a$ (%)	$\text{Ta}_2\text{O}_5^b$ (ppm)	$\text{SnO}_2^c$ (ppm)
S 00124	Spodumene	D (South)	6,57	10,75	411,35
S 00118	Spodumene	C (South)	3,88	123,33	690,66
S 00147	Spodumene	H	3,79	31,63	521,81
S 00144	Spodumene	H	3,10	34,44	1150,26
S 00119	Spodumene	C (South)	2,69	42,01	457,06
S 00108	Lepidolite	A	2,67	290,62	933,16
S 00146	Weatherd Petalite	H	2,58	33,09	548,47
S 00117	Spodumene	C (South)	2,50	9,52	1066,46
S 00107	Lepidolite	A	2,24	598,34	344,06
S 00130	Spodumene	E	1,93	41,64	820,16

- a.  $\text{Li}_2\text{O}$  obtained by conversion factor of 2.153
- b.  $\text{Ta}_2\text{O}_5$  obtained by conversion factor of 1.2211
- c.  $\text{SnO}_2$  obtained by conversion factor of 1.2696



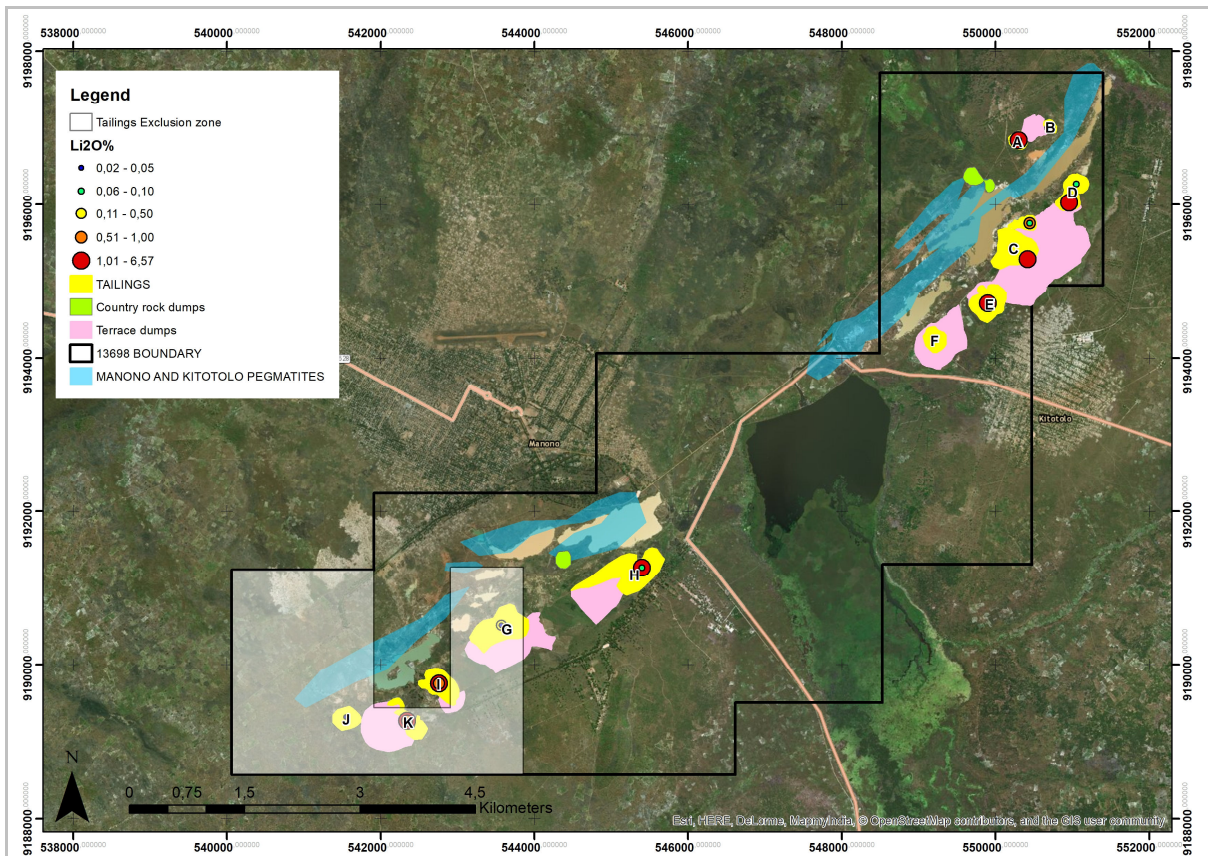


Figure 9.2 Li<sub>2</sub>O grab sample results from samples retrieved by NS and *Tantalex* field teams in 2018. The northern sector shows better lithium results compared to that of the southern sector (Note that tailing #s G, J and K are not part of the *Tantalex Minocom* agreement).

### 9.1.1 QP opinion

The grab sampling program completed by NS together with the *Tantalex* geologists and field teams are adequate for its purpose in this report. The samples were taken from various parts of all tailings and all sample types were sampled. It must however be noted that this grab sampling program is not a substitute for drilling. Drilling of the tailings is recommended and regarded as the only way to investigate the below surface distribution of mined material.

## 9.2 Handheld GPS survey

The QP together with the *Tantalex* geologists and field teams completed a handheld GPS survey in order to obtain an estimate of the tailings heights and volume extent.

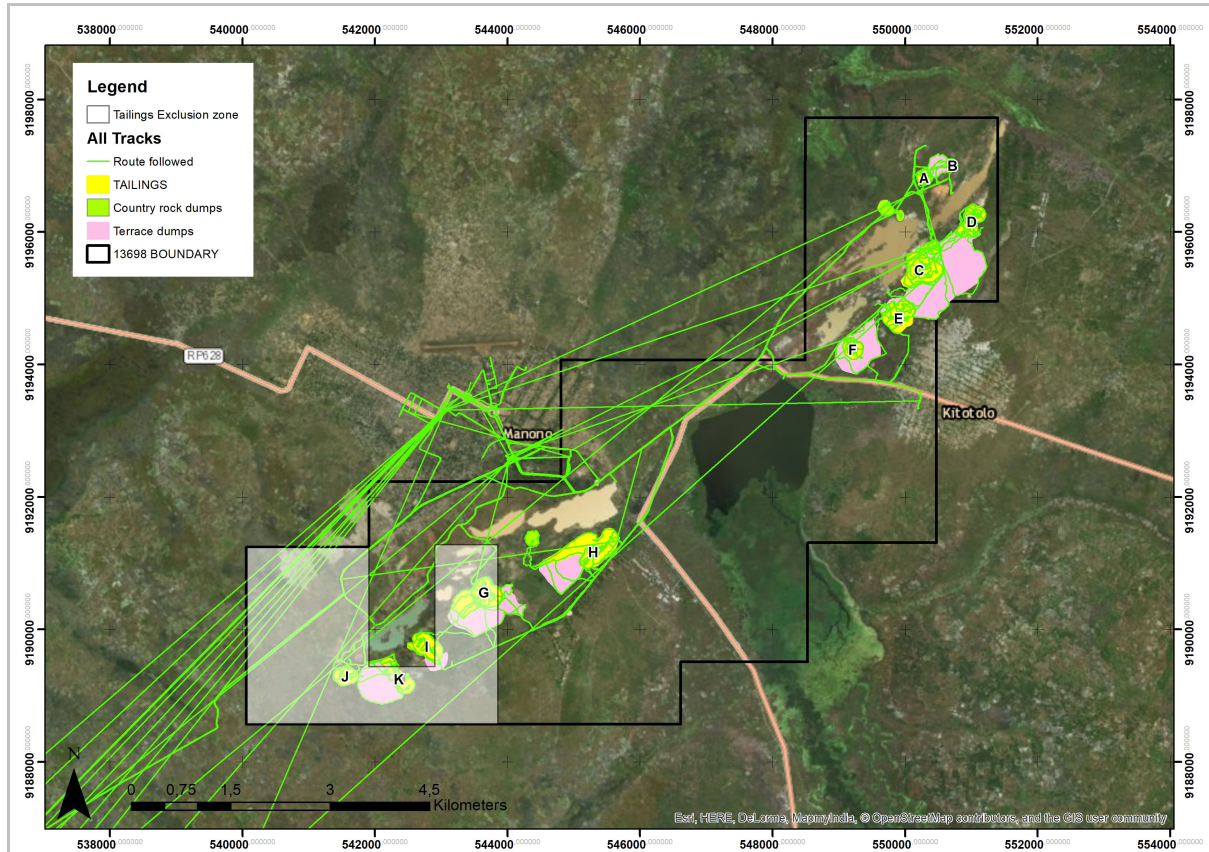


Figure 9.3 Handheld GPS tracks in the Manono tailings and terrace area used to generate preliminary topographical surface (Note that tailing #s G, J and K are not part of the *Tantalex Minocom* agreement).

### 9.2.1 QP opinion

The handheld GPS program completed by NS together with the *Tantalex* geologists and field team is adequate for its purpose in this report. All tailings and terraces were walked continuously over a number of days in order to generate a first pass volume for generation of exploration target presented in this report. It must however be noted that this handheld GPS program is not a substitute for a detailed DGPS (Differential GPS) survey, preferably by airborne drone survey. A DGPS drone survey of the tailings is recommended and regarded as the best method to generate detailed volumes required for the proposed NI43-101 compliant mineral resource estimate.



### 9.3 Bulk sampling

NS together with the *Tantalex* geologists and field teams completed a bulk sampling program from tailings dump and terrace # C. This tailings dump was chosen for the said bulk sample due to easier access. The specific tailings dump is also regarded as the most representative of all material located within said tailings on the license area.

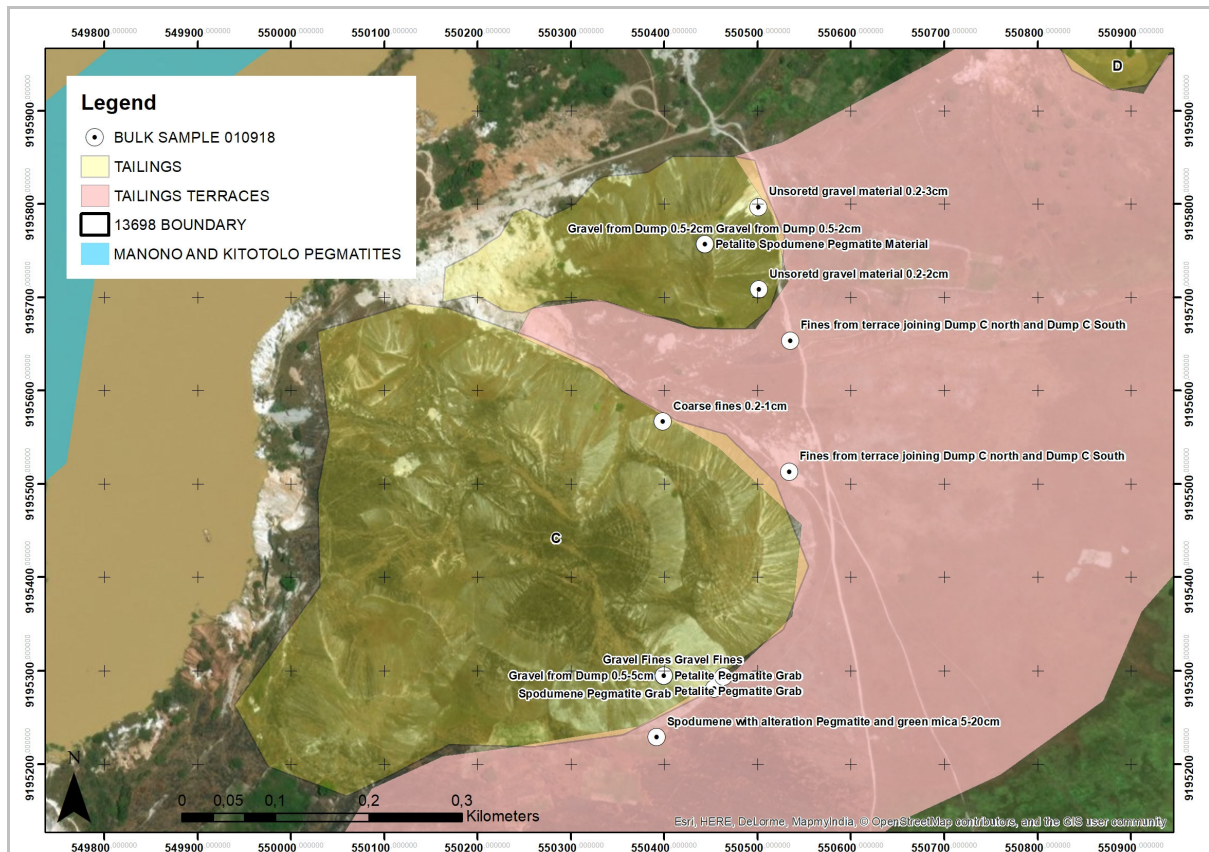


Figure 9.4 Eighteen (18) bulk sample bags (approx 50 kg each) retrieved from different locations on tailings dump # C.

#### 9.3.1 QP opinion

The 1 ton bulk sample retrieved by NS together with the *Tantalex* geologists and field team is adequate for its purpose in this report.

### 9.4 Access route investigations

The *Tantalex* field teams have investigated the tailings and terraces for access route construction during the proposed AC drilling operations. Such routes are to be constructed, but due to steep slopes and ground instability, the proposed routes had to be investigated and marked with GPS.

## 10. DRILLING

*Tantalex Resources* has not completed any drilling on the Manono Tailings Project.

## 11. SAMPLE PREPARATION, ANALYSES AND SECURITY

The methodology for the grab samples as well as bulk sample retrieved on the Manono Tailings Project is listed in this section.

### 11.1 Grab sampling

#### 11.1.1 Methodology

All necessary steps were taken to ensure correct sampling, preparation and storage techniques according to International Standards.

##### 11.1.1.1 Geochemical analysis and sample preparation

Sample preparation on grab samples was completed by *SGS laboratories in Lubumbashi, DRC*, while sample assays were completed by *SGS South Africa*.

##### 11.1.1.2 Sample preparation

Sample preparation involved the following:

- Entire sample crushed and pulverized to 75 µm.
- 75 µm mesh size used for pulverized material of which more than 85 % of pulverized material passed through the mesh size.

##### 11.1.1.3 Sample analyses

Sample analyses at *SGS South Africa* involved digestion by Sodium peroxide fusion with ICP-MS finish

##### 11.1.1.4 Sample security

NS oversaw all aspects of obtaining and labeling the samples, which included the insertion of printed labels inside the sample bags and sealing the bag with a cable tie<sup>®</sup>. The QP delivered the samples to the airport in Manono, whereafter a charter flight delivered the samples to a *Tantalex* representative in Lubumbashi, whom delivered the samples to *SGS Lubumbashi*. *SGS Lubumbashi* used a courier service to send the sample pulps to *SGS* in South Africa.

##### 11.1.1.5 Quality control

Quality assurance and quality control on grab sample results included the following:

- A. Insertion of a reference material sample (GTA03) into the grab sample batch

The reference material sample from the grab sample batch assayed 8,010 ppm Li. The expected value of Li in GTA03 is 8,148 ppm Li.

#### *11.1.1.6 QP opinion*

The reference material sample inserted into the grab sample batch is regarded as sufficient for QAQC checks. The SGS *South Africa* lithium grab sample assays are adequate for its use within this report.

### **11.2 Tantalex bulk sampling**

A one ton bulk sample was collected from tailings dump # C on the Manono Tailings project in 2018.

#### **11.2.1 Methodology**

All necessary steps were taken to ensure correct sampling, preparation and storage techniques according to International Standards. The samples were retrieved manually as follows:

- d. Use of 50 kg sample bags where possible.
- e. Sample bags were filled three quarters with mined pegmatite boulders (where applicable)
- f. Larger boulders were collected by hand
- g. All samples were transported from Manono by truck to the Tantalex office in Lubumbashi

##### *11.2.1.1 Geochemical analysis and sample preparation*

Sample preparation has not yet started.

##### *11.2.1.2 Sample security*

NS oversaw all aspects of obtaining the said bulk sample.

##### *11.2.1.3 Quality control*

NS did not complete any quality control on the bulk sampling.

##### *11.2.1.4 QP opinion*

The sample preparation and retrieval procedures for the bulk samples are adequate for its use within this report.

## 12. DATA VERIFICATION

The qualified person responsible for the completion of this report has relied upon the data supplied by *Tantalex*. Data verification for each individual subject was discussed in the appropriate Section of this report.

Additional data used in the Technical Report was generated by the QP either as a literature review, or obtained during field visits. The data used in this Technical report are adequate for its purposes within the said report.

### **13. MINERAL PROCESSING AND METALURGICAL TESTING**

*Tantalex Resources* is in the process of undertaking preliminary metallurgical investigations on the Manono Tailings Project and bulk sample results are pending.

### **14. MINERAL RESOURCE ESTIMATES**

There are no mineral resource estimates for the Project.

### **15. MINERAL RESERVE ESTIMATES**

There are no mineral reserve estimates for the Project.

### **16. MINING METHODS**

There are no mining methods yet established for the Project.

### **17. RECOVERY METHODS**

There are no recovery methods yet established for the Project.

### **18. PROJECT INFRASTRUCTURE**

Project infrastructure has been described in section 4.7.1 of this report.

### **19. MARKET STUDIES AND CONTRACTS**

There are no market studies or contracts yet for this Project.



## **20. ENVIRONMENTAL STUDIES, PERMITTING, SOCIAL AND COMMUNITY IMPACT**

### **20.1 Environmental studies**

There are no environmental studies completed for the project.

### **20.2 Permitting**

The QP is unaware of any additional permitting requirements.

### **20.3 Social and community impact**

There are no social or community impact studies completed for the project.

## **21. CAPITAL AND OPERATING COSTS**

Capital and operating costs have not yet been completed for this project.

## **22. ECONOMIC ANALYSIS**

An economic analysis has not yet been completed for this Project.

## **23. ADJACENT OR NEARBY PROPERTIES**

Although there are a number of LCT pegmatites in the vicinity of the project, there are no tailing type projects nearby to that of the Manono Tailings Project.

## **24. OTHER RELEVANT DATA AND INFORMATION**

No additional relevant data or information are available that would make this report more understanding.

## 25. INTERPRETATION AND CONCLUSIONS

### 25.1 Interpretation

The Manono tailings project has been investigated in detail by the QP and the *Tantalex* geological team in 2018. In addition to a grab sample program completed, a GPS topographical survey and limited mapping also formed part of the initial reconnaissance work conducted in 2018.

The grab sampling program confirmed that the tailings comprise mostly gravel sized particles with spodumene and in some cases lepidolite fist sized boulders strewn across the surface. Assay results confirmed that mineralised grades vary between <0.05 % Li<sub>2</sub>O up to 6.57 % Li<sub>2</sub>O (average grade of >1.0 % Li<sub>2</sub>O from the grab sample program).

### 25.2 Exploration Target

An exploration target was completed in September 2018 using the parameters as set out in *NI43-101 Section 2.3(2) (b)*. The exploration target comprises a lower and upper range based upon variable grade and volume and constant density (derived from experience). The lower range of the exploration target range was calculated as follows:

- Construction of topographic surfaces and solids (wireframes) of tailings dumps and terraces from handheld GPS surveys
- Lower percentile volumes were used based upon the QPs investigative work on the Manono tailings and past experience on similar tailings projects
- Grade and tonnage derivation based upon lower percentile unbiased grab sampling across the tailings and terraces

The upper range of the exploration target was calculated as follows:

- Construction of topographic surfaces and solids (wireframes) from handheld GPS coordinates
- Upper percentile volumes were used based upon the QPs investigative work on the Manono tailings and past experience on similar tailings projects
- Grade and tonnage derivation based upon upper percentile unbiased grab sampling across the tailings and terraces

## 25.2.1 Lower and upper range calculations

### 25.2.1.1 Database

The grab sample assay database formed the bulk for the grade calculations, while the handheld GPS data retrieved was used to generate volumes.

### 25.2.1.2 Compositing and grade capping

Not utilised.

### 25.2.1.3 Wireframe construction

The wireframes constructed as follows:

1. Tailings – handheld GPS surveys across all tailings
2. Terraces – extent mapped by handheld GPS and average thickness used varying between 5 and 10 m.

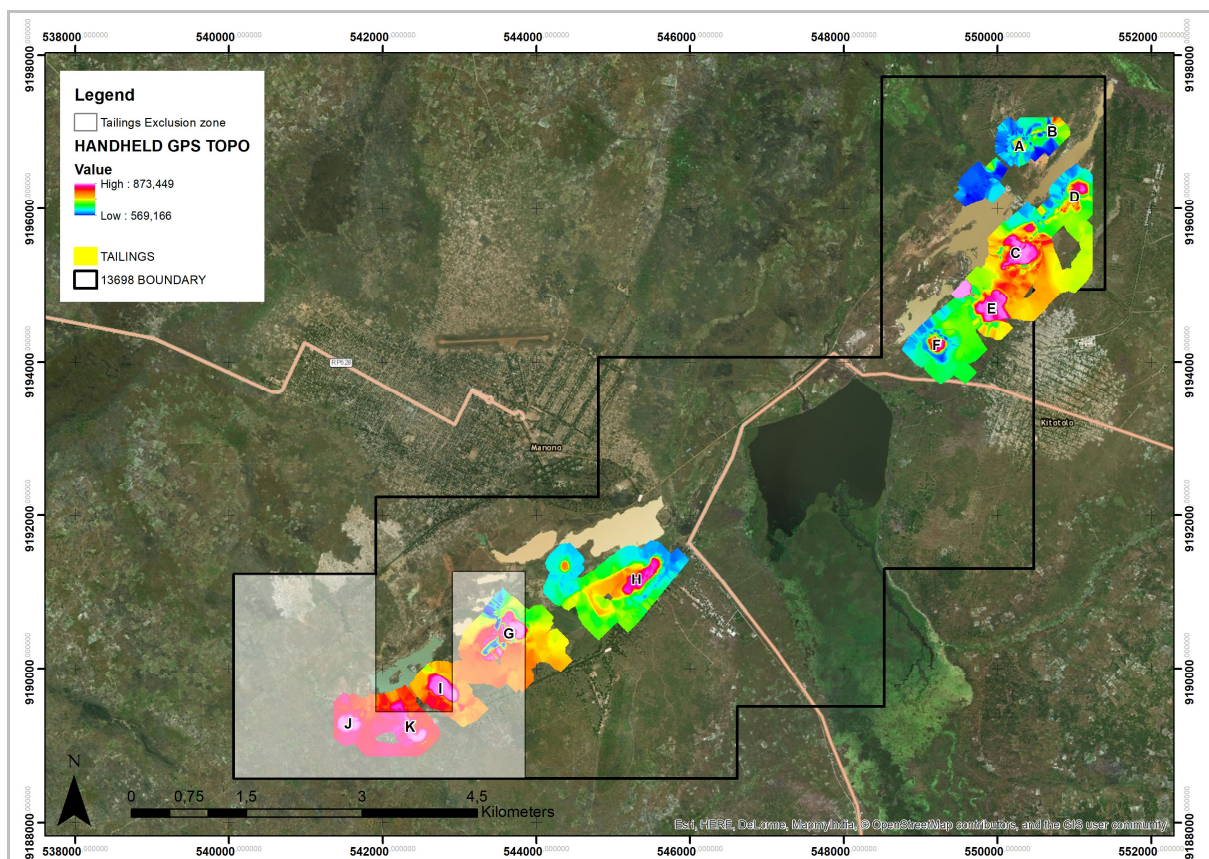


Figure 25.1 Handheld GPS points were used to generate a Digital Elevation Model (DEM), which in turn was used to create a topographical geosurface which assisted in wireframe generation for volume calculations of tailings.



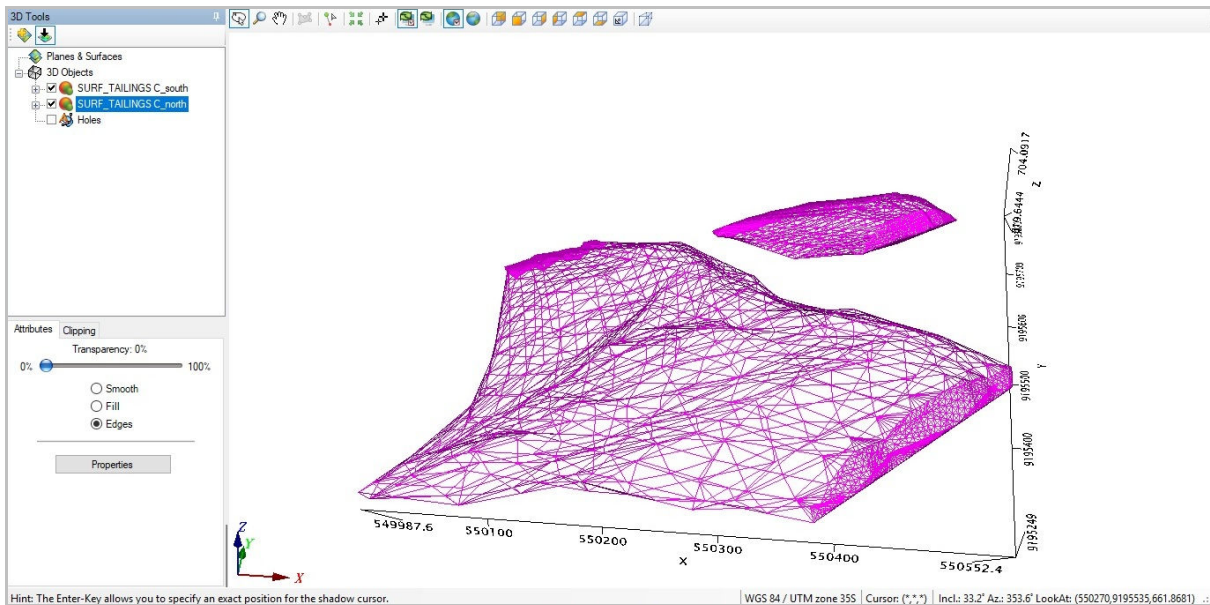


Figure 25.2 Example of wireframe for tailings dumps C north and C south (looking north) which shows the method used to calculate volume of each tailings dump.

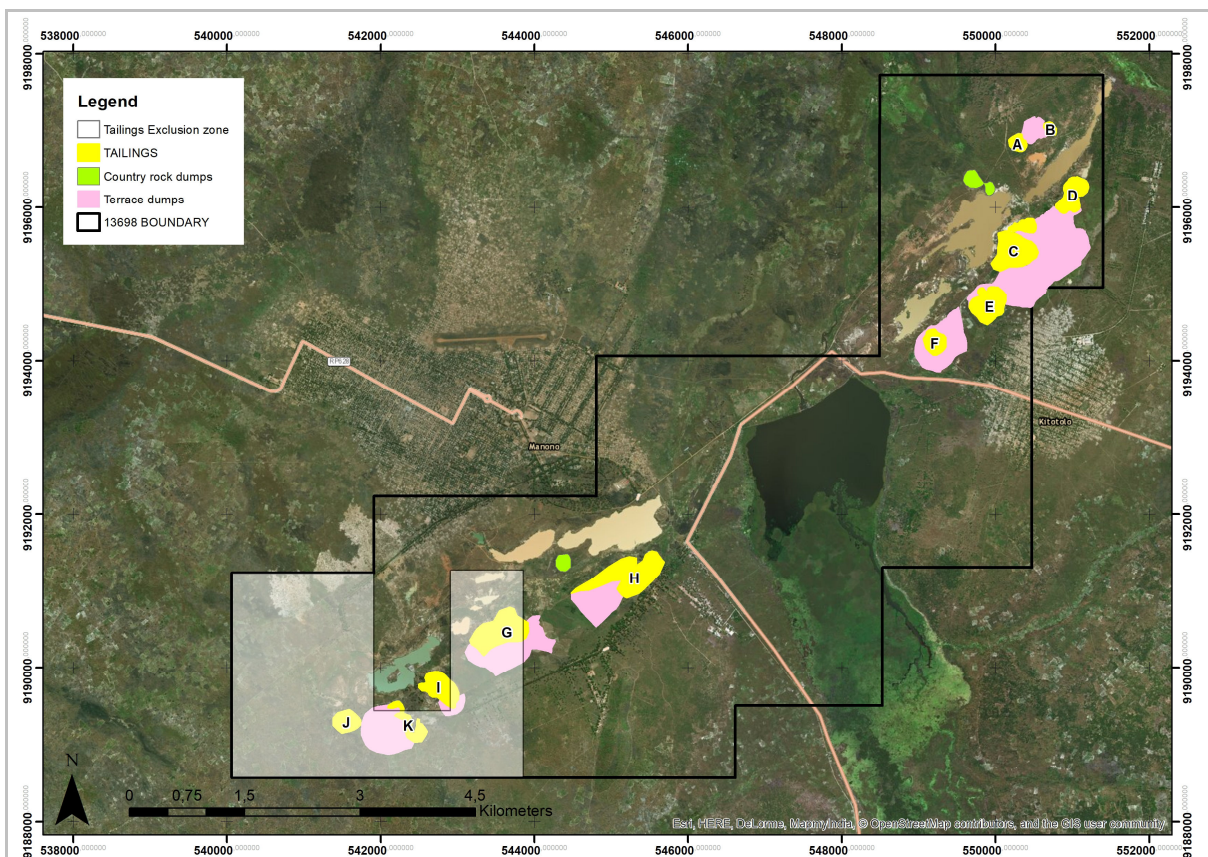


Figure 25.3 Surface extent of tailings terraces was obtained through handheld GPS work and mapping. Tailings terraces are estimated to be between 5 and 10 m thick on average.

#### 25.2.1.4 Block models

No block models were utilised.

#### 25.2.1.5 Cut off grade

Cut off grades were not used.

#### 25.2.1.6 Bulk density

QP experience shows that pegmatite tailings bulk density is approx 1.5.

### 25.2.2 Exploration target

Table 25.1 The Manono Tailings exploration target with different ore grades (values are rounded) (no cut offs were completed) and a conservative ore tonnage range and fixed density (density of 1.5 was used) (Completed for 10 tailings and terraces in total excluding tailing and terrace #s G, J and K).

	Li2O (%)		SnO2 (ppm)	
	LOWER	UPPER	LOWER	UPPER
<b>ORE GRADE</b>	0.5	1	500	1,000
<b>ORE TONS (tons)</b>	60,000,000 (Sixty million tons) to 80,000,000 (Eighty million tons)			

This exploration target is conceptual in nature, with insufficient exploration completed to define a mineral resource. The QP is uncertain if further exploration will result in the target being delineated as a mineral resource. *Tantalex* is planning to complete an aircore drilling as well as topographical survey (DGPS) program which will define the volume, grade and densities in detail. Recommendations are given within the appropriate section of this report that may upgrade the exploration target to a Mineral Resource Estimate.

### 25.3 Conclusions

The size of the Manono tailings project, the presence of lithium and tin mineralization as derived from the QP grab sampling program as well as the seemingly good size distribution of historically mined and subsequently crushed particles across the tailings and terraces, results in a significant target which warrants additional exploration.

### 25.4 Risks

The risks associated with the Manono tailings project are mainly to do with mineralogical grade (tailings have to be drilled to ascertain metal grade at depth) and metallurgical (metallurgical tests are recommended to understand the economic viability of the project).

## 26. RECOMMENDATIONS

The QPs recommendations are itemized below. The recommendations cover a wide variety of common items including database management, aircore drilling, metallurgical testing and mineral resource estimation. It is recommended that the following program be implemented to further the project assessment process.

### 26.1 Database management

The author recommends that all data pertaining to the Manono Tailings Project be kept in a single master database and be managed by a database manager. A single database for the tailings grab sample data was created for this NI43-101 report.

### 26.2 Manono tailings resource estimation

For the Manono tailings mineral resource estimation, the following is required:

- Aircore drilling with associated QAQC
- Handheld *LIBS* (Laser Induced breakdown spectroscopy) assays on inhouse completed pressed pellets of sample pulps
- Laboratory assays on at least 5 % of AC drilling samples using Sodium peroxide fusion digestion and ICP-MS finish
- QAQC on LIBS and laboratory samples to include:
  - Insertion on blanks and duplicates
  - Insertion of reference (CRMs) material
  - Umpire assays at accredited laboratory
- DGPS survey of hole collars and topographical surveys for volume calculations
- Density investigations, metallurgical testing and detailed mineralogical investigations

#### 26.2.1 Drilling

Approximately 220 to 240 AC holes are recommended on the 10 tailings dumps at an average depth of approximately 50 to 60 m per hole. An additional 35 to 50 holes are recommended on the tailings terraces (Approx. 10 to 20 m per hole) for a total of total of approx. 15,000 m of AC drilling during stage 1. The approximate number of holes for each tailings dump is listed below (All collar locations in WGS84 UTM35S are available in Appendix B):

- Tailings dump A (22 AC holes at average depth of 50 to 60 m each)
- Tailings dump B (18 AC holes at average depth of 50 to 60 m each)
- Tailings dump C (50 AC holes at average depth of 50 to 60 m each)



- Tailings dump D (31 AC holes at average depth of 50 to 60 m each)
- Tailings dump E (31 AC holes at average depth of 50 to 60 m each)
- Tailings dump F (26 AC holes at average depth of 50 to 60 m each)
- Tailings dump H (27 AC holes at average depth of 50 to 60 m each)
- Tailings dump I (21 AC holes at average depth of 50 m each)
- Additional drilling (Approximately 35 AC holes at average depth of 10 to 20 m each)

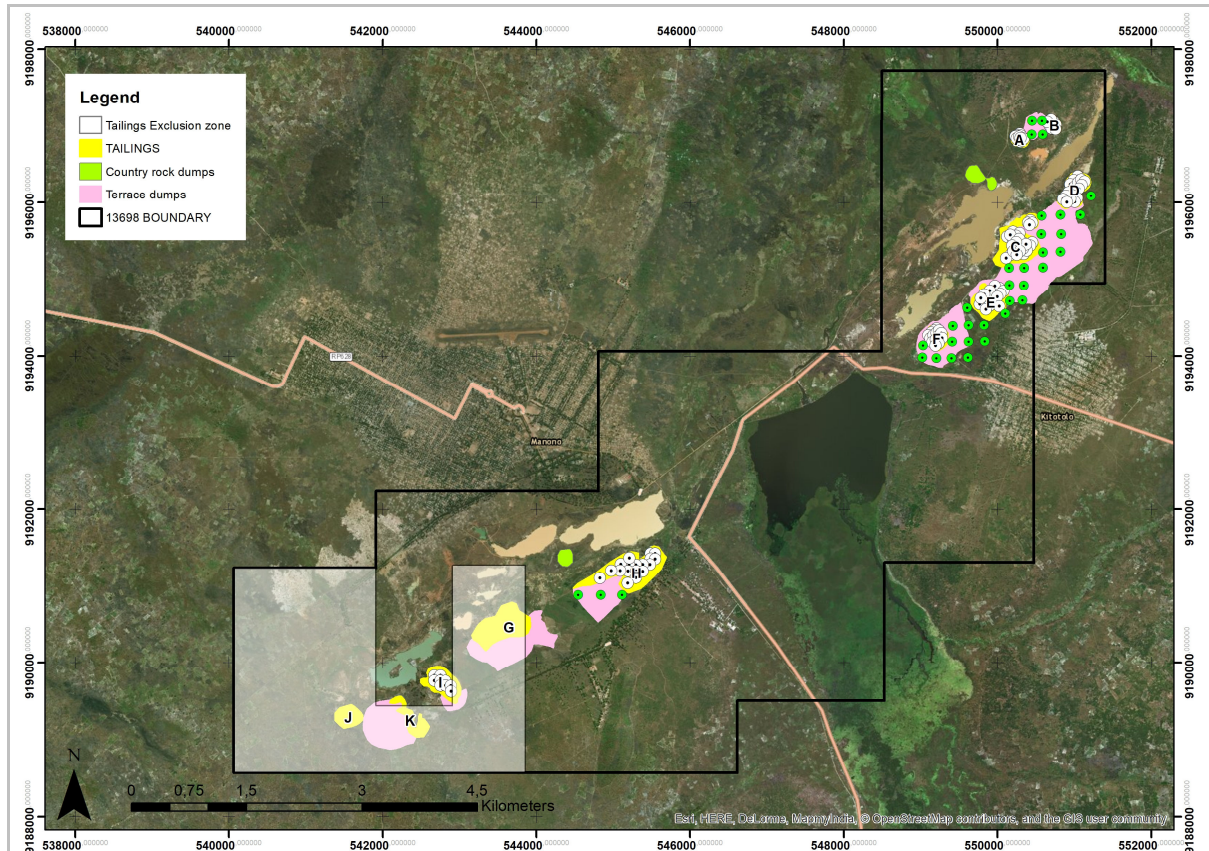


Figure 26.1 Tailings dumps and terraces on the Manono Tailings Project (note that tailings C and D comprise two dumps each and that tailing #s G, J and K do not form part of the Manono Tailings agreement).

The QP regards the number of holes and collar locations for stage one (15,000 m) as a recommendation only and fully understands that collar position and azimuth may change due to accessibility or subsurface conditions during drilling.

26.2.1.1 Tailings Dump A

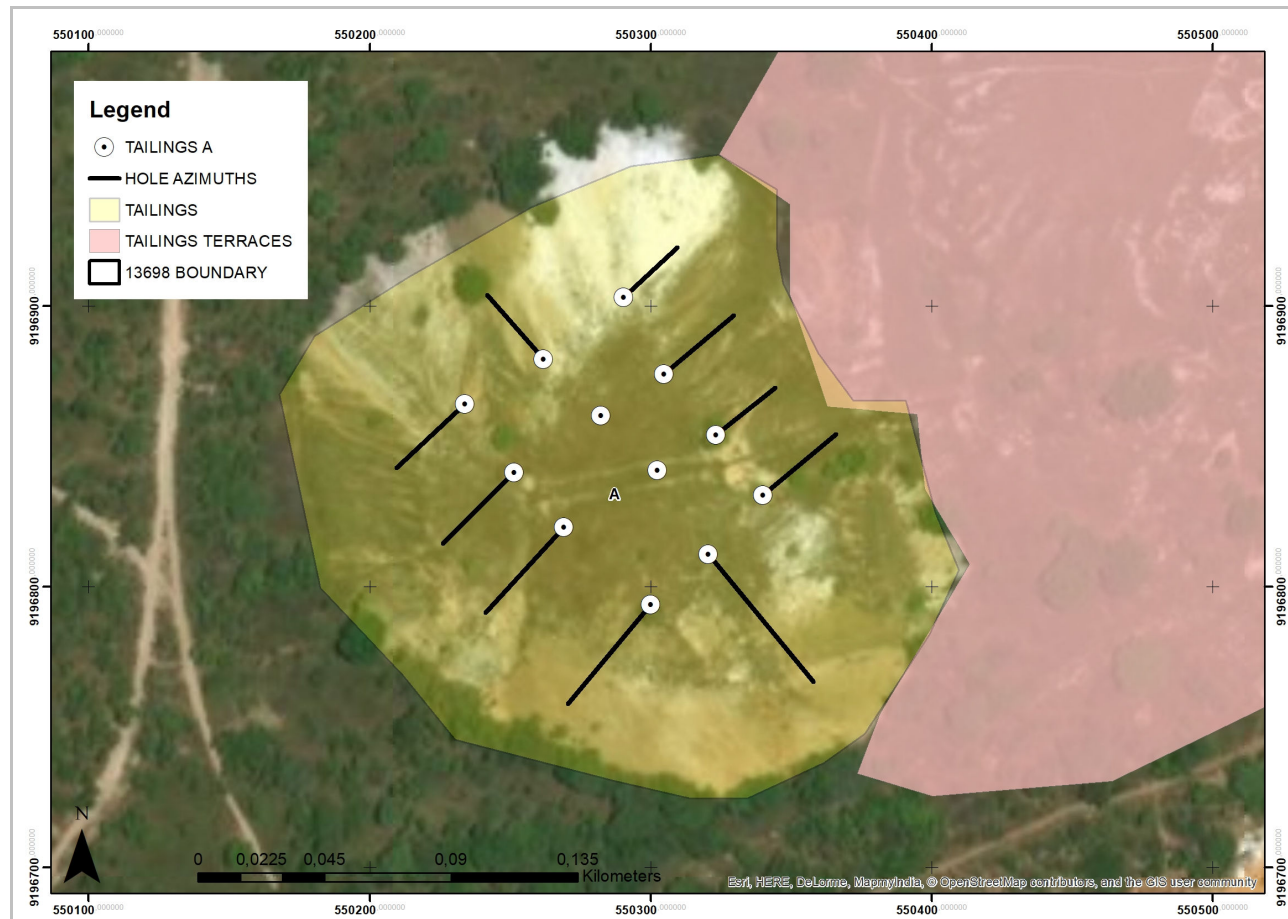


Figure 26.2 Twenty AC drillholes are proposed on tailings dump # A (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).



26.2.1.2 Tailings Dump B

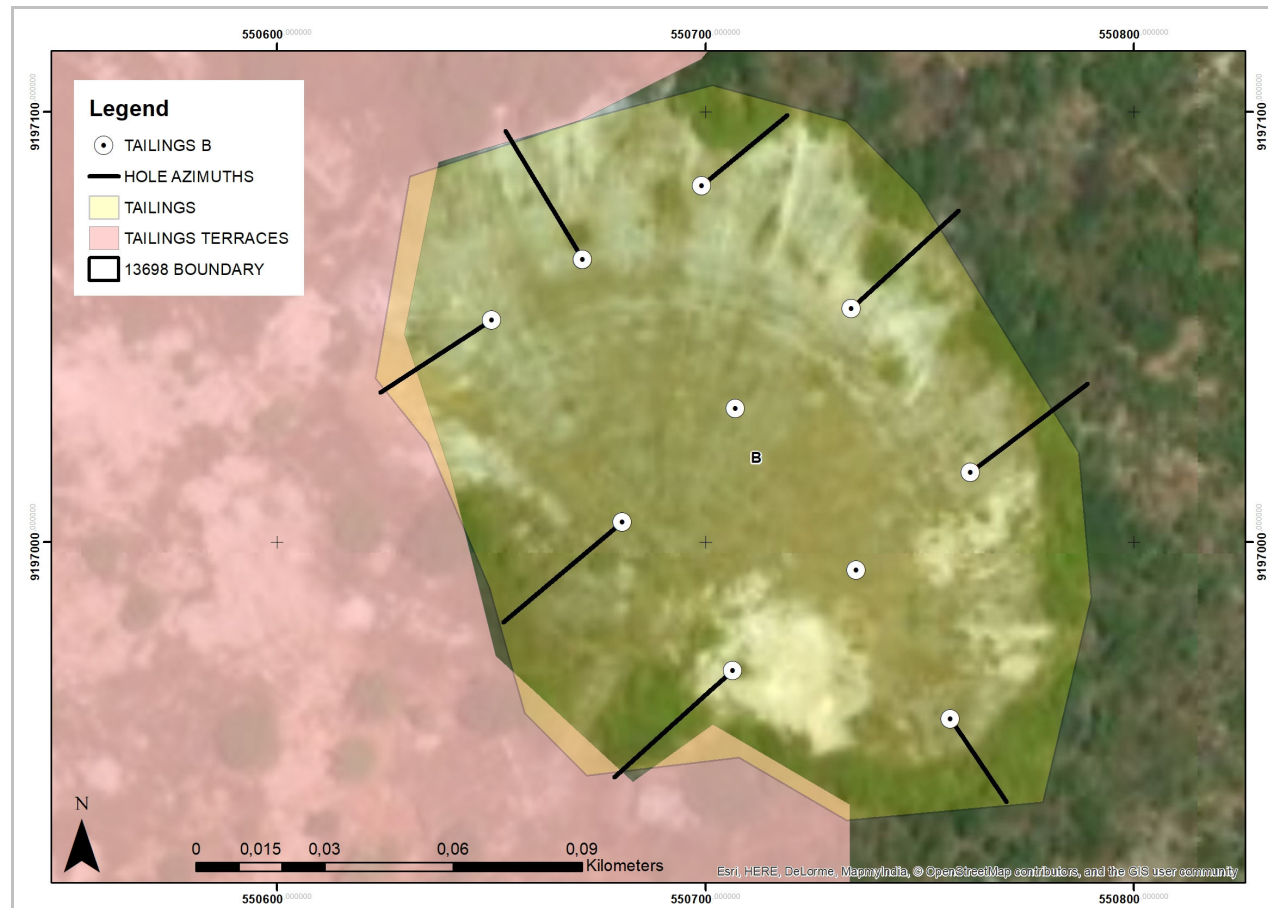


Figure 26.3 Eighteen AC drillholes proposed on tailings dump # B (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).

26.2.1.3 Tailings Dump C

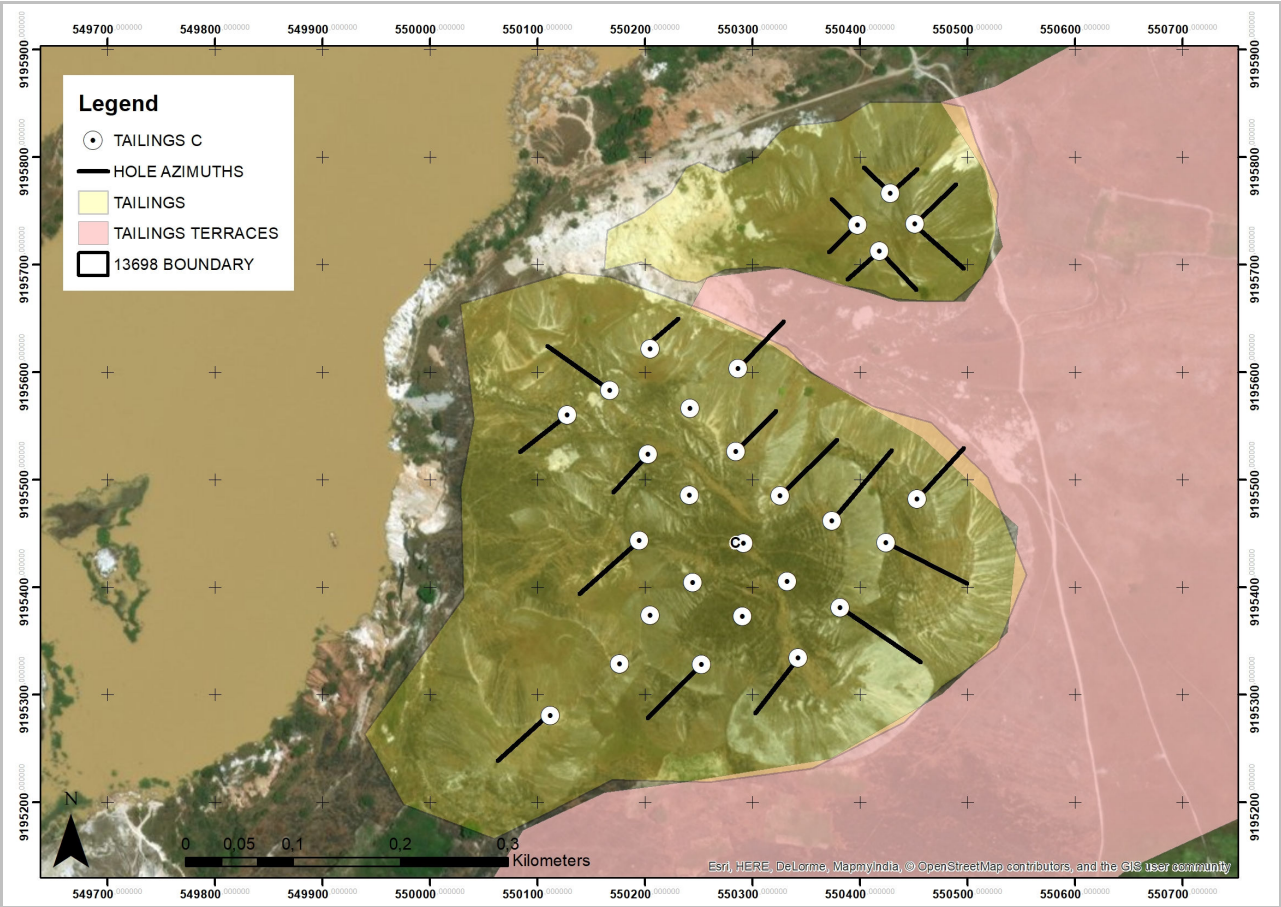


Figure 26.4 Fifty AC drillholes proposed on tailings dump # C (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).

26.2.1.4 Tailings Dump D

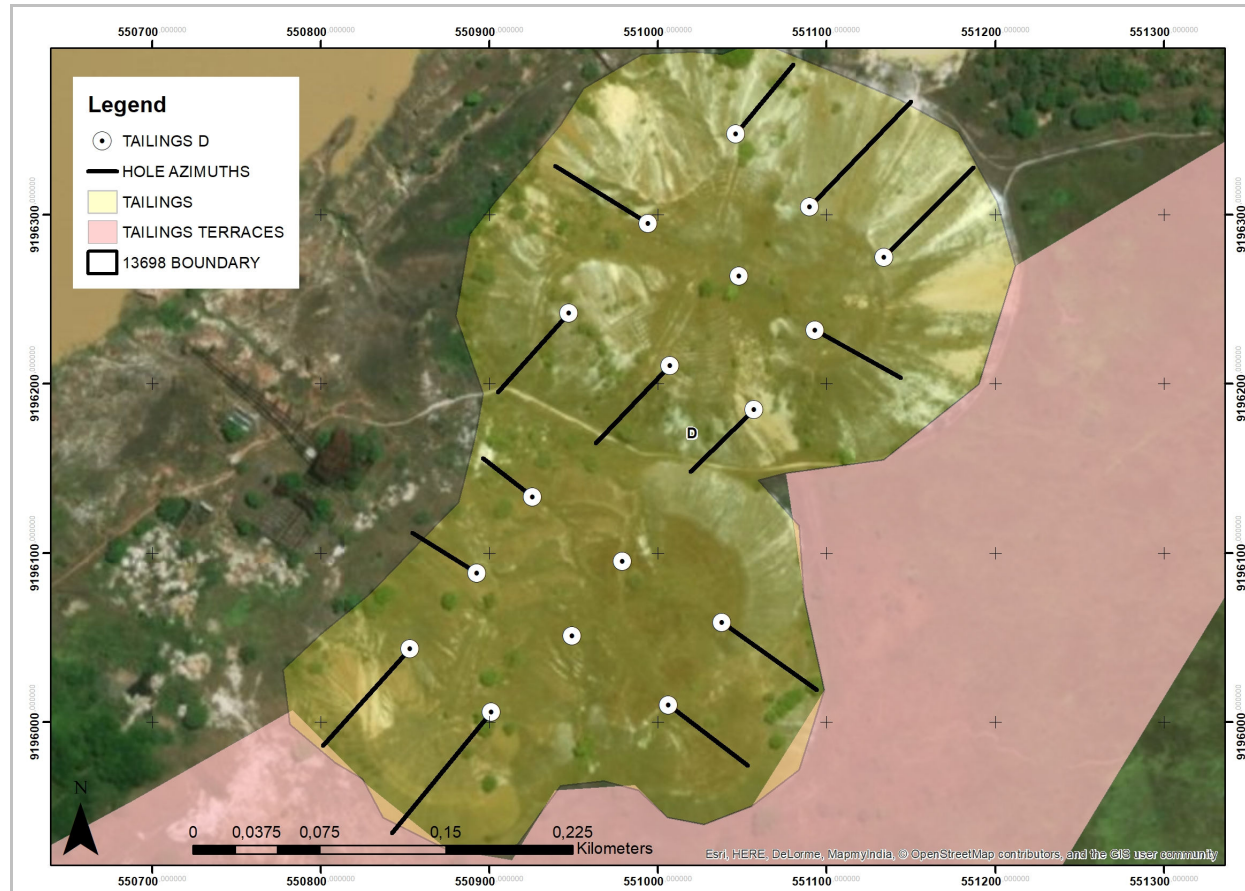


Figure 26.5 Thirty one AC drillholes proposed on tailings dump # D (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).



26.2.1.5 Tailings Dump E

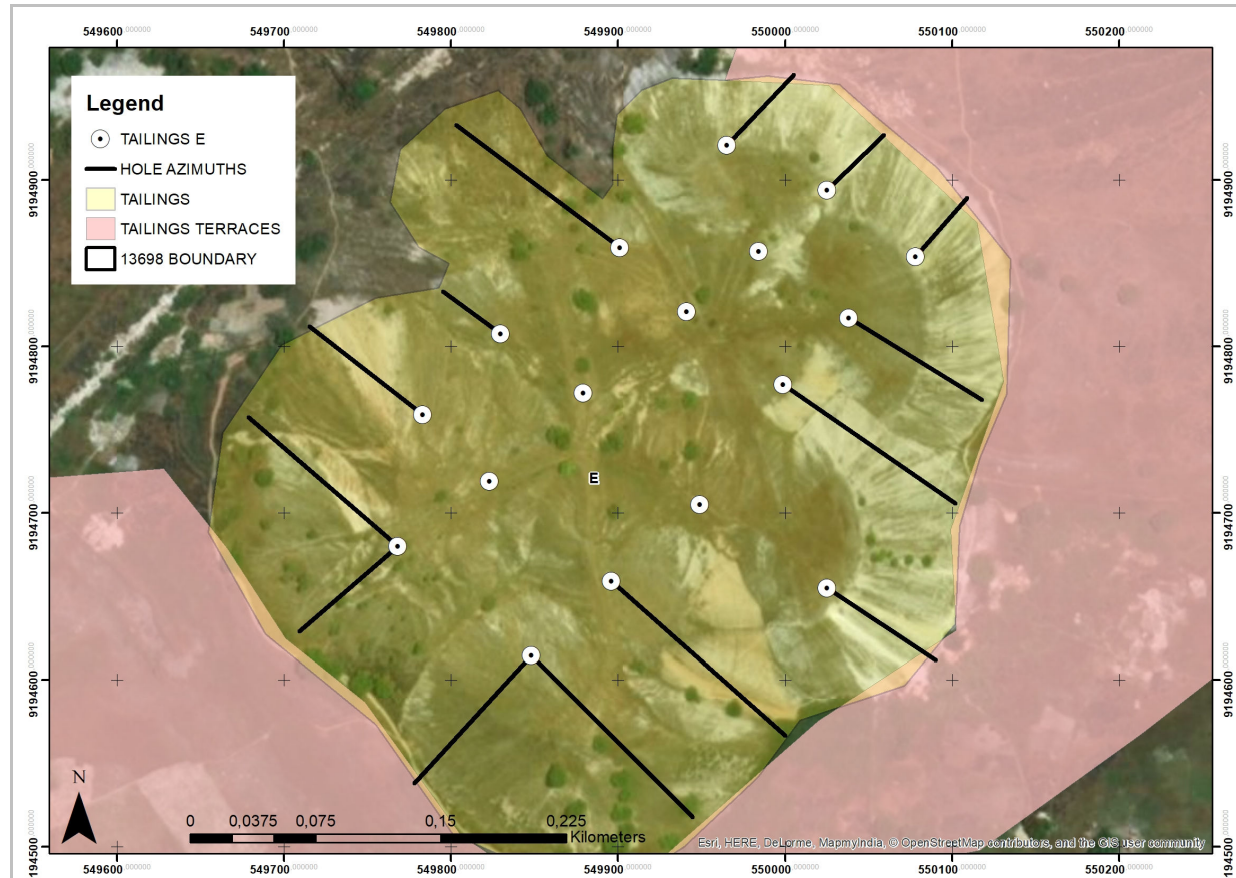


Figure 26.6 Thirty one AC drillholes proposed on tailings dump # E (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).



26.2.1.6 Tailings Dump F

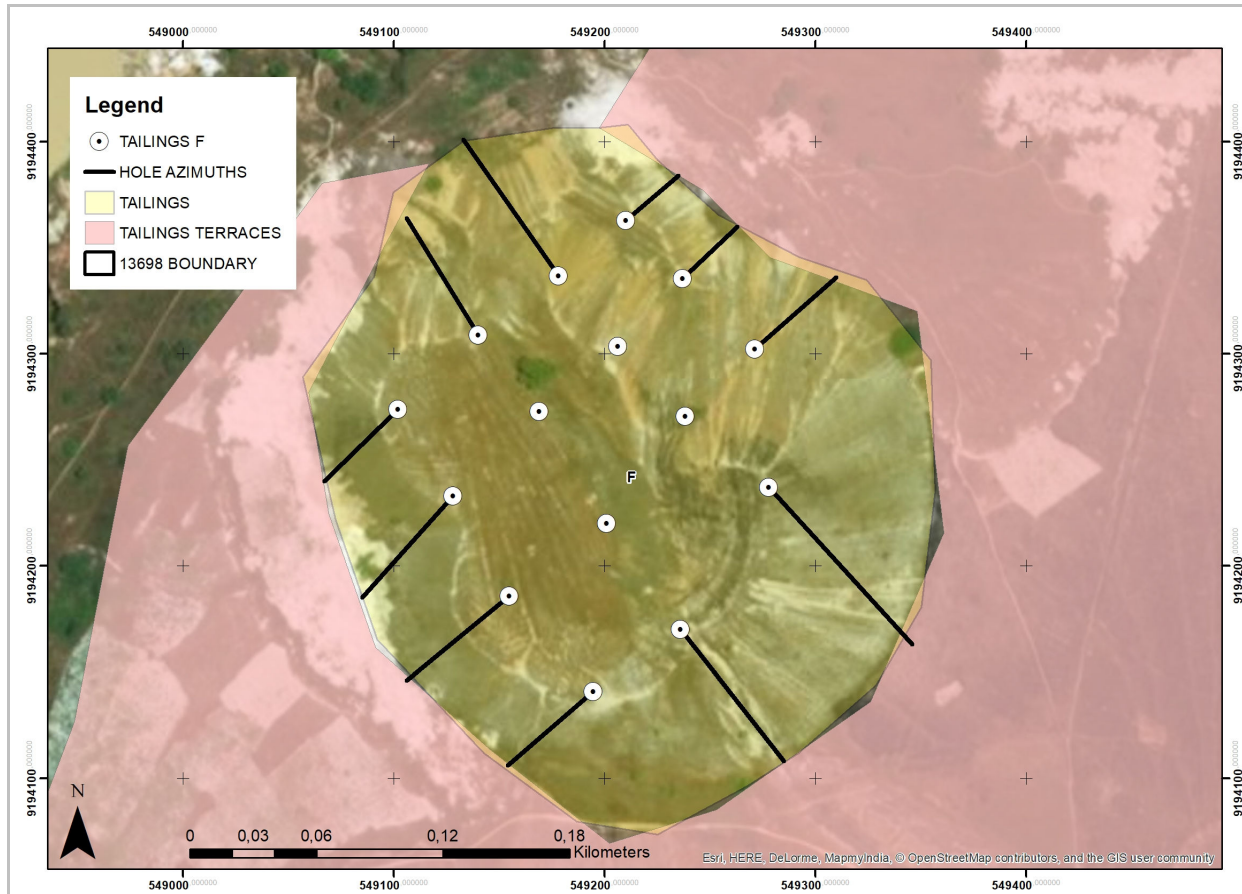


Figure 26.7 Twenty six AC drillholes proposed on tailings dump # F (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).

26.2.1.7 Tailings Dump H

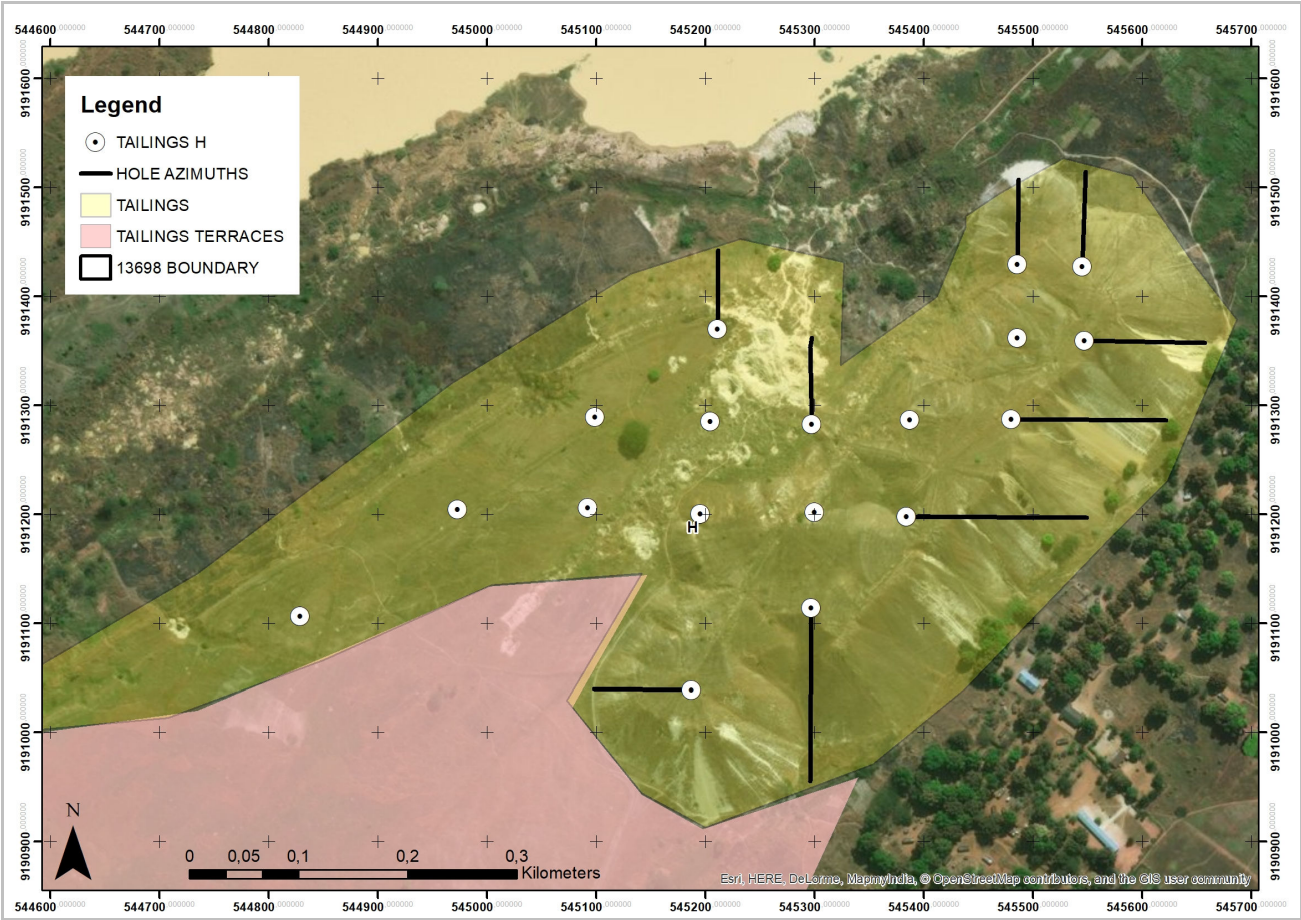


Figure 26.8 Twenty seven AC drillholes proposed on tailings dump # H (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).

26.2.1.8 Tailings Dump I

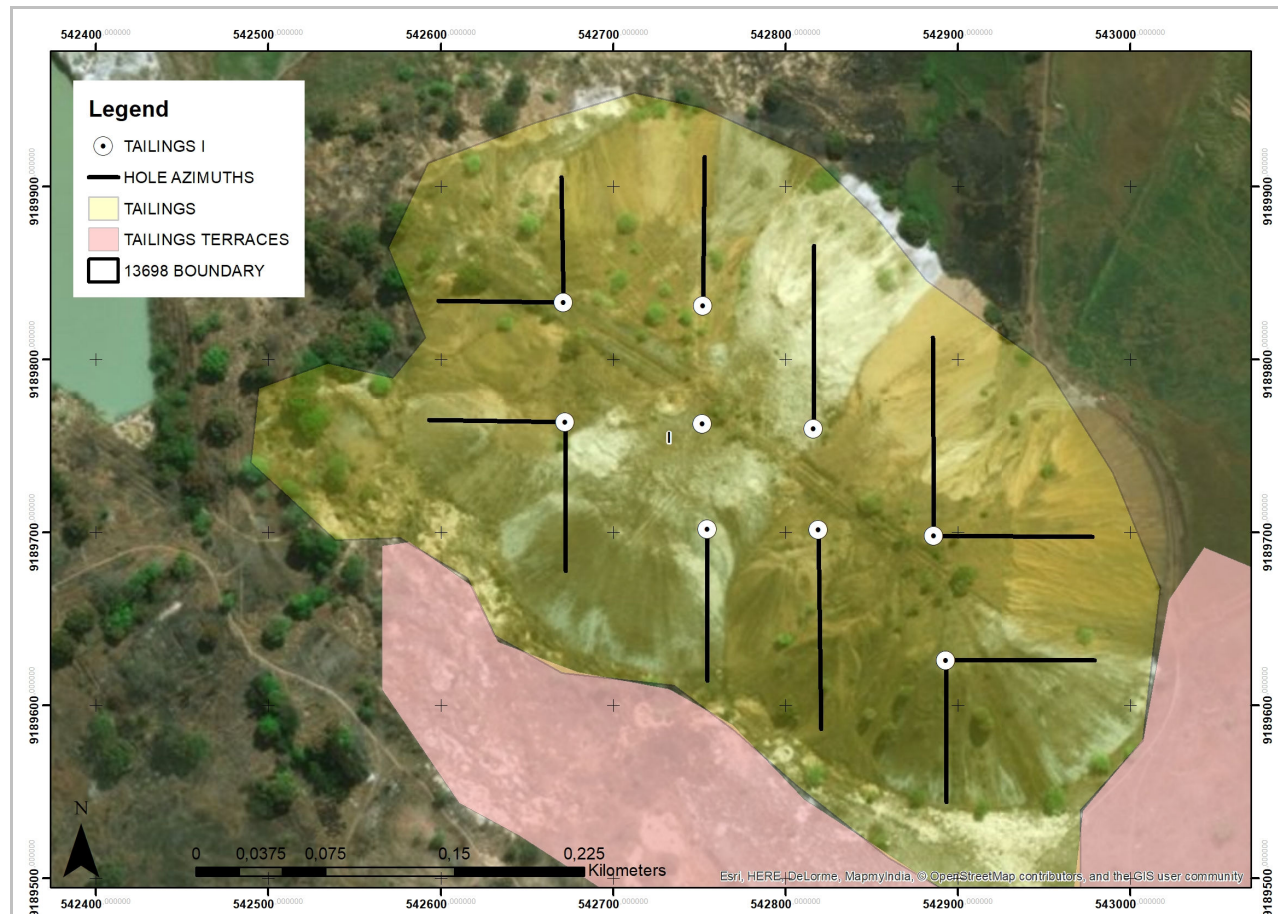


Figure 26.9 Twenty one AC drillholes planned on tailings dump # I (note that each white filled circle represents a vertical hole and the black line indicates the azimuth for an additional inclined hole at the same location).



26.2.1.9 Additional proposed holes on tailings terraces

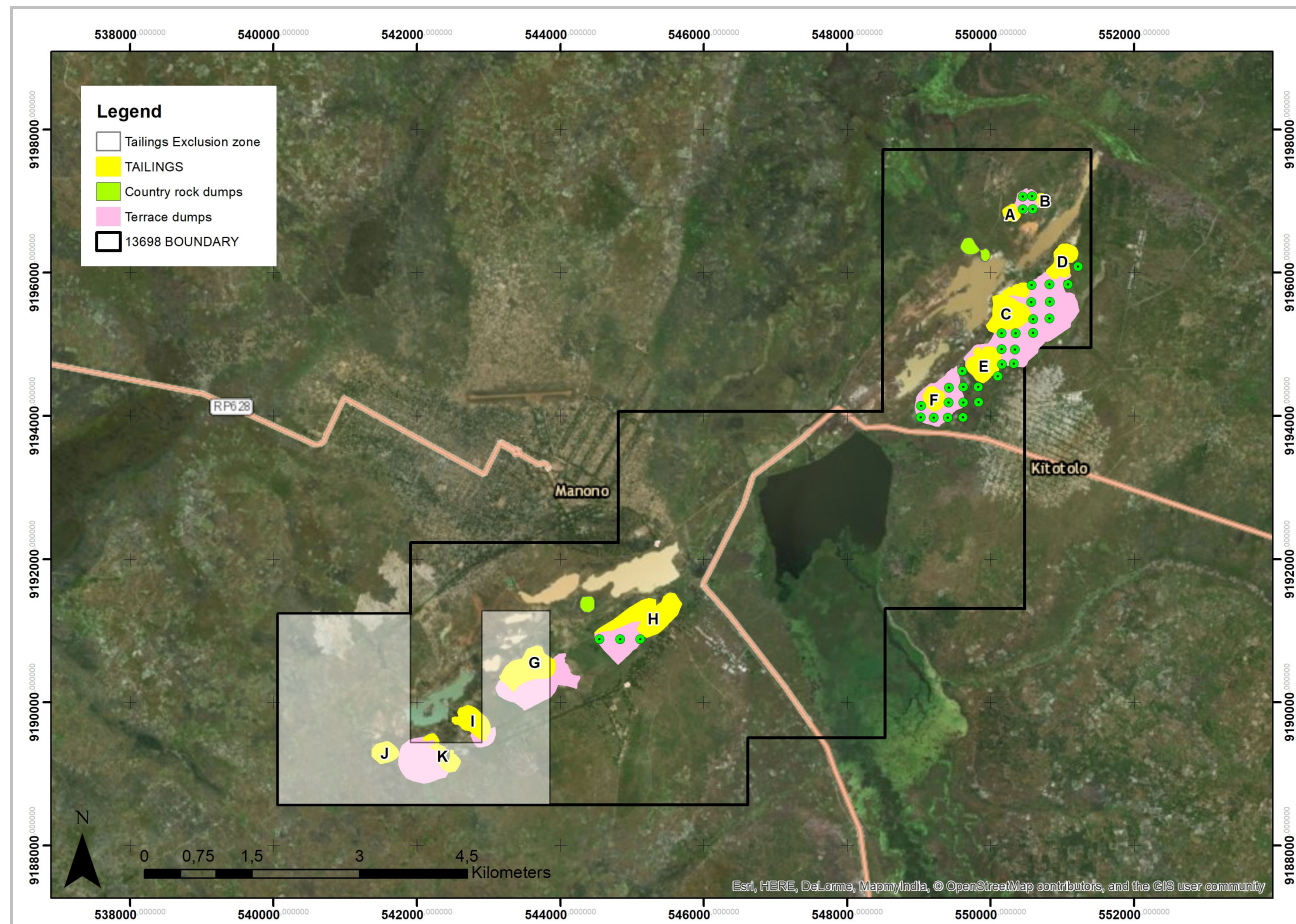


Figure 26.10 Thirty-five additional AC drillholes (all vertical) planned on tailings terraces. Additional holes may be needed at Terrace #s H as well as C, D and E.



### **26.2.2 DGPS**

A differential GPS (DGPS) drone survey is recommended to obtain a detailed Digital Elevation model (DEM) of the topography of the tailings. DGPS (XYZ) surveys of all drillhole collars are also required on completion of drilling.

### **26.2.3 Density**

During the drill stage the author recommends that regularly-spaced density measurements of material be collected to provide a well-distributed series of density data-points.

### **26.2.4 Metallurgical**

Metallurgical testing is recommended on 1 ton sample retrieved in 2018.

## **26.3 Engineering studies**

No engineering studies have been completed for the Manono Tailings Project. The viability of the project should be evaluated only once detailed metallurgical testwork is available and when recommended drilling is completed in order to complete a proposed compliant Mineral Resource Estimate. Such a Preliminary Economic Assessment (“PEA”) will provide a more informed economic assessment with the establishment of a mining method and a mineral processing method. The study should include a financial analysis based on engineering, geological, operating, economic and social factors.

## **26.4 Environmental**

Detailed environmental and social investigations are recommended.

## **26.5 Proposed budget**

Recommendations are given over 1 year in two stages of 6 months each.

### **26.5.1 Stage 1 (Year 1) (AC drilling)**

AC drilling is recommended to increase confidence levels in order to complete a maiden compliant resource estimate.

### **26.5.2 Stage 2 (Year 2) (Metallurgical test work)**

It is recommended that infill AC drilling and metallurgical work is completed, and that a PEA phase is entered.

### 26.5.3 Exploration program budget

Table 26.6 Proposed initial exploration budget over 12 months (excludes costs for office in Lubumbashi or abroad and director expenses).

<b>MONTHS 1 TO 6 (US\$)</b>	
Metallurgical testing on one ton bulk sample (includes transport from DRC)	50,000
Sample requirements (For 15,000 m of drilling) (bags, tags, sample press, CRMs) (includes transport to site)	75,000
AC drilling (15,000m at USD 30 / m)	450,000
Diesel for drilling (500 l per day for 100 days of drilling at USD 4 per liter) (Diesel delivered to Manono)	200,000
Road building with D6 Dozer (wet rate) (30 days @ USD 3,500 per full day use)	100,000
Geologist and technicians costs / salaries while drilling (Approx 150 days at USD 1,500 / day)	225,000
Additional Expenses (Sample transport to lab, vehicle use and fuel, geologist accommodation, food, flights etc)	200,000
Assays (1,000 check assay samples x USD 50 / sample)	50,000
Modelling and Resource Estimate	25,000
Miscellaneous	50,000
<b>SUB TOTAL (Stage 1)</b>	<b>1,425,000</b>
<b>MONTHS 6 TO 12 (US\$)</b>	
Additional AC drilling (5,000m at USD 30 / m)	150,000
Sample requirements (For 5,000 m of drilling) (bags, tags, sample press, CRMs) (includes transport to site)	25,000
Diesel for drilling (approx. 500 l per day for 30 days of drilling at USD 4 per liter) (Diesel delivered to Manono)	100,000
Road building with D6 Dozer (wet rate) (15 days @ USD 3,500 per day)	50,000
Geologist and technicians costs while drilling (Approx 50 days at USD 1,500 / day)	75,000
Additional Expenses (Sample transport to lab, vehicle use and fuel, geologist accommodation, food, flights etc)	100,000
Assays (500 check assay samples x USD 50 / sample)	25,000
Modelling and Resource / Reserve estimate update	50,000
Additional Metallurgical test work	100,000
Environmental studies (EIA) and Preliminary economic assessment (PEA)	250,000
Miscellaneous	50,000
<b>SUB TOTAL (Stage 2)</b>	<b>975,000</b>
<b>TOTAL (US\$)</b>	<b>2,400,000</b>

## 27. REFERENCES

Bradley D., McCauley A.D., and Stillings L.M. 2017 Mineral-Deposit Model for Lithium-Cesium-Tantalum Pegmatites. Chapter O of Mineral Deposit Models for Resource Assessment.

S. Dewaele, N. Hulsbosch, Y. Cryns, A. Boyce, R. Burgess, Ph. Muchez. Geological setting and timing of the world-class Sn, Nb-Ta and Li mineralization of Manono-Kitotolo (Katanga, Democratic Republic of Congo). Ore Geology Reviews 72 (2015) 373–390.

DRC survey: An overview of demographics, health and financial services in the Democratic Republic of the Congo. University of Washington strategic analyses, research and training centre. Report to Bill and Melinda Gates Foundation.

Spanjers 2017. Buckel Li-Sn-Ta project Manono, Tanganyika Province, Democratic Republic of the Congo. NI43-101 report.

### 27.1 Online reference

<http://portals.flexicadastre.com/drc/en/>

<http://services.arcgisonline.com/arcgis/services>

[http://koeppen-geiger.vu-wien.ac.at/pdf/Paper\\_2006.pdf](http://koeppen-geiger.vu-wien.ac.at/pdf/Paper_2006.pdf)

[www.worldbank.com](http://www.worldbank.com)

## 28. CONSENT, DATE AND SIGNATURE OF AUTHOR

### 28.1 Certificate of Author (Qualified Person)

As compiler of the “*Technical Report on Manono Tailings Lithium an Tin Project, DRC*” dated 15 February 2019, I hereby state:

1. My name is Nico Scholtz of P.O. Box 1316, Swakopmund, Namibia.
2. I am member of the *South African Council for Natural and Scientific Professions (SACNASP)*, an M.Sc. graduate of Dept Geology, University of the Free State, South Africa and a practicing geologist since 2004.
3. I am a “qualified person” as defined by The National Instrument (NI43-101) and have been actively involved in mineral exploration for the past 15 years in Africa, South America, North America and Asia.
4. I have been actively involved in GPS surveys, grab – and bulk sampling as well as drillhole planning of the Manono Tailings Project to date and have visited the project on many occasions.
5. I have been responsible for the compilation of all parts of the Technical Report.
6. I have reviewed all data supplied by *Tantalex Resources Corp.*
7. I am independent of the Issuer as described in Section 1.5 of the NI43-101 and am unaware of any circumstances that could interfere with my preparation of this report.
8. I am not under an agreement, arrangement or understanding and do not expect to become an insider, associate, affiliated entity or employee of the Issuer or of an insider or affiliated entity of the Issuer.
9. I do not own, or am under an agreement, arrangement or to acquire, any securities of the Issuer or of an affiliated entity of the Issuer or an interest of the property that is the subject of the technical report or in an adjacent property.
10. I have not received a majority of my income during the three years preceding the date of the technical report from the Issuer.
11. I have read the National Instrument and Form 43-101F1 (The Form) and this report has been prepared in compliance with the Instrument and the Form.
12. This report, to the best of my knowledge, information and belief, contains all scientific and technical information that is required to be disclosed to make the report not misleading.

Dated at Uis, Namibia on 15 February 2019



.....  
Nico Scholtz (Pr. Sci. Nat)  
M.Sc. Geology



**APPENDIX A: Grab sample results in database (from SGS laboratories in South Africa)**

Table A1. Results (44 samples) and description for grab samples retrieved from the 10 Manono tailings (excluding tailing #s G, J and K) in order of highest to lowest Li<sub>2</sub>O (%) grade.

Sample	Li <sub>2</sub> O (%)	SnO <sub>2</sub>	Ta <sub>2</sub> O <sub>5</sub>	X_Easting	Y_Northing	Dump	Sample Type	
S 00124	6,57	411,35	10,75	550955	9196025	D (South)	Spodumene/ Petalite	
S 00118	3,88	690,66	123,33	550415	9195290	C (South)	Spodumene /Quartz	
S 00147	3,79	521,81	31,63	545400	9191267	H	Spodumene Pegmatite	
S 00144	3,10	1150,26	34,44	545400	9191267	H	Spodumene Pegmatite	
S 00119	2,69	457,06	42,01	550415	9195290	C (South)	Spodumene /Quartz/ Feldspar	
S 00108	2,67	933,16	290,62	550300	9196840	A	Lepidolite / Green Mica	
S 00146	2,58	548,47	33,09	545400	9191267	H	Weathered Petalite/Feldspar (White)	
S 00117	2,50	1066,46	9,52	550415	9195290	C (South)	Spodumene/ Petalite/ purple mineral	
S 00107	2,24	344,06	598,34	550300	9196840	A	Lepidolite/Petalite Pegmatite	
S 00130	1,93	820,16	41,64	549900	9194715	E	Spodumene Pegmatite	
S 00109	1,88	379,61	148,97	550300	9196840	A	Lepidolite / Quartz	
S 00131	1,87	1561,61	47,87	549900	9194715	E	Spodumene Pegmatite	
S 00121	1,86	2005,97	44,81	550415	9195290	C (South)	Spodumene /Quartz/ Feldspar Pegmatite	
S 00123	1,80	3478,70	55,68	550955	9196025	D (South)	Lepidolite /Quartz	
S 00129	1,78	4227,77	54,95	549900	9194715	E	Spodumene Pegmatite	
S 00106	1,74	187,90	1129,52	550300	9196840	A	Lepidolite Pegmatite	
<b>S 00166</b>	<b>1,72</b>	<b>384,69</b>	<b>155,08</b>	<b>GTA03 (CRM)</b>				
S 00122	1,68	2894,69	50,07	550415	9195290	C (South)	Spodumene /Quartz/ Feldspar Pegmatite	
S 00155	1,52	469,75	34,68	542760	9189750	I	Gravel from Dump	
S 00128	1,19	505,30	638,64	549900	9194715	E	Lepidolite	
S 00152	1,16	4710,22	107,46	542760	9189750	I	Spodumene Pegmatite	
S 00149	1,13	529,42	28,70	542760	9189750	I	Gravel from Dump	
S 00156	0,88	1434,65	54,34	542760	9189750	I	Gravel from Dump	
S 00154	0,83	424,05	41,64	542760	9189750	I	Gravel from Dump	
S 00114	0,51	742,72	283,30	550444	9195757	C (North)	Spodumene or weathered feldspar	
S 00145	0,37	525,61	61,79	545400	9191267	H	Gravel from Dump	
S 00111	0,26	2209,10	351,68	550705	9197000	B	Lepidolite / Quartz / Albite Pegmatite	
S 00120	0,21	305,97	42,74	550415	9195290	C (South)	Petalite (Pink) slightly weathered	
S 00113	0,12	319,94	58,12	550444	9195757	C (North)	Weathered Petalite/Feldspar (Pink & White)	
S 00153	0,12	479,91	55,32	542760	9189750	I	Gravel from Dump	
S 00151	0,08	308,51	61,18	542760	9189750	I	Weathered Spodumene/Petalite (White)	
S 00112	0,08	347,87	22,10	550300	9196840	A	Weathered Petalite/Feldspar (White)	
S 00134	0,08	468,48	20,64	549200	9194244	F	Spodumene / Petalite / Quartz weathered.	

S 00127	0,07	256,46	246,66	551050	9196270	D (North)	Lepidolite/ Zinnwaldite/ Massive mica
S 00126	0,07	366,91	26,13	551050	9196270	D (North)	Spodumene / Petalite weathered.
S 00148	0,07	1345,78	66,92	545400	9191267	H	Green Mica and Spodumene Alteration
S 00150	0,06	540,85	53,85	542760	9189750	I	Pegmatite Feldspar and quartz
S 00116	0,05	1104,55	28,82	550444	9195757	C (South)	Spodumene of feldspar weathered /Quartz
S 00115	0,05	570,05	45,30	550444	9195757	C (North)	Petalite/Pegmatite quartz and Mica
S 00135	0,04	2463,02	57,76	549200	9194244	F	Spodumene / Petalite / Quartz weathered.
S 00133	0,04	292,01	22,96	549200	9194244	F	Sand from Dump
S 00132	0,04	286,93	11,48	549200	9194244	F	Gravel from Dump
S 00125	0,02	408,81	10,14	551050	9196270	D (North)	Feldspar Weathered
S 00110	0,02	1853,62	1202,78	550705	9197000	B	Weatherd Petalite/Feldspar (White)

**APPENDIX B: Recommended Aircore drillholes**

Table B1. Recommended aircore drillholes on tailings dump # A showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
1	550291	9196903	-90	-
2	550291	9196903	-60	45
3	550262	9196881	-90	-
4	550262	9196881	-60	315
5	550234	9196865	-90	-
6	550234	9196865	-60	225
7	550323	9196854	-90	-
8	550323	9196854	-60	45
9	550300	9196794	-90	-
10	550300	9196794	-60	225
11	550269	9196821	-90	-
12	550269	9196821	-60	225
13	550321	9196812	-90	-
14	550321	9196812	-60	135
15	550305	9196876	-90	-
16	550305	9196876	-60	45
17	550340	9196833	-90	-
18	550340	9196833	-60	45
19	550252	9196841	-90	-
20	550252	9196841	-60	225
21	550282	9196861	-90	-
22	550302	9196841	-90	-

Table B2. Recommended aircore drillholes on tailings dump # B showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
23	550671	9197066	-90	-
24	550671	9197066	-60	315
25	550707	9197031	-90	-
26	550735	9196993	-90	-
27	550681	9197005	-90	-
28	550681	9197005	-60	225
29	550734	9197054	-90	-
30	550734	9197054	-60	45
31	550762	9197016	-90	-
32	550762	9197016	-60	45
33	550706	9196970	-90	-
34	550706	9196970	-60	225
35	550699	9197083	-90	-
36	550699	9197083	-60	45
37	550650	9197052	-90	-
38	550650	9197052	-60	225
39	550757	9196959	-90	-
40	550757	9196959	-60	135

Table B3. Recommended aircore drillholes on tailings dump # C showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
41	550205	9195622	-90	-
42	550205	9195622	-60	45



43	550128	9195560	-90	-
44	550128	9195560	-60	225
45	550287	9195603	-90	-
46	550287	9195603	-60	45
47	550203	9195524	-90	-
48	550203	9195524	-60	225
49	550326	9195485	-90	-
50	550326	9195485	-60	45
51	550244	9195405	-90	-
52	550176	9195329	-90	-
53	550453	9195482	-90	-
54	550453	9195482	-60	45
55	550343	9195334	-90	-
56	550343	9195334	-60	225
57	550112	9195281	-90	-
58	550112	9195281	-60	225
59	550429	9195767	-90	-
60	550429	9195767	-60	45
61	550429	9195767	-60	315
62	550398	9195737	-90	-
63	550398	9195737	-60	225
64	550398	9195737	-60	315
65	550451	9195738	-90	-
66	550451	9195738	-60	45
67	550451	9195738	-60	135
68	550418	9195713	-90	-
69	550418	9195713	-60	135

70	550418	9195713	-60	225
71	550292	9195441	-90	-
72	550242	9195566	-90	-
73	550167	9195584	-90	-
74	550167	9195584	-60	315
75	550424	9195442	-90	-
76	550424	9195442	-60	135
77	550381	9195381	-90	-
78	550381	9195381	-60	135
79	550285	9195526	-90	-
80	550285	9195526	-60	45
81	550332	9195406	-90	-
82	550374	9195462	-90	-
83	550374	9195462	-60	45
84	550242	9195486	-90	-
85	550195	9195444	-90	-
86	550195	9195444	-60	225
87	550205	9195374	-90	-
88	550291	9195373	-90	-
89	550253	9195328	-90	-
90	550253	9195328	-60	225

Table B4. Recommended aircore drillholes on tailings dump # D showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
91	551046	9196348	-90	-
92	551046	9196348	-60	45

93	550994	9196295	-90	-
94	550994	9196295	-60	315
95	550947	9196242	-90	-
96	550947	9196242	-60	225
97	551007	9196211	-90	-
98	551007	9196211	-60	225
99	551048	9196264	-90	-
100	551090	9196305	-90	-
101	551090	9196305	-60	45
102	551134	9196275	-90	-
103	551134	9196275	-60	45
104	551093	9196232	-90	-
105	551093	9196232	-60	135
106	551057	9196185	-90	-
107	551057	9196185	-60	225
108	550926	9196133	-90	-
109	550926	9196133	-60	315
110	550979	9196095	-90	-
111	551038	9196059	-90	-
112	551038	9196059	-60	135
113	551006	9196010	-90	-
114	551006	9196010	-60	135
115	550949	9196051	-90	-
116	550893	9196088	-90	-
117	550893	9196088	-60	315
118	550853	9196043	-90	-
119	550853	9196043	-60	225

120	550901	9196006	-90	-
121	550901	9196006	-60	225

Table B5. Recommended aircore drillholes on tailings dump # E showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
122	550025	9194894	-90	-
123	550025	9194894	-60	45
124	549984	9194857	-90	-
125	549941	9194821	-90	-
126	549879	9194772	-90	-
127	549823	9194719	-90	-
128	549768	9194680	-90	-
129	549768	9194680	-60	225
130	549768	9194680	-60	315
131	549965	9194921	-90	-
132	549965	9194921	-60	45
133	549901	9194859	-90	-
134	549901	9194859	-60	315
135	550078	9194854	-90	-
136	550078	9194854	-60	45
137	549949	9194705	-90	-
138	549896	9194659	-90	-
139	549896	9194659	-60	135
140	549830	9194808	-90	-
141	549830	9194808	-60	315
142	549783	9194759	-90	-



143	549783	9194759	-60	315
144	550038	9194817	-90	-
145	550038	9194817	-60	135
146	549999	9194777	-90	-
147	549999	9194777	-60	135
148	550025	9194655	-90	-
149	550025	9194655	-60	135
150	549848	9194614	-90	-
151	549848	9194614	-60	135
152	549848	9194614	-60	225

Table B6. Recommended aircore drillholes on tailings dump # F showing XY coordinates (WGS84) as well as dip and azimuth.

<b>HOLE #</b>	<b>X</b>	<b>Y</b>	<b>DIP</b>	<b>AZ</b>
153	549210	9194363	-90	-
154	549210	9194363	-60	45
155	549178	9194337	-90	-
156	549178	9194337	-60	315
157	549140	9194309	-90	-
158	549140	9194309	-60	315
159	549102	9194274	-90	-
160	549102	9194274	-60	225
161	549128	9194233	-90	-
162	549128	9194233	-60	225
163	549169	9194273	-90	-
164	549207	9194304	-90	-
165	549237	9194336	-90	-

166	549237	9194336	-60	45
167	549155	9194186	-90	-
168	549155	9194186	-60	225
169	549201	9194220	-90	-
170	549238	9194270	-90	-
171	549271	9194302	-90	-
172	549271	9194302	-60	45
173	549278	9194237	-90	-
174	549278	9194237	-60	135
175	549236	9194170	-90	-
176	549236	9194170	-60	135
177	549195	9194141	-90	-
178	549195	9194141	-60	225

Table B7. Recommended aircore drillholes on tailings dump # H showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
201	545486	9191429	-90	-
202	545486	9191429	-60	360
203	545545	9191427	-90	-
204	545545	9191427	-60	360
205	545486	9191362	-90	-
206	545547	9191359	-90	-
207	545547	9191359	-60	90
208	545480	9191287	-90	-
209	545480	9191287	-60	90
210	545387	9191286	-90	-

211	545297	9191282	-90	-
212	545297	9191282	-60	360
213	545205	9191285	-90	-
214	545099	9191289	-90	-
215	545195	9191200	-90	-
216	545300	9191202	-90	-
217	545385	9191198	-90	-
218	545385	9191198	-60	90
219	545297	9191114	-90	-
220	545297	9191114	-60	180
221	545187	9191039	-90	-
222	545187	9191039	-60	270
223	545211	9191370	-90	-
224	545211	9191370	-60	360
225	545092	9191206	-90	-
226	544973	9191204	-90	-
227	544829	9191107	-90	-

Table B8. Recommended aircore drillholes on tailings dump # I showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
228	542671	9189833	-90	-
229	542671	9189833	-60	360
230	542671	9189833	-60	270
231	542752	9189831	-90	-
232	542752	9189831	-60	360
233	542672	9189764	-90	-

234	542672	9189764	-60	180
235	542672	9189764	-60	270
236	542752	9189763	-90	-
237	542755	9189702	-90	-
238	542755	9189702	-60	180
239	542816	9189760	-90	-
240	542816	9189760	-60	360
241	542819	9189702	-90	-
242	542819	9189702	-60	180
243	542886	9189698	-90	-
244	542886	9189698	-60	90
245	542886	9189698	-60	360
246	542893	9189626	-90	-
247	542893	9189626	-60	90
248	542893	9189626	-60	180

Table B9. Recommended aircore drillholes on tailings terraces showing XY coordinates (WGS84) as well as dip and azimuth.

HOLE #	X	Y	DIP	AZ
267	541910	9189371	-90	-
268	542106	9189371	-90	-
269	541908	9189185	-90	-
270	542125	9189180	-90	-
271	542125	9188987	-90	-
272	542675	9189315	-90	-
273	542553	9189312	-90	-
274	542691	9189556	-90	-

275	542828	9189471	-90	-
276	543024	9189468	-90	-
277	543069	9189619	-90	-
278	542619	9189217	-90	-
279	542439	9189310	-90	-
280	542434	9189220	-90	-
281	543164	9190257	-90	-
282	543167	9190127	-90	-
283	543376	9190122	-90	-
284	543606	9190122	-90	-
285	543611	9190273	-90	-
286	543865	9190278	-90	-
287	544131	9190283	-90	-
288	544131	9190469	-90	-
289	544541	9190884	-90	-
290	544835	9190884	-90	-
291	545113	9190884	-90	-
292	549030	9194141	-90	-
293	549022	9193983	-90	-
294	549204	9193975	-90	-
295	549399	9193975	-90	-
296	549613	9193983	-90	-
297	549621	9194189	-90	-
298	549411	9194189	-90	-
299	549419	9194395	-90	-
300	549621	9194403	-90	-
301	549823	9194403	-90	-



302	549605	9194630	-90	-
303	549831	9194193	-90	-
304	550101	9194554	-90	-
305	550324	9194729	-90	-
306	550157	9194721	-90	-
307	550153	9194931	-90	-
308	550339	9194927	-90	-
309	550149	9195154	-90	-
310	550347	9195154	-90	-
311	550591	9195159	-90	-
312	550591	9195354	-90	-
313	550818	9195362	-90	-
314	550826	9195592	-90	-
315	550568	9195588	-90	-
316	550572	9195826	-90	-
317	550818	9195838	-90	-
318	551076	9195838	-90	-
319	551214	9196084	-90	-
320	550449	9197064	-90	-
321	550576	9197068	-90	-
322	550445	9196890	-90	-
323	550587	9196890	-90	-