#### APPENDIX II WATER QUALITY TEST DATA

Accutest Laboratories – Tested water samples from:

BGC03-12 and BGC03-14

Ice Core samples from:

BGC03-16, BGC03-20, and BGC03-21. (June 2003)

Maxxam Analytical – Tested water samples from: BGC03-12 and BGC03-14. (Sept. 2003)

2308149 2003-06-18

Report Number: Date Submitted:

# ACCUTEST LABORATORIES LTD

1605-840 7th Avenue SW Client: BGC Engineering Inc. Calgary, AB

Attention: Gerry Ferris

Project:

0255-008-03 2003-06-04

P.O. Number: Matrix:

				202702					
	Sami	Sample Date:	2003-05-28	2003-05-28					
	Sa	Sample ID:	BGC03-12-1	BGC03-14-1					
PARAMETER	UNITS	MDL					TYPE	LIMIT	UNITS
Acidity as CaCO3	mg/L	-	18	24					
Alkalinity as CaCO3	mg/L	2	51	11					
Chloride	mg/L	-	2820	10300					
N-NH3 (Ammonia)	mg/L	10	20	15.6					
Sulphate	mg/L	-	1390	780					
Hardness as CaCO3	mg/L	~	5170	14300	•				
Calcium	mg/L	-	1850	5710					
Magnesium	mg/L	-	133	16					
Potassium	mg/L	-	163	287					
Sodium	mg/L	7	87	208			·		
Arsenic	mg/L	0.01	0.02	<0.01					
Barium	mg/L	0.01	0.02	0.05					
Boron	mg/L	0.05	0.51	1.71	-				
Cadmium ·	mg/L	0.001	0.014	0.005					
Chromium	mg/L	0.01	0.05	0.01					
Copper	mg/L	0.01	90.0	60.0					
Iron	mg/L	0.01	26.4	1.68					
Lead	mg/L	0.01	3.32	1.14					
Manganese	mg/L	0.005	0.534	0.060					
Mercury	mg/L	0.0001	<0.0001	<0.0001					
Selenium	mg/L	0.01	0.01	0.03					
Aluminum	mg/L	0.01	0.22	0.04					
Antimony	mg/L	0.01	<0.01	.<0.01	-				
Beryllium	mg/L	0.001	<0.001	<0.001					
Cobalt	mg/L	0.002	0.009	0.010		<del></del>			
Molybdenum	mg/L	0.005	0.006	0.072					
Nickel	mg/L	0.005	0.020	<0.005					
Silicon	mg/L	0.1	4.1	0.4					
Silver	mg/L	0.001	<0.001	<0.001					
Strontium	mg/L	0.002	46.3	167					



#### REPORT OF ANALYSIS

# ACCUTEST LABORATORIES LTD

0255-008-03 Report Number: Date: Date Submitted: Project: Client: BGC Engineering Inc. 1605-840 7th Avenue SW Attention: Gerry Ferris Calgary, AB

2308149 2003-06-18 2003-06-04

P.O. Number: Matrix:

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				O.L.	CNIES																		-
Water	GUIDELINE			1	LIMI				<u> </u>						 	•	 		•		•		
>				1	IYPE								 							 			<del></del>
Matrix:							-				<u> </u>		<del>-</del>	···_		-	 			 		<del></del>	
Mat												_			 		 						
						<del>- , _</del>					-		 -		 		 			 			<u>-</u>
		3	τ <u>-</u> -							<del></del>			 		 		 						
	252492					<0.01	<0.01	<0.01	0.250														
	252491	2003-05-28	BGC03-12-1			<0.01	<0.01	<0.01	4.75										<del></del>	 			
	LAB ID:		Sample ID:		MDF.	0.01	0.01	0.01	0.005											_			
		Sam	Sa		UNITS	mg/L	mg/L	mg/L	mg/L		-												
																		•					
					PARAMETER																		
					PA																		
						띮	E	lium															
						Thallit	Titanium	Vanad	Zinc		.,												

MDL = Method Detection Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration Comment:

APPROVAL:

Ewan McRolibie
Inorganic Lab 8upervisor

# ACCUTEST LABORATORIES LTD

Client: BGC Engineering Inc. 1605-840 7th Avenue SW Calgary, AB

Attention: Gerry Ferris

2308150 2003-06-17 2003-06-04 Report Number: Date: Date Submitted:

0255-008-03

**Project:** 

P.O. Number: Matrix:

		LAB ID:	252493	252494	252495			GUIDELINE	
	San	Sample Date:	2003-05-27	2003-05-27	2003-05-27				
	Ø	Sample ID:	BGC03-06-01	ш	BGC03-20-01				
						-			
PARAMETER	UNITS	MDL					TYPE	LIMIT	UNITS
Acidity as CaCO3	mg/L	-	\$	<5	NS				
Alkalinity as CaCO3	mg/L	5	10	18	SN				
Chloride	mg/L	~	47	4	₹				
N-NH3 (Ammonia)	mg/L	0.02	0.03	0.04	SN	-			
Sulphate	mg/L	Υ-	-	14	₹				
Hardness as CaCO3	mg/L	-	22	28	2880	-			
Calcium	mg/L	<u></u>	23	7	299				
Magnesium	mg/L	-	₹	₹	296				
Potassium	mg/L	-			ო				
Sodium	mg/L	7			က		<del></del>		
Arsenic	mg/L	0.001			600.0				
Barium	mg/L	0.01			0.08				
Boron	mg/L	0.05		·	60.0				
Cadmium	mg/L	0.0001			0.0112			-	
Chromium	mg/L	0.001			0,060				
Copper	mg/L	0.001			0.842				
Iron	mg/L	0.01			38.3				
Lead	mg/L	0.001		-	14.0				
Manganese	mg/L	0.005		•	1.96				
Mercury	mg/L	0.0001			<0.0001				
Selenium	mg/L	0.001			<0.001				
Aluminum	mg/L	0.01			1.80				
Antimony	mg/L	0.001			0.004				
Beryllium	mg/L	0.001		100	<0.001				
Cobalt	mg/L	0.0002			0.0287				
Molybdenum	mg/L	0.005		-	<0.005	<del></del>			
Nickel	mg/L	0.005	•		0.047				
Silicon	mg/L	0.1			1.2				
Silver	. mg/L	0.0001			<0.0001		<del>adaa k</del>		
Strontium	ma/L	0.002			0.815		****		

MDL = Method Detection Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

Comment:

252495: NS = No Sample.

0255-008-03 2308150 2003-06-17 2003-06-04 Report Number: Date Submitted: Project: Client: BGC Engineering Inc. 1605-840 7th Avenue SW Calgary, AB Attention: Gerry Ferris

P.O. Number: Matrix:

	- 1			 <del>                                     </del>					 							 				
				UNITS																
Water	GUIDELINE			LIMIT					 							en Portugue				
8	9			TYPE									 	 		 				
;				T					 <del></del>	<del></del>			 			 	 			
Matrix:																				
												•						-		
						_														
	252495	2003-05-27	3GC03-20-01		0.001	<0.01	0.017 5.36										•			
	252494	2003-05-27	3GC03-21-01														-			
	252493	2003-05-27	3GC03-06-01																•	
	LAB ID:	Sample Date:		MDL	0.001	0.01	0.001		 		-		 		<del></del>	 				· · · · · ·
		Sampl	San	UNITS	mg/L	mg/L	mg/L mg/l	i D	 				 	 						
				R																
				PARAMETER													•			
				Ρ¢																
			···		Thallium	Titaninm	Vanadium													

MDL = Method Detection Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration Comment:

252495: NS = No Sample.

Inorganic Lab Supervisor

MAXXAM JOB #: A331738
PROJECT NAME: NANISIVIK MINE
PROJECT #: 28935
REPORT DATE: 2003/09/03
RESULTS OF CHEMICAL ANALYSES OF LIQUID

RESULTS OF CHEMICAL ANALYSES OF L	QUID											
Maxxam ID COC Number		A82897		A82900								
Sampling Date	-	215038 19/08/2003		215038 19/08/2003								
Parameter	Units		MDL	BGC03-14	MDI	MATRIX SPIKE %REC	MDI	QC %REC	1451	ODIVED DI ALIVENIDA		
				B0000-14	MOC	MATRIX OF INC. MREC	MDC	QC WREC	MUL	SPIKED BLANK %REC	MDL	METHOD BLANK MDL
Acidity as CaC03	mg/L	N/A	N/A	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A	ND 10
Total Alkalinity (Total as CaCO3)	mg/L	N/A	N/A	87.9	1	N/A	N/A	98	1	N/A		ND 1
Dissolved Chloride (CI) Dissolved Sulfates (SO4)	mg/L	413	3.8	1380	3.8	N/A	N/A	100	0.15	101		ND 0.15
Total Petroleum Hydrocarbons(Extractable)	mg/L	1430	13	575	13	N/A	N/A	98	0.5	98		ND 0.5
Total Aluminum (AI)	ug/L mg/L	N/A 0.08	N/A 0.04	N/A 0.06	0.04	N/A	N/A	N/A	N/A	95		ND 70
Total Chromium (Cr)	mg/L	ND ND	0.005	ND	0.005	92	0.04	100	0.04	100		ND 0.04
Total Cobalt (Co)	mg/L	0.01	0.005	ND	0.005		0.005		0.005	106		ND 0.005
Total Copper (Cu)	mg/L	0.038	0.004	0.014	0.004		0.004		0.004	108		ND 0.005
Total Iron (Fe)	mg/L	30.4	0.006	2.06	0.006		0,006		0.006	116		ND 0.004 ND 0.006
Total Lead (Pb)	mg/L	0.741	0.025	0.517	0.025	89			0.025		0.025	ND 0.025
Total Lithium (Li)	mg/L	0.06	0.02	0.43	0.02	110			0.02	102		ND 0,02
Total Magnesium (Mg) Total Manganese (Mn)	mg/L		0.003	14.9	0.003	N/A		107		N/A		0.007 0.003
Total Antimony (Sb)	mg/L mg/L	0.141	0.002	0.049	0.002	92		98		105		ND 0.002
Total Molybdenum (Mo)	mg/L		0.006	0.081	0.006	89	0.006	111	0.1	106		ND 0.1
Total Nickel (Ni)	mg/L		0.01	ND	0.01	93		97	0.006	109		ND 0.006
Total Phosphorus Total (P)	mg/L		0.04	ND	0.04	N/A				105 N/A		ND 0.01 ND 0.04
Total Potassium (K)	mg/L	106	1	122	1	N/A	1	99	1	N/A		ND 0.04
Total Selenium (Se)	mg/L		0.033	ND	0.033	98			0.033			ND 0.033
Total Silicon (Si)	mg/L		0.2	0.7	0.2	N/A	0.2	103	0.2	N/A		ND 0.2
Total Silver (Ag) Total Sodium (Na)	mg/L		0.007	ND DE 7	0.007	N/A				N/A	0.007	ND 0.007
Total Strontium (Sr)	mg/L mg/L		0.09	95.7 12	0.003							ND 0.09
Total Sulfur (S)	mg/L		0.065		0.065	N/A N/A						ND 0.003
Total Arsenic (As)	mg/L		0.003	ND	0.04							ND 0.065
Total Thallium (TI)	mg/L		0.05	ND	0.05							ND 0.04 ND 0.05
Total Tin (Sn)	mg/L		0.018		0.018							
Total Titanium (Ti)	mg/L		0.003		0.003	99						ND 0.003
Total Tungsten (W) Total Vanadium (V)	mg/L		0.03	ND	0.03	N/A					0.03	ND 0.03
Total Zinc (Zn)	mg/L		0.003		0.003							ND 0.003
Total Barium (Ba)	mg/L		0.001		0.001						0,003	ND 0.003
Total Beryllium (Be)	mg/L		0.001		0.001						0,001	ND 0.001
Total Bismuth (BI)	mg/L		0.023		0.023							ND 0.001 ND 0.023
Total Boron (B)	mg/L		0.005		0.005						0.005	
Total Cadmium (Cd)	mg/L		0.003		0.003				0.003		0.003	
Total Calcium (Ca) Total Ammonia-N	mg/L		0.04		0.04							ND 0.04
Total pH	mg/L		0.5	14.1	0.5							
Sulphide	pH mg/l		0.02		0.02							
Dissolved Total Dissolved Solids (TDS)	mg/L		1	4510	0.02	N/A						
Dissolved Aluminum (Al)	mg/L		0.04	ND	0.0							
Dissolved Chromium (Cr)	mg/l		0.005	ND	0.00							
Dissolved Coball (Co)	mg/l		0.005		0.00				0.005			
Dissolved Copper (Cu) Dissolved Iron (Fe)	mg/l		0.004		0.00	1					A N/A	ND 0.00
Dissolved Iron (Pb)	mg/l		0.008		0.00							
Dissolved Lithium (Li)	mg/l		0.02		0.02							
Dissolved Magnesium (Mg)	mg/l		0.003		0.00							
Dissolved Manganese (Mn)	mg/l		0.002		0.00							
Dissolved Antimony (Sb)	mg/	L 0.3	0.1	0.1	0,	1 N/A	N/A	9				
Dissolved Molybdenum (Mo)	mg/		0.000		0.00			A 91	0.00	6 N/		
Dissolved Nickel (Ni)	mg/		0.01		0.0							ND 0.0
Dissolved Phosphorus Total (P) Dissolved Potassium (K)	mg/i		0.04	ND 118	0.0							
Dissolved Potassidiff (K) Dissolved Selenium (Se)	mg/		0.33		0.3					1 N/		
Dissolved Silicon (Si)	mg/		0.02		0.0							
Dissolved Silver (Ag)	mg/		0.00		0.00							
Dissolved Sodium (Na)	mg/	L 76.2	0.09	95.4	0.0	9 N//	A N/	A 10				
Dissolved Strontium (Sr)	mg/		0.00	3 12.1	0.00	3 N/	A N/	A 9				
Dissolved Sulfur (S)	mg/		0.06		0.06						A N/A	
Dissolved Arsenic (As) Dissolved Thallium (Ti)	mg/		0.04		0.0							ND 0.0
Dissolved Tin (Sn)	mg/ mg/		0.05		0.01				0.0	- 10	A N//	
Dissolved Tith (Sil)	mg/		0.00		0.00				0.01			
Dissolved Tungsten (W)	mg/		0.03		0.0				4 0.0			
Dissolved Vanadium (V)	mg/		0,00		0.00				8 0.00			
Dissolved Zinc (Zn)	mg/	/L 0.025	0.00	3 0.013	0.00	3 N/.			7 0.00			
Dissolved Barium (Ba)	mg/		0.00		0.00	1 N/.	A N/	A 10	1 0.00	1 N		
Dissolved Beryllium (Be)	mg/		0.00		0.00			A 9	8 0.00	1 N	A N/	A ND 0.00
Dissolved Bismuth (Bi) Dissolved Boron (B)	mg/		0.02		0,02						A N/	A ND 0.02
Dissolved Boron (B) Dissolved Cadmium (Cd)	mg/		0.00		0.00				9 0.00			A ND 0.00
			1 0.00	טו ועט		3 N/.		AI 10	01 H NO	3 N	A N/	A) ND 0.00
Dissolved Calcium (Ca)	mg/		0.04		0.0				8 0.0		A N/	

ND = Not detected N/A = Not Applicable TBA = Result to follow MDL = METHOD DETECTION LIMIT QC = QC Standard