BAFFINLAND IRON MINES CORPORATION, MARY RIVER PROJECT, QIA 2017 COMPREHESIVE SECURITY ESTIMATE

November 30, 2016

Jamie Van Gulck, Ph.D., P.Eng.
Principal, ARKTIS Solutions Inc.
vangulck@arktissolutions.com

Phone: 867.446.4129
Facsimile: 866.475.1147

November 30, 2016

Qikiqtani Inuit Association
P.O. Box 1340
Iqaluit, NU, X0A 0H0

ATTENTION: Stephen Williamson Bathory

RE: BAFFINLAND IRON MINES CORPORATION, MARY RIVER PROJECT, QIA 2017 COMPREHENSIVE SECURITY ESTIMATE

ARKTIS Solutions Inc. is pleased to provide the Baffinland Iron Mines Corporation, Mary River Project, QIA 2017 Comprehensive Security Estimate, which was completed on behalf of the Qikiqtani Inuit Association under the terms of the land lease (Commercial Lease No.: Q13C301) with Baffinland Iron Mines Corporation.

We trust that the information presented in this report satisfies the requirements of the project. Please do not hesitate to contact the undersigned if there are any questions or comments regarding this report.

Sincerely,

ARKTIS Solutions Inc.

Jamie VanGulck, Ph.D., P.Eng.
Chief Technical Officer

TABLE OF CONTENTS

LIST OF TABLES

1.0 INTRODUCTION

ARKTIS Solutions Inc. (ARKTIS) submits this report to the Qikiqtani Inuit Association (QIA) that provides a complete reclamation security estimate of Baffinland Iron Mines Corporation's (BIMC) 2017 Work Plan[1] for the Mary River Project (Project). The annual security determination is required as per Section 9.2, Item (d), of the Commercial Production Lease No. Q13C301 (CPL),[2] as well as by the Nunavut Water Board (NWB) for BIMC's Type 'A' Water Licence No. 2AM-MRY1325.[3]

The reclamation security estimate provided herein incorporates information from previous QIA reclamation security estimates (2014,[4] 2015,[5], 2015 Addendum[6], 2016[7], and 2016 Update[8]), an analysis of the changes that have occurred at the Project during 2016 since these estimates, as well as an analysis of the planned activities listed in BIMC's 2017 Work Plan. In other words, this security estimate includes both a revised 2016 security value and a 2017 marginal security value. The reclamation security does not include activities on Crown Lands (e.g., Steensby Inlet, Ore dock), nor does it address the Type 'B' Exploration Water Licence No. 2BE-MRY1421.[9] It is ARKTIS' understanding that QIA does not evaluate liability on behalf of other landowners, nor does QIA intend to take a position on whether the amount of security held by other parties is adequate to fulfill their interests.

This report is structured as follows:

- Section 2.0 outlines the methodology and assumptions used to develop this reclamation security estimate.
- Section 3.0 presents the analysis and results of the Direct Costs in the reclamation security estimate.
- Section 4.0 presents the analysis and results of the Indirect Costs in the reclamation security estimate.
- Section 5.0 provides a summary of both the Direct and Indirect Costs in the reclamation security estimate, in addition to a summary of the recommendations from the analysis.
- Section 6.0 provides a disclaimer for the contents of this report and a closure of the document.
- Appendix A includes the detailed results of items added to the reclamation security estimate.
- Appendix B includes the detailed results of items removed from the reclamation security estimate.
- Appendix C presents details used in the development of select unit costs.
- Appendix D presents the general terms and conditions of this report.

---

[1] BIMC (2016) 2017 Work Plan. November 4, 2016.

[2] QIA and BIMC (2013) Commercial Lease No. Q13C301. September 6, 2013.

[3] NWB (2015) Type 'A' Water Licence No.: 2AM-MRY1325, Amendment No. 1. July 31, 2015.

[4] ARKTIS (2014) QIA 2014 Comprehensive Security Estimate. December 12, 2014.

[5] ARKITS (2014) QIA 2015 Comprehensive Security Estimate. December 5, 2014.

[6] ARKTIS (2015) QIA Revised 2015 Comprehensive Security Estimate. January 13, 2015.

[7] ARKITS (2015) QIA 2016 Comprehensive Security Estimate. December 2, 2015.

[8] ARKTIS (2016) 2016 Comprehensive Security Estimate Update. January 8, 2016.

[9] NWB (2014) Type 'B' Water Licence No.: 2BE-MRY-1421. April 17, 2014.

2.0 METHODOLOGY

The reclamation security estimate was developed in accordance with the methodologies detailed in the QIA 2014 Comprehensive Security Estimate,[4] the QIA Abandonment and Reclamation Policy,[10] and generally applies the principles outlined by Indigenous and Northern Affairs Canada (INAC).[11]

The revised 2016 security estimate[6] was informed by the observations made and discussions with BIMC during QIA's following site visits:

- June 2016 Environmental Inspection;[12]
- August 2016 Environmental Inspection;[13] and
- September 2016 Audit.[14]

The 2017 marginal increase was calculated from the sum of direct costs and indirect costs associated with activities occurring on IOL as reported by BIMC in the 2017 Work Plan[1] and 2017 revisions.[15]

Differences shown in tables are BIMC values minus QIA values, therefore differences in which QIA values are greater than BIMC result in a negative value.

Information utilized in developing the updated reclamation security estimate was collected from the following sections of the 2017 Work Plan:

- Section 3.0 – Annual Scope of Operations and Work;
- Section 7.0 – Materials to be Shipped Off the Property;
- Section 8.0 – Materials to be Shipped to the Property; and
- Appendix A – 2017/18 ASR Estimate Breakdown Structure (EBS).

Direct costs and indirect costs were calculated using unit costs as described in QIA's 2014 Comprehensive Security Estimate.[4] The reclamation security estimate was based on the information available at the time of report development.

3.0 DIRECT COSTS ANALYSIS

The following sections describe in detail, by reclamation activity, changes to Direct Costs associated with the 2016 Audit and the 2017 Work Plan. A summary of Direct Costs can be found in Table 7. An itemized

[10] QIA (n.d.) Abandonment and Reclamation Policy for Inuit Owned Lands. V. 2.0.

[11] INAC (2002) Mine Site Reclamation Policy for Nunavut.

[12] ARKTIS (2016) Baffinland Iron Mines Corporation, Mary River Project, June 2016 Environmental Inspection Report. July 7, 2016.

[13] ARKTIS (2016) Baffinland Iron Mines Corporation, Mary River Project, August 2016 Environmental Inspection Report. August 25, 2016.

[14] ARKTIS (2016) Baffinland Iron Mines Corporation, Mary River Project, 2016 Audit.

[15] BIMC (2016) 2017 Marginal Closure and Reclamation Security Estimate – Revisions to Reflect Interested Parties Feedback November 24, 2016

list of Direct Costs added to the reclamation security estimate is provided in Appendix A, while Appendix B provides an itemized list of Direct Costs removed from the reclamation security estimate.

3.1 Fill Application

Table 1 provides a comparison of ARKTIS' and BIMC's estimated Direct Costs associated with Fill Application. The unit costs for Fill Application established by ARKTIS and BIMC during the 2014 ASR differ by $1.06/m^2, which also amounts to a portion of the cost difference (Table 1); the unit costs used by the two parties will not be discussed further here. The cost difference in the estimates are small.

3.2 Grade and Recontour

Table 2. Comparison of Direct Costs associated with Grade and Recontour provides a comparison of ARKTIS' and BIMC's estimated Direct Costs associated with the grading and recontouring. The direct cost difference of about $2,400 is a result of the unit costs for grading and recontouring established by ARKTIS and BIMC during the 2014 ASR differ by $0.12/m^2.

Table 1. Comparison of Direct Costs associated with Fill Application.

Item	Quantity (m^2)		Unit Cost		Direct Cost		Remarks
	BIMC	QIA	BIMC	QIA	BIMC	QIA	
Fill Application Added for 2017	1192	1192	$44.4	$43.31	$52,895	$47,400	Fill application for 2017 is primarily associated with reclamation landfill activity for buildings added as a part of the 2017 security estimate. There is a difference in unit cost leading to the difference in direct cost.
SUB-TOTAL DIRECT COSTS					$52,895	$47,400	
DIFFERENCE					$5,500		

Table 2. Comparison of Direct Costs associated with Grade and Recontour

Item	Quantity (m^2)		Unit Cost		Direct Cost		Remarks
	BIMC	QIA	BIMC	QIA	BIMC	QIA	
Subtractions from grade and recontour	-102,131	-102,131	$1.81	$1.93	-$184,887	-$197,000	Quarries and borrow sources which were not developed and have been removed from the ASR.
Additions of grade and recontour	122,700	122,700	$1.81	$1.93	$222,300	$236,800	Slight difference in unit costs leads to the difference in reclamation security.
SUB-TOTAL DIRECT COSTS					$37,400	$39,800	
DIFFERENCE					-$2,400		

3.2.1 Tote Road

The current reclamation security accounts for disturbed areas (i.e., borrow sources) along the Tote Road. No changes are recommended currently with the 2017 security estimate, due to the lack of planned activity on the Tote Road known at this time. Additional uncertainty exists in the long term stability of areas of the Tote Road and its embankments.

A high degree of uncertainty exists in the 2017 Work Plan in regard to the Tote Road. When the Tote Road work for 2017 has been finalized and presented (anticipated February 2017) an update to financial security will be needed to account for changes in the plan. Additionally, a reexamination of security will be needed when the satellite imagery and ground topography information becomes available (anticipated December 2016).

3.3 Liner Removal

ARKTIS' estimated Direct Costs associated with liner removal is minimal for 2017 security purposes and is carry over, that was removed from 2016 and added to 2017, resulting in zero change to security.

3.4 Grade and Recontour Significant Disturbed Areas

Table 3 provides a comparison of ARKTIS' and BIMC's estimated Direct Costs associated with the grading and recontouring of significantly disturbed areas (i.e., areas with large amounts of permafrost degradation such as KM 97 Borrow Source). **Updates to the disturbed areas will be needed when the satellite imagery and ground topography information becomes available (anticipated December 2016).**

3.5 Precast Foundations

The precast foundations reclamation security contributes to the overall difference in calculated security. BIMC's estimate includes reclamation of the foundation of the new truck wash building to be built in 2017, whereas the ARKTIS calculation includes both the truck wash building built in 2016, as captured in the 2016 Audit, and the proposed 2017 truck wash building. Unit costs also differ between ARKTIS and BIMC, but make up a small difference compared to the inclusion of an additional building. **The difference in security is $33,600.**

Table 3. Comparison of Direct Costs associated with Grade and Recontour of Significantly Disturbed Areas.

Item	Quantity (m^2)		Unit Cost		Direct Cost		Remarks
	BIMC	QIA	BIMC	QIA	BIMC	QIA	
Tote Road Unidentified High Priority Disturbed Areas - 2016	1,000	1,000	$2.72	$2.90	$2,700	$2,900	Small increase due to 2017 anticipated expansion of borrow source in high priority disturbed area category.
SUB-TOTAL DIRECT COSTS					$2,700	$2,900	
DIFFERENCE					-$200		

3.6 Mobile Equipment

Table 4 provides a summary of estimated Direct Costs associated with mobile equipment. Direct costs associated with mobile equipment changed as a result of adjustments made to the unit classifications and the added units for 2017. Discussion during the 2016 Audit to clarify items of high uncertainty led to alignment between QIA and BIMC regarding the classification of Light, Medium, and Heavy Mobile Equipment. This was captured in the HATCH/BIMC Path Forward on High Uncertainty Items Memo[16].

The quantities of QIA and BIMC are now in close agreement. The unit costs for mobile equipment established by ARKTIS and BIMC during the 2014 ASR differ by a small amount. The unit costs used by the two parties will not be discussed further here.

The number of Light, Medium, and Heavy Mobile Equipment rose according to the new equipment to come to site as documented in the 2017 Work Plan.

3.7 Fold Away Buildings

The removal of fold away buildings results in a difference in calculated security. The BIMC calculation is for the removal of the new truck wash building to be constructed in 2017 and the ARKTIS calculation includes both the truck wash building built in 2016 and captured in the 2016 Audit and the proposed 2017 truck wash building. Unit costs also vary, but make up a small difference compared to the inclusion of an additional building. **The difference in security is $145,700.**

[16] HATCH, BIMC (2016) Mary River Financial Security Estimate - Preliminary Path Forward on Items with High Uncertainty, October 27, 2016

Table 4. Marginal Direct Costs change associated with BIMC owned Mobile Equipment.

Item	Quantity (No.)		Unit Cost		Direct Cost		Remarks
	BIMC	QIA	BIMC	QIA	BIMC	QIA	
Light Mobile Equipment	9	9	$941.09	$938.16	$8,500	$8,400	ARKTIS values for the 2017 security estimate are a combination of equipment being added to site and adjustments to equipment size classifications in alignment with the High Uncertainty Path Forward Memo.
Medium Mobile Equipment	61	69	$1,494.13	$1,559.26	$91,100	$107,600	ARKTIS values for the 2017 security estimate are a combination of equipment being added to site and adjustments to equipment size classifications in alignment with the High Uncertainty Path Forward Memo. The largest adjustment is in the classification of trailers which have moved from heavy mobile to medium mobile. ARKTIS calculations add 2 units for each B-train coming to site in 2017, as a B-train consists of 2 trailers.
Heavy Mobile Equipment	-30	-30	$2,618.87	$2,251.31	-$78,600	-$67,500	ARKTIS values for the 2017 security estimate are a combination of equipment being added to site and adjustments to equipment size classifications in alignment with the High Uncertainty Path Forward Memo. The largest adjustment is in the classification of trailers which have moved from heavy mobile to medium mobile.
SUB-TOTAL DIRECT COSTS					$21,000	$48,500	
DIFFERENCE					-$27,500		Difference is due to unit costs and 8 additional medium units in the QIA column.

3.8 Mechanical Equipment

Table 5 provides a comparison of the ARKTIS and BIMC estimated Direct Costs associated with mechanical equipment. The unit costs for mechanical equipment established by ARKTIS and BIMC during the 2015 ASR differ by a small amount, which accounts for a portion of the difference (Table 5); the unit costs used by the two parties will not be discussed further here.

The number of Light, Medium, and Heavy Equipment increased by a small amount with the addition of new equipment from the 2017 Work Plan.

The 2017 ASR has agreement with classification of mobile equipment. Standard mechanical equipment classifications have not been discussed between BIMC and QIA and could be addressed in a future Security Review.

3.9 Reclaim Conveyor

A cross conveyor being proposed in the 2017 Work Plan is added to the financial security but lacks sufficient detail for an accurate security estimate. The assumption of 1/6 the length of the existing conveyor, resulting in $226,000 in financial security calculated, will need to be revisited when plans for the conveyor are developed. An adjustment in security will be assessed upon submission to QIA of the issued for construction drawings associated with the cross-conveyor. The timing is expected to be minimum 30 days prior to construction.

3.10 Consumables

BIMC and QIA have added consumables to the financial security due to the relocation of the Steensby Camp to the Milne port site being planned for 2017. The unit value for both QIA and BIMC are the same resulting in $34,300 added security.

3.11 Lighting

For the proposed addition of approximately 7,000 m of lighting/cabling split between the Mary River Mine and Port sites, a difference in unit costs results in a difference of $9,100 in calculated financial security between BIMC and QIA.

Table 5. Comparison of Direct Costs associated with Mechanical Equipment.

Item	Quantity (No.)		Unit Cost		Direct Cost		Remarks
	BIMC	QIA	BIMC	QIA	BIMC	QIA	
Light Equipment – Net change	40	40	$1,980.80	$1,784.11	$79,200	$71,400	ARKTIS has adopted the Baffinland Mechanical Equipment SAP List from September 25, 2015, as the previous list of BIMC owned equipment on site. 2017 additions are from the 2017 Work Plan.
Medium Equipment – Net change	18	18	$4,261.34	$4,276.14	$76,700	$81,200	ARKTIS has adopted the Baffinland Mechanical Equipment SAP List from September 25, 2015, as the previous list of BIMC owned equipment on site. 2017 additions are from the 2017 Work Plan.
Heavy Equipment – Net change	2	2	$41,205.45	$41,937.03	$82,400	$83,900	ARKTIS has adopted the Baffinland Mechanical Equipment SAP List from September 25, 2015, as the previous list of BIMC owned equipment on site. 2017 additions are from the 2017 Work Plan.
SUB-TOTAL DIRECT COSTS					$201,400	$194,500	
DIFFERENCE					$6,900		Difference is due to different unit costs.

4.0 INDIRECT COSTS ANALYSIS

The following sections describe in detail, by reclamation activity, changes to Indirect Costs resulting from the 2017 Annual Security Review (ASR). A summary of Indirect Costs can be found in Table 8. Direct costs impact the mobilization and demobilization of equipment, mobilization of workers, fuel for reclamation mobile equipment, and indirect costs in the other category and therefore the difference in security for these items is primarily due to the difference in total direct costs for the ASR. An itemized list of Indirect Costs added to the reclamation security estimate is provided in Appendix A, while Appendix B provides an itemized list of Indirect Costs removed from the reclamation security estimate.

4.1 Soil

An addition of contaminated soil to be treated has been made with a slight difference in unit cost for BIMC and QIA. BIMC soil treatment in the 2017 Work Plan adds the treatment of 4,232 m3, whereas the estimated ARKTIS volume is 4500 m3. The cost for treatment is in very close agreement, $63,000 BIMC versus $60,500 QIA.

4.2 Mobilization and Demobilization

It is ARKTIS' opinion that 3rd Party Equipment at the Project cannot be landfilled in a reclamation scenario as it is not the property of BIMC. Previously, BIMC has lumped removal of 3rd Party Equipment in with the Indirect Costs associated with mobilization and demobilization of materials and equipment by sealift (equal to 10% of all Direct Costs). It is ARKTIS' position that existing site 3rd Party Equipment be handled separately.

4.2.1 Mobile Equipment (3rd Party Owned)

Unit costs for backhauling 3rd Party Owned Light, Medium, and Heavy Mobile Equipment were derived from the cost to haul, load, and ship the equipment offsite. The resulting unit costs were calculated to be **$2,801.52** per unit, **$8,206.97** per unit, and **$15,984.36** per unit, for Light, Medium, and Heavy Mobile Equipment, respectively. Detailed calculations of these unit costs can be found in Appendix D.

The unit costs differ from disposal of BIMC owned equipment onsite, in that backhauling equipment does not require decontamination and disassembly, nor does it contribute to the fill application cost associated with the landfill (See Section 3.1), however it does include a cost for shipping. The shipping cost is based on the average volume of each class of mobile equipment (Light, Medium, or Heavy) as calculated in the 2014 QIA Comprehensive Security Estimate.[4] During the 2016 Audit it was suggested that a typical fleet of 3rd Party Equipment be adopted and used for security purposes. The composition of the fleet is outlined in the Path Forward on High Uncertainty Items Memo.[17] As outlined in the memo, if work plan activities indicate a greater than "typical" year for 3rd Party Equipment needs, this value will be examined at that time. The adjustment to security for 2017 to align with this typical fleet is -$63,900.

[17] HATCH, BIMC (2016) Mary River Financial Security Estimate - Preliminary Path Forward on Items with High Uncertainty, October 27, 2016

Table 6. Indirect Costs associated with Mobilization and Demobilization of 3rd Party Owned Equipment.

Item	Quantity (No.)		Unit Cost		Indirect Cost		Remarks
	BIMC	QIA	BIMC	QIA	BIMC	QIA	
Light Mobile Equipment (3rd Party) – 2016 Work Plan	0	34	$0	$2,801.52	$0	$95,300	It is ARKTIS' opinion that 3rd Party Equipment at the Project cannot be landfilled in a reclamation scenario as it is not the property of BIMC. BIMC has included the same number of each equipment type in their estimate, however, BIMC has applied a unit cost to landfill the equipment. Furthermore, BIMC believes the indirect cost for mobilizing and demobilizing 3rd Party Equipment for reclamation (10% of Direct Costs) should also be sufficient to also cover the demobilization of 3rd Party Equipment already present at the time of closure.
Medium Mobile Equipment (3rd Party) – 2016 Work Plan	0	28	$0	$8,206.97	$0	$229,800	It is ARKTIS' opinion that 3rd Party Equipment at the Project cannot be landfilled in a reclamation scenario as it is not the property of BIMC. BIMC has included the same number of each equipment type in their estimate, however, BIMC has applied a unit cost to landfill the equipment. Furthermore, BIMC believes the indirect cost for mobilizing and demobilizing 3rd Party Equipment for reclamation (10% of Direct Costs) should also be sufficient to also cover the demobilization of 3rd Party Equipment already present at the time of closure.
Heavy Mobile Equipment (3rd Party) – 2016 Work Plan	0	21	$0	$15,984.36	$0	$335,700	It is ARKTIS' opinion that 3rd Party Equipment at the Project cannot be landfilled in a reclamation scenario as it is not the property of BIMC. BIMC has included the same number of each equipment type in their estimate, however, BIMC has applied a unit cost to landfill the equipment. Furthermore, BIMC believes the indirect cost for mobilizing and demobilizing 3rd Party Equipment for reclamation (10% of Direct Costs) should also be sufficient to also cover the demobilization of 3rd Party Equipment already present at the time of closure.
SUB-TOTAL INDIRECT COSTS					$0.00	$660,800	**A net change of -$63,900 due to adoption of typical year 3rd party fleet.**

4.3 Short Term Care and Maintenance, Closure Monitoring and Reporting

ARKTIS previously adopted the reclamation cost proposed by BIMC for Short Term Care & Maintenance and Closure Monitoring & Reporting. ARKTIS notes that at this time, the updated Interim Closure and Reclamation Plan (ICRP) is still in the review process between QIA and BIMC, and therefore has not been approved by the QIA.[18] ARKTIS will review the reclamation cost associated with Short Term Care & Maintenance and Closure Monitoring & Reporting after QIA approval of the ICRP. Thus, costing for Care and Maintenance and Closure Monitoring and Reporting will be revised in future security estimates.

4.4 Inflation

The unit costs used by both ARKTIS and BIMC are based on rates and costs derived in 2014 and therefore representative of 2014 Canadian dollars. BIMC has not applied an adjustment for inflation and change in market conditions. As of September 2016, Baffinland maintained unit rates developed in 2014 are still representative of estimated reclamation costs for the purpose of the 2017/18 ASR Process as the labor, equipment, and fuel costs used as the basis of the 'first principle' build up of unit rates have not significantly changed since they were developed[17]. According to section 9.6 of the CPL, use of reclamation security is to compensate the landlord for reasonable costs of remediation and reclamation; further Section 4.8 of the CPL requires that rent and other compensation calculated from time to time shall include an annual increase for inflation.

Rather than recalculating unit costs annually, unless otherwise warranted, ARKTIS applied an inflation adjustment, to the total security estimate, to account for rising unit costs as per Section 4.8 of the CPL.[2]

The base year for estimating the inflation increase is October 2014, the year and month the unit costs were calculated. The monthly Commercial Price Index for Canada is published in the Statistics Canada table.[19] In October 2014, the inflation reading was 125.9, which represents the *base year for inflation adjustment* in the equation below.

The current Consumer Price Index for the year and month in which the ASR is being completed is then taken from the same Statistics Canada table; ARKTIS recommends using October to align with the month when the unit costs were initially calculated. The difference between the current year Consumer Price Index (129.1 for October 2016) and the base year Consumer Price Index (125.9 for October 2014) for Canada will determine the *Inflation adjustment multiplier* that will be applied to all Rent and compensation amounts.

The mathematical formula used to determine the *Inflation Adjustment multiplier* is as follows:

$$Inflation\ adjustment\ multiplier = \frac{(Inflation\ reading\ for\ current\ year)}{(Base\ \ year\ for\ inflation\ adjustment)}$$

[18] QIA's October 23, 2015, letter to BIMC titled, "Baffinland Iron Mines Corporation's Interim Mine Closure and Reclamation Plan – Conditional Approval."

[19] CANSIM table 326-0020

ARKTIS recommends that an adjustment for inflation of 1.0254 be applied to the final security estimates.

5.0 SUMMARY AND RECOMMENDATIONS

A summary of the changes to Direct Costs and Indirect Costs as part of the 2017 ASR is provided in Table 7 and Table 8, respectively. ARKTIS recommends that the reclamation security held by QIA (currently **$48,845,500**[20] pursuant to Q13C301 Commercial Lease) for IOL be adjusted by an increase of **$2,203,000**, from the revised 2016 estimate of **$52,719,000**[6] and an inflation adjustment multiplier of 1.0254 be applied to result in an aggregate reclamation security of **$56,317,000** for all activities up to the end of 2017 (Table 9); this excludes the activities associated with the Type 'B' Exploration Water License (2BE-MRY1421).

.

[20] QIA BIMC (2016) Joint Submission to the Nunavut Water Board, January 11, 2016

Table 7. Summary of marginal increases in Direct Costs for the 2017 ASR

Direct Costs										
Area	Item	BIMC		QIA		BIMC	QIA	BIMC	QIA	Difference
		Qty	Unit	Qty	Unit	Unit Cost	Unit Cost	Direct Cost	Direct Cost	Direct Cost
Site Works	Fill Application	1,095	m^2	1,095	m^2	$44.37	$43.31	$52,900	$47,400	$5,500
	Grade and Recontour	20,650	m^2	20,569	m^2	$1.81	$1.93	$37,400	$39,800	-$2,400
	Grade and Recontour of Building Footprints	-	-	-	-	-	-	-	-	-
	Liner Removal	-	-	-	-	-	-	-	-	-
	Grade and Recontour Significant Disturbed Areas	1,000	m^2	1,000	m^2	$2.72	$2.90	$2,700	$2,900	-$200
	Culvert Removal	-	-	-	-	-	-	-	-	-
	Bridge Removal	-	-	-	-	-	-	-	-	-
	Timber Cribbing	-	-	-	-	-	-	-	-	-
	Precast Foundations	1500	m^2	650	m^3	$38.47	$140.52	$57,700	$91,300	-$33,600
	Slab on Grade	-	-	-	-	-	-	-	-	-
Mobile Equipment	Light Mobile Equipment	9	ea.	9	ea.	$941.09	$938.16	$8,500	$8,400	$100
	Medium Mobile Equipment	61	ea.	69	ea.	$1,494.13	$1,559.26	$91,100	$107,600	-$16,500
	Heavy Mobile Equipment	-30	ea.	-30	ea.	$2,618.87	$2,251.31	-$78,600	-$67,500	-$11,100
Buildings (Contaminated)	Modular Buildings		m^2		m^2	$143.42	$184.43			-
	Fold Away Building	1500	m^2	2500	m^2	$142.41	$143.71	$213,600	$359,300	-$145,700
	Soft Walled Building (Tent)	-	-	-	-	-	-	-	-	-
	ISO Shipping Containers	-	-	-	-	-	-	-	-	-

Direct Costs										
Area	Item	BIMC		QIA		BIMC	QIA	BIMC	QIA	Difference
		Qty	Unit	Qty	Unit	Unit Cost	Unit Cost	Direct Cost	Direct Cost	Direct Cost
	Other Buildings	500	m2	1	ea	-	-	$71,700	$27,000	$44,700
Buildings (Not Contaminated)	Modular Buildings	950	m^2	986	m^2	$59.38	$61.47	$54,400	$60,700	-$6,300
	Fold Away Building	-	-	-	-	-	-	-	-	-
	Soft Walled Building (Tent)	-	-	-	-	-	-	-	-	-
	Temporary Construction Warehouses and Office Allowances	-	-	-	-	-	-	-	-	-
	ISO Shipping Containers	-	-	-	-	-	-	-	-	-
	Other Buildings									
Bulks	Piping	-	-	-	-	-	-	-	-	-
	Cable	-	-	-	-	-	-	-	-	-
Packaged Facilities	Incinerator	-	-	-	-	-	-	-	-	-
	Potable Water									
	Sewage Treatment Plant									
	Truck Wash Facility	-	-	-	-	-	-	-	-	-
Mechanical Equipment	Light Equipment	40	ea.	40	ea.	$1,980.80	$1,784.11	$79,200	$71,400	$7,800
	Medium Equipment	18	ea.	18	ea.	$4,261.34	$4,276.14	$76,700	$81,200	-$4,500
	Heavy Equipment	2	ea.	2	ea.	$41,205.45	$41,937.03	$82,400	$83,900	-$1,500
	Light Tanks		ea.	-	-	-	-	-	-	-
	Medium Tanks		ea.	-	-	-	-	-	-	-

Direct Costs										
Area	Item	BIMC		QIA		BIMC	QIA	BIMC	QIA	Difference
		Qty	Unit	Qty	Unit	Unit Cost	Unit Cost	Direct Cost	Direct Cost	Direct Cost
	Light Diesel Tanks			-	-	-	-	-	-	-
	Medium Mobile Diesel Tanks									
	Medium Diesel Tanks	-	-	-	-	-	-	-	-	-
	Large Diesel Tanks	-	-	-	-	-	-	-	-	-
	Largest Diesel Tanks	-	-	-	-	-	-	-	-	-
	Miscellaneous Items									
	Reclaim Conveyor	0.17	ea.	0.17	ea.	-	-	$221,600	$226,000	-$4,400
	Consumables	49	beds	49	beds	$700.80	$700.80	$34,300	$34,300	$0
	Contaminated Soil (Excavate)									
	Lighting	7000	m	7000	m	$26.50	$27.78	$185,400	$194,500	-$9,100
	Camp Mats (Size 1)	-	-	-	-	-	-	-	-	-
	Camp Mats (Size 2)	-	-	-	-	-	-	-	-	-
	Container Water Crossings	-	-	-	-	-	-	-	-	-
	Sea Containers	-	-	-	-	-	-	-	-	-
SUB-TOTAL DIRECT COSTS								$1,263,800	$1,368,000	-$104,200

Table 8. Summary of marginal increases in Indirect Costs for the 2017 ASR

Indirect Costs										
Area	Item	BIMC		QIA		BIMC	QIA	BIMC	QIA	Difference
		Qty	Unit	Qty	Unit	Unit Cost	Unit Cost	Indirect Cost	Indirect Cost	Indirect Cost
Off-site Disposal	Waste & Material	-	-	-	-	-	-	-	-	-
	Fuel		L	50,000	L	$0.10	$0.10	$30,000	$0	$30,000
	Ammonium Nitrate & Explosives		kg		kg	$2.37	$2.37	$0	$0	
Soil	Contaminated Soil Treatment	4232	m^3	4,500	m^3	$14.78	$13.45	$63,000	$60,500	$2,500 [a,d]
Mob. & Demob.	Mobilization of Workers Required for Reclamation	-	-	-	-	-	-	$43,000	$63,900	-$20,900
	Worker Accommodation & Camp Operations	-	-	-	-	-	-	$117,000	$198,000	-$81,000
	Mobilization and Demobilization of Equipment and Materials by Sealift	-	-	-	-	10.0%	10.0%	$126,000	$136,800	-$10,800
	Backhaul Light Mobile Equipment (3rd party)	0	ea.		ea.	$0.00	$2,801.52	$0	$0	$0 [f]
	Backhaul Medium Mobile Equipment (3rd party)	0	ea.		ea.	$0.00	$8,206.97	$0	$0	$0 [f]
	Backhaul Heavy Mobile Equipment (3rd party)	0	ea.	-4	ea.	$0.00	$21,314.42	$0	-$63,900	$63,900 [f]

Indirect Costs										
Area	Item	BIMC		QIA		BIMC	QIA	BIMC	QIA	Difference
		Qty	Unit	Qty	Unit	Unit Cost	Unit Cost	Indirect Cost	Indirect Cost	Indirect Cost
	Fuel for Reclamation Mobile Equipment	0	L	156,332	L	$0.40	$0.38	$	$59,400	-$59,400
Monitoring and Reporting	Geotechnical Inspections	-	-	-	-	-	-			
	Project Environmental Site Assessment	-	-	-	-	-	-			
	Closure & Post Closure Monitoring	-	-	-	-	-	-			
	Short Term Care & Maintenance, Closure Monitoring & Reporting	-	-	-	-	-	-			
Other	Engineering Fees					3.9%	3.9%	$49,000	$53,400	-$12,100
	Supervision, Project Management & Contract Administration					9.4%	9.4%	$125,000	$128,600	-$22,200
	Contingency					12.5%	15.0%	$202,000	$205,200	-$32,900
							SUB-TOTAL INDIRECT COSTS	$755,000	$835,000	-$80,000

Notes: Differences greater than $100,000 are highlighted yellow.
[a] Not impacted by Direct Costs.
[b] Quantity updated based on 50% of increased fuel storage capacity.
[c] Quantity updated based on inventory provided by BIMC during 2016 Audit.
[d] Contaminated soil treatment for the Milne Port Fuel Bladder Farm has already been included in the security estimate.
[e] Impacted by Direct Costs, particularly Grade & Recontour and Heavy Equipment.
[f] Difference in opinion of reclamation activity for 3rd Party Owned Equipment. Additionally, BIMC's opinion is that the Indirect Cost for Mobilization and Demobilization of Equipment and Materials by Sealift would also cover 3rd Party Equipment already at site.

Table 9. Summary of Total Costs for the complete 2017 ASR

Total Costs			
	BIMC [a]	QIA	Difference
2017 ASR SUB-TOTAL DIRECT COSTS	$1,263,800	$1,368,000	-$104,200
2017 ASR SUB-TOTAL INDIRECT COSTS	$755,000	$835,000	-$80,000
2017 ASR TOTAL ADJUSTMENT	$2,018,800	$2,203,000	-$184,200
2016 TOTAL RECLAMATION SECURITY ESTIMATE (WITHOUT INFLATION)	$46,053,000	$52,719,000	-$6,666,000
2017 TOTAL RECLAMATION SECURITY ESTIMATE (WITHOUT INFLATION)	$48,072,000	$54,922,000	-$6,850,000
INLFATION ADJUSTED 2017 TOTAL RECLAMATION SECURITY ESTIMATE [b]	-	$56,317,000	-$8,245,000

Notes:

[a] BIMC values may differ slightly from BIMC's 2016 Marginal Closure and Reclamation Financial Security Estimate due to rounding.

[b] ARKTIS has applied an inflation adjustment multiplier of 1.0254 as described in Section 4.5. BIMC has not applied an inflation adjustment.

6.0 CLOSURE

This report has been prepared exclusively for the use of the QIA for the specific application described within this report. The details provided in this report are for general information purposes only. The information and recommendations contained in this report should not be used for any other purpose, at another location, or by any other parties. Any use of, or reliance on this report by any third party is at that party's sole risk. ARKTIS assumes no responsibly for inappropriate use of the contents of this report, and disclaims all liability arising from negligence or otherwise. General terms and conditions are provided in Appendix E.

ARKTIS SOLUTIONS INC.

Bartholomew Warren B.Sc. Eng, MBA
Environmental Specialist

Jamie VanGulck, Ph.D., P.Eng.
Chief Technical Officer

APPENDIX A – DETAILED RECLAMATION SECURITY RESULTS, LINE ITEMS ADDED

Table A 1. Detailed Reclamation Security Results, Direct Costs Line Items Added.

Item Description	# of Items	Type	Reclamation Activities	Mine Site	Area (m^2) Total	Volume (m^3) Total	Unit Rate	Unit	Reclamation Cost
Consumables	49	Material and Supplies	CONSUMABLES	N/A			$700.80	/BED	$34,339.20
Landfill (2017 building additions)	1	Landfill	FILL APPLICATION	N/A	1,095.00	1,095.00	$43.31	/m2	$47,424.45
2016 Truck Wash Building	1	Buildings	FOLD-AWAY BUILDING TEARDOWN - CONTAMINATED	Mary River	1,000.00		$143.71	/m2	$143,710.00
2017 Truck Wash Building	1	Buildings	FOLD-AWAY BUILDING TEARDOWN - CONTAMINATED	Mary River	1,500.00		$143.71	/m2	$215,565.00
Maintenance Building (Old Concrete Batch Plant)	1	Buildings	FOLD-AWAY BUILDING TEARDOWN - CONTAMINATED	Milne Port	668.90	4,077.63	$143.71	/m2	$96,127.89
Crusher pad expansion 2017	1	Areas	GRADE AND RECONTOUR	Mary River	25,700.00		$1.93	/m2	$49,601.00
KM 2 Borrow Source 2017 marginal increase	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	1,000.00		$1.93	/m2	$1,930.00
Ore stockpile expansion 2017	1	Areas	GRADE AND RECONTOUR	Milne Port	82,000.00		$1.93	/m2	$158,260.00
Q1 quarry (2017 marginal increase in area)	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	6,000.00		$1.93	/m2	$11,580.00
Q13 Quarry	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	6,350.00		$1.93	/m2	$12,255.50
Q16A Quarry	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	11,240.00		$1.93	/m2	$21,693.20
Q18 Quarry	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	2,000.00		$1.93	/m2	$3,860.00
QMR2 Quarry 2017 marginal increase	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Mary River	6,000.00		$1.93	/m2	$11,580.00
Km 97 borrow source 2017 marginal increase	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	1,000.00		$2.90	/m2	$2,900.00

Item Description	# of Items	Type	Reclamation Activities	Mine Site	Area (m^2) Total	Volume (m^3) Total	Unit Rate	Unit	Reclamation Cost
			SIGNIFICANT DISTURBED AREAS						
Hazardous Waste Berm	1	Bermed/Lined Areas	GRADE AND RECONTOUR WITH LINER	Mary River	156.00		$5.34	/m2	$833.04
Hazardous Waste Berm	1	Bermed/Lined Areas	GRADE AND RECONTOUR WITH LINER	Mary River	156.00		$5.34	/m2	$833.04
Hazardous Waste Berm	1	Bermed/Lined Areas	GRADE AND RECONTOUR WITH LINER	Mary River	156.00		$5.34	/m2	$833.04
PWSP #3	1	Bermed/Lined Areas	GRADE AND RECONTOUR WITH LINER	Milne Port	4,260.00		$5.34	/m2	$22,748.40
Reclaim Conveyor cross conveyor 2017	0.17	Reclaim Conveyor	RECLAIM CONVEYOR	Milne Port	-	-	$1,329,441.00	EACH	$226,004.97
Tire shop at ore haul truck lineup	18	Container Building	REMOVE 20' ISO-CONTAINER (CONTAMINATED)	Mary River	267.91		$70.08	/m2	$18,775.27
Tire shop at ore haul truck lineup	4	Container Building	REMOVE 40' ISO-CONTAINER (CONTAMINATED)	Mary River	118.97		$70.08	/m2	$8,337.73
2017 lighting Cabling addition milne port	1	Cabling	REMOVE CABLING	N/A			$27.78	/m	$97,230.00
2017 lighting Cabling addition mine	1	Cabling	REMOVE CABLING	N/A			$27.78	/m	$97,230.00
Heavy Mobile Equipment (2017 additions)	-30	Equipment	REMOVE HEAVY MOBILE EQUIPMENT	N/A			$2,251.31	EACH	$(67,539.30)

Item Description	# of Items	Type	Reclamation Activities	Mine Site	Area (m^2) Total	Volume (m^3) Total	Unit Rate	Unit	Reclamation Cost
12 ML Diesel Fuel Tank	1	Fuel Tanks	REMOVE LARGEST DIESEL TANKS	Milne Port	794.23	12,112.01	$180,864.02	EACH	$180,864.02
Light Equipment (2017 additions)	40	Equipment	REMOVE LIGHT EQUIPMENT	N/A			$1,784.11	EACH	$71,364.40
Light Mobile Equipment (2017 additions)	9	Equipment	REMOVE LIGHT MOBILE EQUIPMENT	N/A			$938.16	EACH	$8,443.44
750,000L Jet A Fuel Tanks x 1	1	Fuel Tanks	REMOVE MEDIUM DIESEL TANKS	Milne Port	82.52	754.23	$17,169.52	EACH	$17,169.52
Heavy Equipment (2017 additions)	2	Equipment	REMOVE HEAVY EQUIPMENT	Mary River			$41,937.03	EACH	$83,874.06
Medium Equipment (2017 additions)	18	Equipment	REMOVE MEDIUM EQUIPMENT	N/A			$4,276.14	EACH	$76,970.52
Medium Mobile Equipment (2017 additions)	69	Equipment	REMOVE MEDIUM MOBILE EQUIPMENT	N/A			$1,559.26	EACH	$107,588.94
2016 Truck Wash Building precast foundation	1	Non-Hazardous	REMOVE PRECAST CONCRETE FOUNDATIONS	Mary River	1,000.00	260.00	$140.52	/m3	$36,535.20
2017 Truck Wash Building Precast foundations	1	Non-Hazardous	REMOVE PRECAST CONCRETE FOUNDATIONS	Mary River	1,500.00	390.00	$140.52	/m3	$54,802.80
mobile unit camp (previously steensby camp)	1	Buildings	SINGLE MODULAR BUILDING TEARDOWN - NOT CONTAMINATED	Milne Port	950.00		$61.48	/m2	$58,406.00
Workshop Office Building from 2017 Audit	1	Buildings	SINGLE MODULAR BUILDING TEARDOWN - NOT CONTAMINATED	Milne Port	35.67	86.99	$61.48	/m2	$2,193.28

Table A 2. Detailed Reclamation Security Results, Indirect Costs Line Items Added.

Item Description	# of Items	Type	Reclamation Activities	Volume (m^3) Total	Unit Rate	Unit	Reclamation Cost
0.75 ML Jet-A	0.5	Fuel	FUEL BACKHAUL	375.00	$100.00	/m3	$37,500.00
12 ML Diesel Fuel	0.5	Fuel	FUEL BACKHAUL	6,000.00	$100.00	/m3	$600,000.00
Heavy Mobile Equipment (3rd Party)	-4	3rd Party Equipment	REMOVE HEAVY MOBILE EQUIPMENT (3rd PARTY)		$15,984.36	EACH	-$63,937.45
Contingency (15% Direct Costs)	1	Contingency	CONTINGENCY	-	-	-	$265,100.00
Engineering Fees (3.9% Direct Costs)	1	Engineering	ENGINEERING	-	-	-	$68,900.00
Mobilization of Workers for Reclamation	1	Mobilization and Demobilization	CREW TRANSPORTATION	-	-	-	$73,800.00
Worker Accommodation & Camp Operations	1	Mobilization and Demobilization	CREW ACCOMMODATIONS	-	-	-	$228,800.00
Mobilization and Demobilization of Equipment and Materials by Sealift (10% Direct Costs)	1	Mobilization and Demobilization	RECLAMATION EQUIPMENT	-	-	-	$168,000.00
Fuel for Reclamation Mobile Equipment	1	Mobilization and Demobilization	RECLAMATION FUEL	156.33	$380.00	/m3	$59,406.16
Supervision, Project Management & Contract Administration (9.4% Direct Costs)	1	Project Management	PROJECT MANAGEMENT	-	-	-	$166,100.00
Contaminated Soil Treatment	1	Soil	CONTAMINATED SOIL TREATMENT	4,500.00	$13.45	/m3	$60,525.00

APPENDIX B – DETAILED RECLAMATION SECURITY RESULTS, LINE ITEMS REMOVED

Table B 1. Detailed Reclamation Security Results, Direct Costs Line Items Removed.

Item Description	# of Items	Type	Reclamation Activities	Mine Site	Area (m^2) Total	Unit Rate	Unit	Reclamation Cost
Q9 Quarry	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	15,166.00	$1.93	/m2	$29,270.38
Q14 Quarry	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	13,440.00	$1.93	/m2	$25,939.20
Q15 Quarry	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	10,680.00	$1.93	/m2	$20,612.40
P5 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	4,600.00	$1.93	/m2	$8,878.00
P6 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	7,500.00	$1.93	/m2	$14,475.00
P7 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	8,100.00	$1.93	/m2	$15,633.00
P8 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	8,385.00	$1.93	/m2	$16,183.05
P10 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	19,344.00	$1.93	/m2	$37,333.92
P13 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	8,456.00	$1.93	/m2	$16,320.08
P14 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	3,160.00	$1.93	/m2	$6,098.80
P15 Borrow Source	1	Quarry/Borrow Area	GRADE AND RECONTOUR	Tote Road	3,300.00	$1.93	/m2	$6,369.00

APPENDIX C – SUMMARY OF SELECT UNIT COSTS

Light Mobile Equipment (Assumed 3rd Party Equipment) Backhaul

					U.S. Averages		Ottawa Index	Ottawa Costs	Nunavut Index	Nunavut Costs	
					Hourly	Daily		Hourly		Hourly	
Load	Crew	1 Laborer			$56.55		1.05	$59.38	1.6	$95.00	
		1 Equipment Operator Medium			$74.15		1.05	$77.86	1.6	$124.57	
		1 F.E. Loader, W.M., 2.5 CY			$71.89	$575.08	1.038	$74.62	2.5	$186.54	
										$406.12	/hr
	Crew	Daily Output (Volume) =	24	ea.							
		Daily Cost (8 hour day) =	$3,248.94								
		Cost ea. =	$135.37	ea.							
Haul	Crew	1 Truck Driver (heavy)			$57.30		1.05	$60.17	1.6	$96.26	
		1 Truck Tractor, 220 H.P.			$50.38	$403.04	1.038	$52.29	2.5	$130.74	
		1 Flatbed Trailer, 40 Ton			$20.90	$167.20	1.038	$21.69	2.5	$54.24	
										$281.24	/hr
	Crew	Daily Output (Volume) =	12	ea.							
		Daily Cost (8 hour day) =	$2,249.88								
		Cost per m3 =	$187.49								
Backhaul Shipping		Shipping Cost	$103.02	/m^3							
		Average Volume	24.06	m^3							
		Cost ea. =	$2,478.66	ea.							

Unit Cost Light Mobile Equipment Backhaul (ARKTIS) = $2,801.52 ea.

Unit Cost Light Mobile Equipment (BIMC) = $0.00 ea.

Medium Mobile Equipment (Assumed 3rd Party Equipment) Backhaul

					U.S. Averages		Ottawa		Nunavut		
							Index	Costs	Index	Costs	
					Hourly	Daily		Hourly		Hourly	
Load	Crew	1 Laborer			$56.55		1.05	$59.38	1.6	$95.00	
		1 Equipment Operator Medium			$74.15		1.05	$77.86	1.6	$124.57	
		1 F.E. Loader, W.M., 2.5 CY			$71.89	$575.08	1.038	$74.62	2.5	$186.54	
										$406.12	/hr
	Crew	Daily Output (Volume) =	24	ea.							
		Daily Cost (8 hour day) =	$3,248.94								
		Cost ea. =	$135.37	ea.							
Haul	Crew	1 Truck Driver (heavy)			$57.30		1.05	$60.17	1.6	$96.26	
		1 Truck Tractor, 220 H.P.			$50.38	$403.04	1.038	$52.29	2.5	$130.74	
		1 Flatbed Trailer, 40 Ton			$20.90	$167.20	1.038	$21.69	2.5	$54.24	
										$281.24	/hr
	Crew	Daily Output (Volume) =	4	ea.							
		Daily Cost (8 hour day) =	$2,249.88								
		Cost per m3 =	$562.47								
Backhaul Shipping		Shipping Cost	$103.02	/m^3							
		Average Volume	72.89	m^3							
		Cost ea. =	$7,509.13	ea.							

Unit Cost Medium Mobile Equipment Backhaul (ARKTIS) = $8,206.97 ea.

Unit Cost Medium Mobile Equipment (BIMC) = $0.00 ea.

Heavy Mobile Equipment (Assumed 3rd Party Equipment) Backhaul

					U.S. Averages		Ottawa		Nunavut		
							Index	Costs	Index	Costs	
					Hourly	Daily		Hourly		Hourly	
Load	Crew	1 Laborer			$56.55		1.05	$59.38	1.6	$95.00	
		1 Equipment Operator Medium			$74.15		1.05	$77.86	1.6	$124.57	
		1 F.E. Loader, W.M., 2.5 CY			$71.89	$575.08	1.038	$74.62	2.5	$186.54	
										$406.12	/hr
	Crew	Daily Output (Volume) =	12	ea.							
		Daily Cost (8 hour day) =	$3,248.94								
		Cost ea. =	$270.75	ea.							
Haul	Crew	1 Truck Driver (heavy)			$57.30		1.05	$60.17	1.6	$96.26	
		1 Truck Tractor, 220 H.P.			$50.38	$403.04	1.038	$52.29	2.5	$130.74	
		1 Flatbed Trailer, 40 Ton			$20.90	$167.20	1.038	$21.69	2.5	$54.24	
										$281.24	/hr
	Crew	Daily Output (Volume) =	3	ea.							
		Daily Cost (8 hour day) =	$2,249.88								
		Cost per m3 =	$749.96	/m^3							
Backhaul Shipping		Shipping Cost	$103.02	/m^3							
		Average Volume	145.25	m^3							
		Cost ea. =	$14,963.66	ea.							

Unit Cost Heavy Mobile Equipment Backhaul (ARKTIS) = $8,206.97 ea.

Unit Cost Medium Mobile Equipment (BIMC) = $0.00 ea.

APPENDIX D – GENERAL TERMS AND CONDITIONS

USE OF REPORT

This report pertains to a specific site, a specific development, and a specific scope of work. It is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site or proposed development would necessitate a supplementary investigation and assessment.

This report and the assessments and recommendations contained in it are intended for the sole use of ARKTIS Solutions Inc.'s (ARKTIS) client. ARKTIS does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than ARKTIS' client unless otherwise authorized in writing by ARKTIS. Any unauthorized use of the report is at the sole risk of the user.

LIMITATIONS OF REPORT

This report is based solely on the conditions which existed on site at the time of ARKTIS' investigation. The client, and any other parties using this report with the express written consent of the clients and ARKTIS, acknowledge that conditions affecting the environmental assessment of the site can vary with time and that the conclusions and recommendations set out in this report are time sensitive.

The client, and any other party using this report with the express written consent of the client and ARKTIS, also acknowledge that the conclusions and recommendations set out in this report are based on limited observations and testing on the subject site and that conditions may vary across the site which, in turn, could affect the conclusions and recommendations made.

The client acknowledges that ARKTIS is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the property, the decisions on which are the sole responsibility of the client.

During the performance of the work and the preparation of this report, ARKTIS may have relied on the information provided by persons other than the client. While ARKTIS endeavors to verify the accuracy of such information when instructed to do so by the client, ARKTIS accepts no responsibility for the accuracy or the reliability of such information which may affect the report.

STANDARD OF CARE

Services performed by ARKTIS for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and financial and physical constraints applicable to the services. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

ALTERNATE REPORT FORMAT

Where ARKTIS submits both electronic file and hard copy versions of reports, drawings and other project related documents and deliverables (collectively termed instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by ARKTIS shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancies, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by ARKTIS shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of instruments of professional services shall not, under any circumstances, no matter who owns or uses them, be altered by any party except ARKTIS. The Client warrants that instruments of professional services will be used only and exactly as submitted by ARKTIS.