INTERIM TECHNICAL REPORT

Omitiomire Copper Project: Geochemistry Assessment

Static Geochemistry Results

Prepared for: **Environmental Compliance Consultancy and Craton Mining**

RGS

MINE WASTE AND
WATER MANAGEMENT

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DOCUMENT CONTROL 001	
Document Version	**001**
Project Number	**2022052**
File Location	**Z:\004_Projects\Projects 2022\2022052 (Omitiomire Project)\Reporting**
Date	**21.03.2023**

DOCUMENT DISTRIBUTION			
Document Name	**Document Status**	**Distributed to**	**Date distributed**
001_2022052_Namibia_Omitiomire Project_Interim_Technical_Report_ 21032023	Revision A	Environmental Compliance Consultancy and Craton Mining	21.03.2023

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Glossary of Terms and Acronyms

Acidity	A measure of hydrogen ion (H+) concentration and certain dissolved metals in a solution when titrated to a set pH value; generally expressed as mg/L $CaCO_3$ equivalent.
ABA	Acid Base Account, an evaluation of the balance between acid generation and acid neutralisation processes. Generally, determines the Maximum Potential Acidity (MPA) and the inherent Acid Neutralising Capacity (ANC), as defined below, and is commonly used in assessing the potential for AMD associated with mining.
Alkalinity	A measurement of the amount of alkalinity in a sample generally derived using a titration method to a set pH value.
AMD	Acid and Metalliferous Drainage (AMD) caused by exposure of sulfide minerals in mine waste materials to oxygen and water. Typically characterised by low pH and elevated concentrations of salts, sulfate and metals.
ANC	Acid neutralising capacity of a sample as kg H_2SO_4 per tonne of sample. Commonly referred to as the buffering capacity.
ANC:MPA	Ratio of the acid neutralising capacity (ANC) and maximum potential acidity (MPA) of a sample. Used to assess the risk of a sample generating acid conditions.
EC	Electrical Conductivity, expressed as µS/cm, is a measure of electrical conductance.
KLC	Kinetic Leach Column test to determine the dynamic quality of leachate from test materials.
LoR	Limit of Reporting. Laboratory detection limit for the reporting of results for a particular geochemical test.
MPA	Maximum Potential Acidity calculated by multiplying the total sulfur content of a sample by 30.625 (stoichiometric factor) and expressed as kg H_2SO_4 per tonne.
NAF-Barren	Non-acid forming and barren of sulfur (i.e., less than or equal to 0.07% sulfur). Geochemical classification criterion for a sample that is highly unlikely to generate acidic conditions either now or in the future.
NAPP	Net Acid Producing Potential (NAPP) expressed as kg H_2SO_4 per tonne. NAPP is the balance between the capacity of a sample to generate acidity (MPA) minus its capacity to neutralise acidity (ANC).
NMD	Neutral Mine Drainage typically caused by exposure of sulfide minerals in mine waste materials to oxygen and water and then neutralisation by gangue minerals. Typically characterised by neutral pH and elevated concentrations of salts, sulfate and metals.
PAF	Potentially Acid Forming. Geochemical classification criterion for a sample that has the potential to generate acid conditions.
pH	A measure of hydrogen ion (H+) concentration; generally expressed in pH units.
Static test	Procedure for characterising the geochemical nature of a sample at one point in time. Static tests may include measurements of mineral and chemical composition of a sample and the Acid Base Account.
Total Sulfur	Total sulfur content of a sample generally measured using a high temperature ‘Leco’ analyser expressed as %S.

1 Introduction

RGS Environmental Consultants Pty Ltd (RGS) was commissioned by Environmental Compliance Consultancy (ECC) to develop a geochemistry assessment program on behalf of Craton Mining and Exploration (Pty) Ltd (herein referred to as Craton) for the Omitiomire Copper Project (the 'Project').

The geochemistry assessment program is being completed in accordance with mining industry technical guidelines (INAP, 2023) and focusses on the sampling and geochemical testing of representative samples of various mining and mineral processing materials (including waste rock, low-grade and high-grade ore, spent heap leach residue and tailing materials), when these become available. Associated leachate quality data will be interpreted and used to support water quality assessments completed by others in relation to site geochemical risk assessments and planning for operations and future site closure.

ECC has been contracted by Craton to revise and update the environmental and social impact assessment for proposed mining activities within Mining License (ML) 197.

1.1 Project Location

The Project is located approximately 140 km northeast of Windhoek and approximately 39 km south of Hochfeld in the Khomas Region of Namibia, on the Exclusive Prospecting Licence (EPL) 8550.

Exploration activities have identified that the total Omitiomire resource is 137 million tonnes and ore grade is estimated at an average of 0.55 % to 0.65 % Copper. Most of the deposit is in the form of copper sulfides, containing high proportions of copper and low proportions of sulfur. The copper sulfides are oxidised near the surface and next to major fractures and fault lines at depth. The oxidised copper ores make up about 15 % of the total deposit and initial mining will focus on a part of the oxide resource near surface.

Craton plans initial development of a small, shallow "mini-mining" operation, to bring the project into production quickly and at low cost. The plan involves mining a modest tonnage (10,000 tonnes per month) of oxide copper ore in a small open-cut mine to a depth of 16 m. The mine designed will impact upon the existing infrastructure and will require diversions to Black Nossob River and public road.

1.2 Project background

Craton is an exploratory mining prospector and a Namibian registered subsidiary of Mauritian registered Omico Copper Limited, and jointly owned by Greenstone Resources II L.P., International Base Metals Limited (Australia), and Craton Foundation (Namibia).

The environmental clearance certificate for the exploration activities on EPL 8550 was valid for three (3) years and was issued by the Environmental Commissioner on the 20th of September 2017. ML 197 was applied in 2015 and granted for a period of 20 years in 2016, with the first environmental clearance certificate was issued by the Environmental Commissioner in 2017, which was then amended in 2018 and was valid for a period of three years from the 8th May 2018 to 8th May 2021.

The site has Renewal Environmental Clearance Certificates submitted for both EPL 8550[1] and ML 197[2] in February 2022 with ECC, with requirement to be renewed every three years to allow mining activities to be undertaken as part of the Listed Activities in accordance with Ministry of Environment and Tourism (MET) Environmental Management Act, 2007 (Act No. 7 of 2007) and its gazetted Environmental Impact Assessment Regulations (No. 30 of 2011).

ECC is supporting Craton to achieve their commitment to comply with the provisions of the Namibian environmental regulatory requirements. At this time, approval is being sought only for planned definition and exploration drilling activities.

ECC has previously undertaken environmental compliance audit and reporting activities, as well as submission of the Renewal Environmental Clearance Certificate on behalf of Craton, adjacent to and within the Project study areas. Available information includes:

- ECC Craton (2022a) – Renewal Environmental Clearance Certificate (ECC, 2022a).
- ECC Craton (2022b) – Renewal Environmental Clearance Certificate (ECC, 2022b).

Other available information includes the Environmental Management Plan (EMP) by SLR Namibia (Pty) Ltd (SLR), the independent firm of consultants who also compiled the groundwater and surface water report:

- SLR Global Environmental Solution (2017) – Environmental Management Plan (SLR, 2017a).
- SLR Global Environmental Solution (2017) – Omitiomire Groundwater and Surface Water Update for Revised Mining Layout (SLR, 2017b).

The proposed mine is likely to include three open cut pits, an ore processing plant, three waste rock dumps, a tailings facility, workshops, water management infrastructure and related support services and facilities. A heap leach operation may also be implemented at the site to augment the ore processing plant activities. The three oxide pits, each averaging about 280 m long and 50 m depth will be mined as small open pits with a conventional drill, blast, load and haul mining configuration. Ore will be transported to the heap leach by haul truck, and waste rock to one of three waste rock dumps associated with each pit.

Waste rock dumps are aimed to be constructed with flood-proof erosion containment structures that will be used to dispose of waste produced from mining. The capping of the heap leach facility (HLF) with waste rock and soil are also to be considered as part of the closure plan.

The treatment plant comprises of the following processing steps: Two stage crushing and screening, leaching, belt filter filtration, solvent extraction and electrowinning. The twice washed, dewatered tailings, will be sent by conveyor to a tailings storage facility (TSF) for disposal. The crushed mined ore will be heaped on an impermeable plastic or clay lined leach pad where it will be irrigated with a leach solution to dissolve the valuable metals. The solution will then percolate through the heap. The leach solution containing the dissolved minerals will then be collected, treated in a process plant to recover the copper. This leached solution will then be sent to the processing plant designed to extract approximately 30,000 tonnes of product per annum.

Site water supplied will be from the Otavi Mountainland via Namwater canal system and pumped to site at approximately 400 m^3/h. No local water used except during construction. Surface water monitoring occurs from selected farm dams upstream and downstream the mining development. Surface runoff from HLF pit area footprint will need to be collected in a pit sump and pumped out into a lined pollution control dam (PCD).

Currently on-site biannual groundwater level and quarterly groundwater quality monitoring for compliance boreholes occurs to the north, north-east, and south west from the proposed mining pit. Groundwater potential in the area was reported to be depending on the proximity to the Black Nossob River and is classified as Class B (Water of acceptable drinking water quality) in accordance with Namibian guidelines (DWA, 1962).

1.3 Geology

Figure 1 (Attachment A) shows the dominant geological feature of the Omitiomire project area is the Ekuja Dome, a basement inlier consisting of felsic and mafic gneisses. The Ekuja Dome contains the Omitiomire copper deposit and other copper prospects.

Copper occurs mainly in disseminated chalcocite with minor bornite, hosted by dark amphibole-biotite rich (mafic) rock types. The highest copper grades are associated with bands of strongly-deformed schist containing chrome-epidote and biotite. Barren white to light grey quartz-feldspar rich (felsic) gneiss is common in the hanging wall and is also inter-banded with mafic layers in the copper-bearing zone. Banding is on a scale of centimetres to metres in thickness. The banding of heavy, copper-bearing, mafic rocks and lighter, barren, felsic layers lends itself to effective pre-concentration by DMS. Chalcocite is strongly hydrophobic and easily floats in a flotation process.

The deposit forms sub–outcrop, beneath shallow sand cover, over several hundred metres. The deposit is about 10m thick near surface but thickens to the east, where some drill holes have intersected over 100 m of copper mineralisation. The deposit consists of a number of stacked parallel tabular bodies (“lenses”) which

partly merge. The sand, soil and gravel cover averages 1 – 2 m in thickness, but varies in thickness, from a few decimetres near the northern banks of the Nossob River to several metres on the southern side.

The weathering profile is highly irregular and varies according to fracture intensity and rock type. Felsic rocks tend to become less weathered and hard within about 10 m from surface and mafic rocks may be distinctly weathered to a depth of 20 m or more. Weathering has resulted in clay minerals, mainly from the break-down of feldspars, biotite and amphibole. Calcrete material occurs mainly near secondary drainages and pans.

Near surface and down to about 20 m depth, the copper minerals are oxidised and dominated by the minerals malachite and chrysocolla, with associated minor tenorite and traces of native copper. Within this near-surface zone, some of the copper has remobilised into fractures within the felsic layers. A transition zone between oxidised and chalcocite-dominated copper exists from about 20 m to about 40 m depth. Additional zones of deeper oxidation extend down near-vertical faults and fractures.

1.4 Scope of Work

RGS, on behalf of ECC, is currently completing a Geochemical Assessment of mining materials for the Project using relevant legislation, guidelines and policies to inform the assessment (CoA, 2016; INAP, 2023; and AMIRA, 2002). A geochemical analysis of the mine material (waste rock, low-grade, medium-grade, and high-grade ore materials) is being conducted to assess the potential for generation of acid and metalliferous drainage (AMD), neutral and metalliferous drainage (NMD) and Saline Drainage (SD) from these materials. This geochemical assessment will also assess the potential to provide progressive/preliminary results to inform any water quality modelling exercises associated with planning for site closure.

The RGS work program is being completed in three stages:

Stage 1: Review existing information and develop a Geochemical Sampling and Analysis Plan. Intervals from drill core have been selected for geochemical analysis. Selection of drill holes and selected core intervals for sampling has been guided by assay and spatial data provided by Craton **[completed]**.

Stage 2: Sample collection and analysis. ECC staff will work together with Craton personnel to help guide and supervise the sample collection process. The collected samples will be submitted for static geochemical analysis at an accredited laboratory. Based on the results of the static analyses, kinetic leach columns will be established. At the conclusion of the static geochemical analysis an Interim Geochemical Assessment Report will be provided. The Interim Geochemical Assessment Report will present the results obtained from static analyses and any kinetic leaching result data available at that point as well as including a discussion of any potential AMD, NMD, SD, or dispersion issues related to mining materials likely to be generated from the Project **[completed].**

Stage 3: Complete KLC tests. Kinetic leach column (KLC) testing will take place over a period of 12 months with four leach events over the first three months followed by three quarterly leach events. At the conclusion of the KLC test program the Interim Geochemical Assessment Report will be updated to include the data derived from this program and reissued as the Geochemical Assessment Report including a discussion of any AMD, NMD, and SD issues related to mining materials likely to be generated from the Project.

This Interim Technical Report fulfills the requirements of the **Stage 2** of the above Scope of Work, specifically completion of static geochemical characterisation and provides an interpretation of the static geochemical test results available to date. This Technical Memorandum also informs the scope of the KLC test program to be completed in **Stage 3**.

2 Geochemical Sampling and Testing Methodology

This section provides a summary of the methodology used for the sampling and geochemical characterisation of representative samples of mining materials at the Project.

2.1 Investigation Strategy

RGS worked closely with ECC and Craton personnel to develop a strategy to collect and geochemically characterise representative samples of mine materials representing waste rock, low-grade, medium-grade and high-grade ore materials. The sampling and testing strategy was developed to align with Australian (AMIRA, 2002, COA, 2016) and international (INAP, 2023) technical guidelines for the geochemical assessment of mine waste materials.

2.2 Sampling Program

2.2.1 Sample selection

Representative samples of the mine materials were collected by ECC and Craton personnel following instructions provided in the RGS Geochemical Sampling and Analysis Plan (GSAP) (RGS, 2023). **Table 2-1** provides a summary of the distribution of samples collected and tested according to the mine material types which occur at the Project along with associated sample descriptions.

A total of 96 samples were collected and included in this assessment. The sample list included 86 waste rock samples from 53 drill holes and 10 ore samples from 5 drill holes. The samples were crushed (where required) and a sub-sample taken and pulverised to pass 75 µm sieve size. The samples were bagged, labelled, sealed, and then transferred to an accredited commercial laboratory (Aquatico Scientific Laboratories in South Africa) for static geochemical testing. This standard laboratory sample preparation procedure provides a homogenous sample, but also generates a large sample surface area in contact with the resultant assay solution, thereby providing greater potential for dissolution and reaction, and represents an assumed initial 'worst case' scenario for these sample materials.

Table 2-1: Sample materials used for geochemical testing

Lithology	Material Type	Min. Depth (m)	Max. Depth (m)	Number of Samples
CAL	Waste rock	1.00	10.00	5
CBG	Waste rock	7.00	165.00	22
MGN	Waste rock	10.00	117.86	17
PEG	Waste rock	1.00	123.00	12
PGN	Waste rock	7.00	170.00	15
QV	Waste rock	3.00	9.00	3
WGN	Waste rock	7.00	148.00	12
MGN/PEG/WGN	High-Grade Ore	70.13	182.86	4
BAS/MGN/PEG/WGN	Low-Grade Ore	81.41	185.33	4
MGN	Medium-Grade Ore	189.42	195.00	2

The drill holes selected for sampling drill core material representing mining materials across the Project were chosen to be spatially representative of the most waste rock and ore.

The 86 waste rock samples and the 10 ore samples are described in **Table 2-2** and **Table 2-3**, respectively.

Table 2-2: Waste Rock drill hole intervals selected for geochemical sampling

Sample Number	Drill Hole ID	From	To	Interval	Major Lithology[1]	Cu[1,2,3]
		m				ppm
X3083	ORC710	73.48	74,34	0.86	PGN	<500
X3084	ORC710	74.34	75.53	1.19	WGN	<500
X3085	ORC710	75.53	77.37	1.84	WGN	<500
X3089	ORC712	86.09	88.09	2.00	GBG	<500
X3090	ORC712	88.09	89.59	1.50	GBG	<500
X3091	ORC712	89.59	91.59	2.00	MGN	<500
X3092	ORC714	131.00	133.00	2.00	GBG	<500
X3093	ORC714	133.00	134.00	1.00	GBG	630
X3094	ORC714	134.00	135.38	1.38	GBG	<500
X3095	ORC716	115.21	116.40	1.19	GBG	620
X3096	ORC716	116.40	117.86	1.46	MGN	810
X3001	PRC010	25	26	1	GBG	not analysed
X3002	PRC010	38	39	1	PGN	not analysed
X3003	PRC011	36	37	1	PEG	not analysed
X3004	PRC011	114	115	1	WGN	not analysed
X3005	PRC014	17	18	1	GBG	not analysed
X3006	PRC015	25	26	1	MGN	not analysed
X3007	PRC015	122	123	1	PEG	not analysed
X3008	PRC016	40	41	1	GBG	not analysed
X3009	PRC017	49	50	1	MGN	not analysed
X3010	PRC018	100	101	1	GBG	not analysed
X3011	PRC018	146	147	1	GBG	not analysed
X3012	PRC019	7	8	1	PGN	not analysed
X3013	PRC019	58	59	1	MGN	not analysed
X3014	PRC020	60	61	1	WGN	not analysed
X3015	PRC020	114	115	1	GBG	not analysed
X3016	PRC021	45	46	1	PGN	not analysed
X3017	PRC023	3	4	1	CAL	not analysed
X3018	PRC023	82	83	1	PGN	not analysed
X3019	PRC024	55	56	1	PEG	not analysed
X3020	PRC024	122	123	1	GBG	not analysed
X3021	PRC025	52	53	1	PGN	not analysed
X3022	PRC025	164	165	1	GBG	not analysed
X3023	PRC026	53	54	1	MGN	not analysed
X3024	PRC026	84	85	1	WGN	not analysed
X3025	PRC027	2	3	1	CAL	not analysed
X3026	PRC027	24	25	1	MGN	not analysed
X3027	PRC028	35	36	1	PEG	not analysed
X3028	PRC029	21	22	1	MGN	not analysed
X3029	PRC029	74	75	1	GBG	not analysed
X3030	PRC030	59	60	1	WGN	not analysed

Sample Number	Drill Hole ID	From	To	Interval	Major Lithology[1]	Cu[1,2,3]
		m				ppm
X3031	PRC030	134	135	1	PGN	not analysed
X3032	PRC031	1	2	1	CAL	not analysed
X3033	PRC031	65	66	1	WGN	not analysed
X3034	PRC032	89	90	1	MGN	not analysed
X3035	PRC033	29	30	1	MGN	not analysed
X3036	PRC035	9	10	1	CAL	not analysed
X3037	PRC036	77	78	1	MGN	not analysed
X3038	PRC036	147	148	1	WGN	not analysed
X3039	PRC038	44	45	1	PEG	not analysed
X3040	PRC038	73	74	1	MGN	not analysed
X3041	PRC039	19	20	1	PEG	not analysed
X3042	PRC039	150	151	1	PGN	not analysed
X3043	PRC040	94	95	1	GBG	not analysed
X3044	PRC040	169	170	1	PGN	not analysed
X3045	PRC040	249	250	1	MGN	not analysed
X3046	PRC041	14	15	1	PEG	not analysed
X3047	PRC041	43	44	1	MGN	not analysed
X3048	PRC042	7	8	1	GBG	not analysed
X3049	PRC043	20	21	1	MGN	not analysed
X3050	PRC044	37	38	1	GBG	not analysed
X3051	PRC045	17	18	1	GBG	not analysed
X3052	PRC045	48	49	1	GBG	not analysed
X3053	PRC046	12	13	1	WGN	not analysed
X3054	PRC047	3	4	1	CAL	not analysed
X3055	PRC048	12	13	1	PGN	not analysed
X3056	PRC049	7	8	1	WGN	not analysed
X3057	PRC050	15	16	1	WGN	not analysed
X3058	PRC051	24	25	1	PEG	not analysed
X3059	PRC052	7	8	1	WGN	not analysed
X3060	PRC052	11	12	1	PGN	not analysed
X3061	PRC001	3	4	1	QV	not analysed
X3062	PRC001	4	5	1	QV	not analysed
X3063	PRC002	49	50	1	GBG	not analysed
X3064	PRC003	1	2	1	PEG	not analysed
X3065	PRC004	8	9	1	QV	not analysed
X3066	PRC005	44	45	1	MGN	not analysed
X3067	PRC006	15	16	1	PEG	not analysed
X3068	PRC006	24	25	1	PGN	not analysed
X3069	PRC007	13	14	1	PGN	not analysed
X3070	PRC008	40	41	1	PGN	not analysed
X3071	PRC008	65	66	1	PEG	not analysed
X3072	PRC009	10	11	1	MGN	not analysed

Sample Number	Drill Hole ID	From	To	Interval	Major Lithology[1]	Cu[2,3,4]
		m				ppm
X3073	PRC053	21	22	1	PEG	not analysed
X3074	PRC054	17	18	1	PGN	not analysed
X3075	PRC054	42	43	1	GBG	not analysed

Notes:
1. BAS: Biotite Amphibole Epidote Schist, CAL: Pan Calcrete, CLY: Clay Horizons, GBG: Grey Biotite Gneiss, MGN: Mafic Gneiss, PEG: Very coarse grained Quartz-feld (Muscovite) rock, usually reddish, PGN: Pink Gneiss, SCH: Biotite Schist, WGN: White Gneiss.
2. Cut of grade is approximately 0.25% (~2,500 ppm) for waste.
3. Average grade of mined material will be 0.55% to 0.65% (~5,500-6,500 ppm).

Table 2-3: Ore drill hole intervals selected for geochemical sampling

Sample Number	Drill Hole Number	From	To	Interval	Major Lithology	Ore Class	Cu
		m					ppm
X3076	ORC701	180.63	182.86	2.23	MGN	High Grade	6,930
X3077	ORC701	184.01	185.33	1.32	BAS	Low Grade	3,970
X3078	ORC701	193.99	195.00	1.01	MGN	Medium Grade	6,240
X3079	ORC702	189.42	190.42	1.00	MGN	Medium Grade	4,990
X3080	ORC703	95.95	97.37	1.42	MGN	High Grade	19,500
X3081	ORC710	70.13	71.02	0.89	PEG	High Grade	10,200
X3082	ORC710	71.02	72.48	1.46	WGN	High Grade	6,990
X3086	ORC712	81.41	83.41	2.00	MGN	High Grade	19,500
X3087	ORC712	83.41	85.00	1.59	PEG	High Grade	10,200
X3088	ORC712	85.00	86.09	1.09	WGN	High Grade	6,990

Notes:
1. BAS: Biotite Amphibole Epidote Schist, MGN: Mafic Gneiss, PEG: Very coarse grained Quartz-feld (Muscovite), WGN: White Gneiss.
2. Cut of grade is approximately 0.25 % (~2,500 ppm) for waste rock.
3. Average grade of mined material will be 0.55% to 0.65% (~5,500-6,500 ppm).

2.2.2 Sample labelling and dispatch

The selected waste rock and ore samples were checked to ensure that each individual sample was clearly labelled and identified on the sample bag. All samples were logged and bagged, with each bag being labelled with a permanent marker at the time of sampling and a cardboard identification label also inserted into the sample bag. Sample logging requirements included sample ID, date and visual appearance and ample photographs were taken at the time of sampling. Plastic sample bags were used and all samples were stored in a suitable dry storage area prior to transfer to an appropriate commercial laboratory.

Sample details, including a list of samples and hard copy Chain of Custody (COC) document were attached to the sample batch that was subsequently transferred to the commercial laboratory for initial static geochemical screening tests. A second electronic copy of the completed certified commercial laboratory COC was emailed to Alan Robertson at RGS in Brisbane (alan@rgsenv.com) and Stephan Bezuidenhout at ECC in Namibia (stephan@eccenvironmental.com).

Samples were shipped to the commercial laboratory (by ECC/Craton) to undergo a series of geochemical tests. The geochemical test program was designed to assess the degree of risk from AMD, NMD and SD, from mining materials if used in landform rehabilitation.

2.3 Geochemical Test Program

A series of static geochemical tests were completed by Aquatico Scientific Laboratories on the 96 drill core samples. The geochemical test program was designed to assess the degree of risk from the presence and potential oxidation of sulfides, acid generation and the presence/leaching of soluble metals/metalloids and salts.

A summary of the parameters involved in geochemical assessment of mining waste materials is provided in **Attachment A**.

2.3.1 Static Geochemical Tests

Static geochemical tests provide a 'snapshot' of the geochemical characteristics of a sample material at a single point in time. These tests were staged to screen individual samples before selecting either individual and/or composite samples for more detailed static (and planned kinetic) geochemical test work.

The Acid Base Account (ABA) was used to determine the acid-neutralising and acid-generating characteristics of the 96 sample materials.

The ABA program included static geochemical tests for the following parameters:

- pH (1:5 sample:water) [AMIRA, 2002];
- Electrical conductivity (EC) (1:5 sample:water) [electrometric];
- Total sulfur [Combustion method]; and
- Acid Neutralising Capacity (ANC) [Sobek method];

From the total sulfur and ANC results, maximum potential acidity (MPA) and Net Acid Producing Potential (NAPP) values were calculated.

Based on the results of the ABA tests received and interpreted by RGS, 13 composite samples of mine materials (10 waste rock and 3 ore samples) were prepared and subjected to multi-element analysis on both the solid and soluble fractions. The 13 composite samples were selected based on material type, lithology, location and static geochemical characteristics.

The selected samples were be tested for:

- pH and EC (1:5 sample:water);
- Alkalinity or acidity (pH dependent) (1:5 sample:water);
- Total metals/metalloids (Al, As, B, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, P, Pb, Sb, Se, Th, U, V and Zn) in solids (**2-acid digest**);
- Total cations (Ca, Mg, Na, K);
- Soluble metals/metalloids (Al, As, B, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, P, Pb, Sb, Se, Th, U, V and Zn) in 1:5 sample:water extracts; and
- Soluble cations (Ca, Mg, Na, K) and soluble anions (Cl, F, SO_4);

The composition of the composite samples selected for multi-element analysis is provided in **Table B1** (**Attachment B**). The raw laboratory test results for the static ABA and multi-element geochemical test program are provided in **Attachment C.**

2.3.2 Kinetic Geochemical Tests

In Stage 3, it is proposed that six composite samples of mine materials be selected for KLC testing over a period of 12 months. The recommended composite samples have been selected in **Table B1** (**Attachment B**) although implementation of the recommended KLC test program is subject to Craton approval prior to **Stage 3** proceeding.

The proposed six composite samples are provided in **Table 3-3** and in **Attachment B (Table B1)**, although there is an additional option to split the composite ore samples into two composite samples representing high grade and low grade ore. As a minimum, five waste rock samples and one ore sample, are recommended for KLC tests to be completed by ECC under RGS technical guidance.

The results from these KLC tests will be used to predict the ongoing dynamic geochemical characteristics and likely quality of any leachate from the mine materials and assist with optimising the planned methods for managing these materials in the field. Leachate collected from the KLC test program will be analysed for:

- pH and EC;
- Acidity and alkalinity [PC Titrator];
- Dissolved metals/metalloids (Al, As, B, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, P, Pb, Sb, Se, Th, U, V and Zn) [ICP-AES/MS];
- Dissolved major cations (Ca, Mg, Na and K) [ICP-AES/MS]; and
- Dissolved major anions (Cl, F, SO_4) [ICP-AES/MS].

KLC tests will take place over a period of 12 months with 4 monthly leach events together with a preliminary results write-up at the end of that period and then three final quarterly leach events prior to final reporting.

Table 3-4: Proposed sample materials for KLC testing

Sample Description	Sample Type	Classification	KLC Number
GBG	Waste rock	Non-Acid Forming (Barren)	KLC1
MGN	Waste rock	Non-Acid Forming (Barren)	KLC2
PEG/PGN	Waste rock	Non-Acid Forming (Barren)	KLC3
QV	Waste rock	Non-Acid Forming (Barren)	KLC4
WGN	Waste rock	Non-Acid Forming (Barren)	KLC5
BAS/MGN/PEG/WGN	Ore	Uncertain	KLC6

3 Geochemistry of Mine Materials

3.1 ABA Test Results

The ABA test results for the 86 waste rock and 10 ore samples sorted by lithology and material type are provided in **Table B1 (Attachment B)**. The methodology used in this section is provided in **Section 2.3.1** and a glossary of terms and acronyms used is provided on **Page IV**. The ABA data trends discussed in this section are presented in **Figures 3-1** to **3-5**.

- **pH**: The pH of the samples tested ranges from 8.1 to 10.2 (i.e., in the slight to moderately alkaline range) and has a median value of 9.5 (**Figure 3-1**). The majority of the samples have moderately alkaline pH values greater than the deionised water used in the tests, suggesting that at least initially, addition of alkalinity to water in contact with these materials is likely.

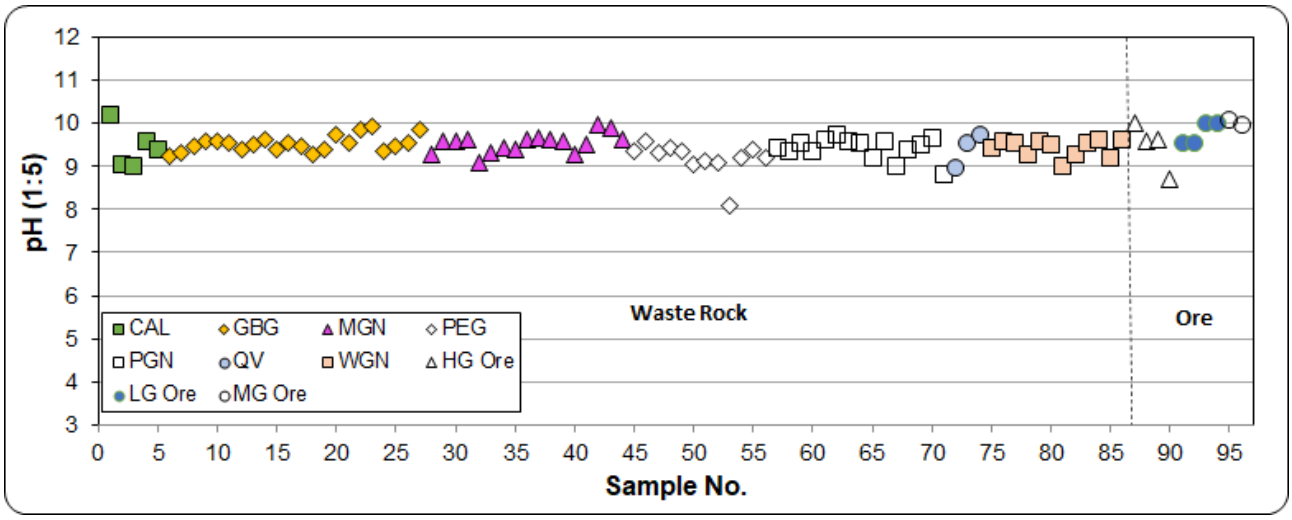

Figure 3-1: pH values for mine materials

- **Electrical Conductivity (EC)**: The EC value of the samples ranges from 50 to 520 µS/cm and is generally low for most samples (median 100 µS/cm) (**Figure 3-2**). Hence, initial contact water with most mine materials are likely to remain relatively fresh and have a low salinity value.

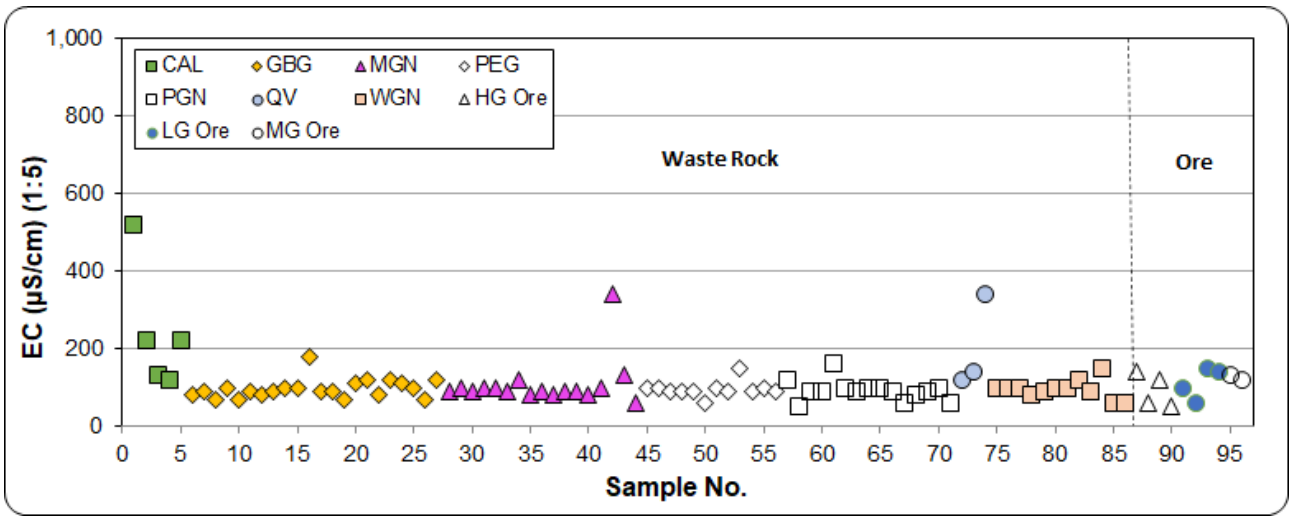

Figure 3-2: EC values for mine materials

- **Total sulfur:** The total sulfur (S) content of the mine material samples ranges from 0.01 to 0.6 %S and has a low median value of 0.01 %S (**Figure 3-3**). Most of the waste rock and ore samples have a low total sulfur concentration well below the median crustal abundance (0.1 %S) for this element in unmineralised soils (INAP, 2023; Bowen, 1979). Materials with a total sulfur content less than or equal to 0.1 %S are essentially barren of sulfur, generally represent background concentrations, and have negligible capacity to generate acidity (INAP, 2023). The total sulfur content of 5 of the 96 samples is greater than 0.1 %S for a single MGN waste rock sample and four high-grade ore samples.

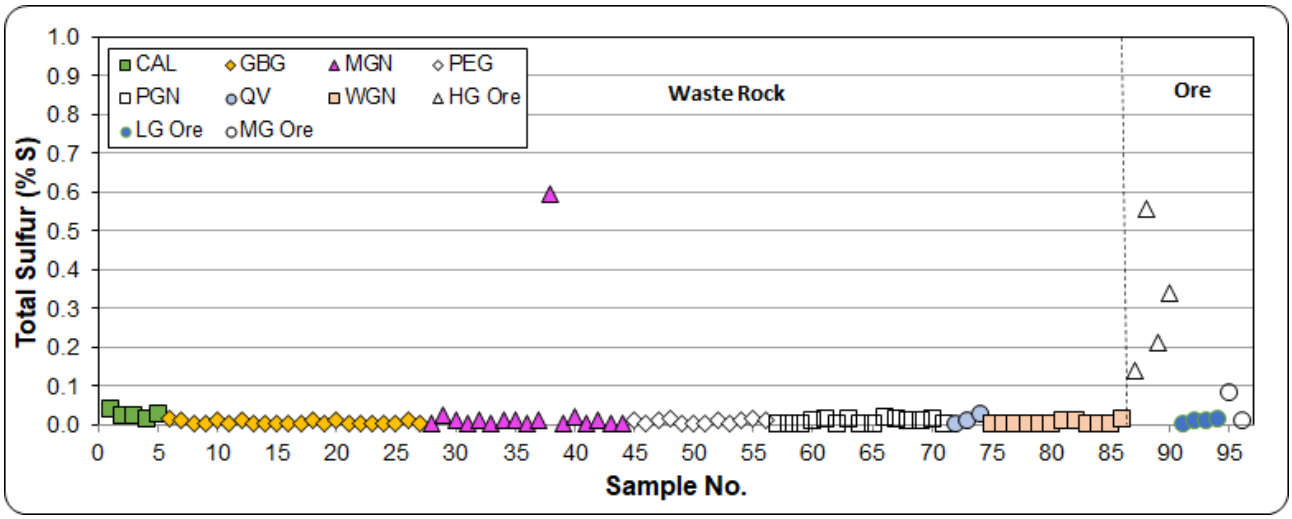

Figure 3-3: Total sulfur concentrations for mine materials

- **Maximum Potential Acidity (MPA)**: Based on the total sulfur content, the MPA that could be generated by the mine material samples ranges from 0.2 to 18.3 kg H_2SO_4/t (median 0.3 kg H_2SO_4/t.)
- **Acid Neutralising Capacity (ANC)**: The ANC value for the samples ranges from 2.6 kg H_2SO_4/t to 678.0 kg H_2SO_4/t (median 9.3 kg H_2SO_4/t. The highest ANC values are recorded for the CAL waste rock samples and, the median ANC is more than an order of magnitude greater than the median MPA.
- **Net Acid Producing Potential (NAPP)**: The NAPP is the balance between the capacity of a sample to generate acidity (MPA) minus its capacity to neutralise acidity (ANC). The calculated NAPP values for the samples of mine materials range from -676.7 to +7.1 kg H_2SO_4/t and have a negative median value of -8.9 kg H_2SO_4/t (**Figure 3-4**). Only one sample (a high-grade ore sample) has a positive NAPP value. The remainder of the samples have a NAPP value that is negative or close to zero.

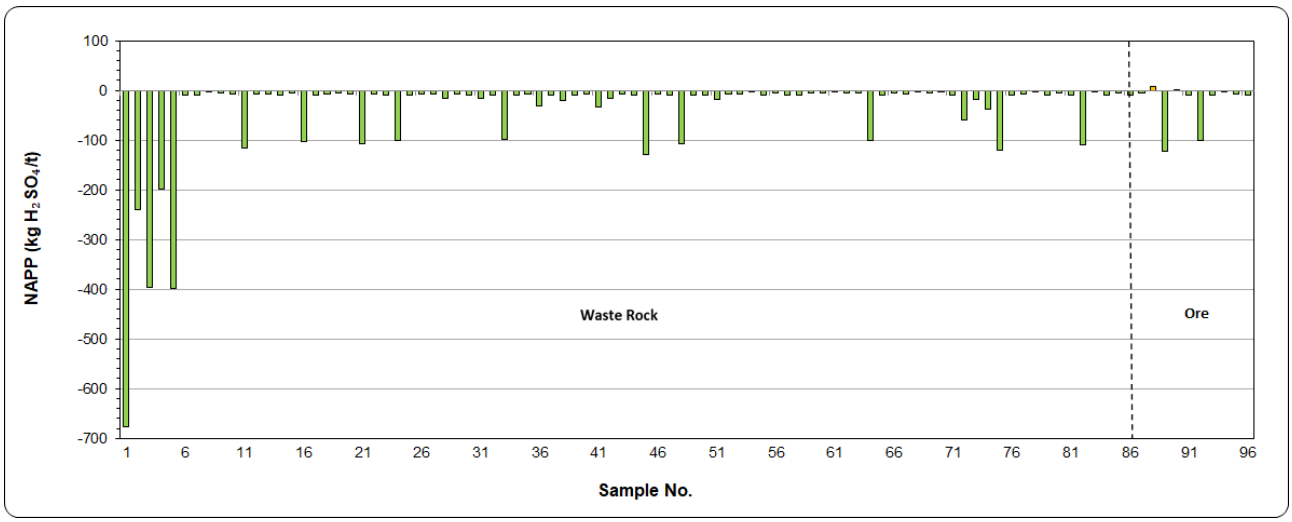

Figure 3-4: NAPP values for mine materials

- **ANC:MPA Ratio: Figure 3-5** presents ANC versus MPA data for the 96 samples of mine materials[1]. ANC:MPA ratio lines are plotted on the figure to illustrate the factor of safety associated with the samples. Generally, those samples with an ANC:MPA ratio greater than 2 (and/or with a sulfur content ≤ 0.1 %) are considered to have a low to negligible risk of acid generation and a high factor of safety in terms of potential for AMD (COA, 2016; INAP, 2023).

  The results indicate that most of the samples of mine materials plot in the low to negligible risk domains and represent materials with a very low risk of acid generation and a high factor of safety with respect to potential acid generation. Some (17) of the 96 sample materials have an ANC value more than 100 kg H_2SO_4/t and are considered to have some capacity to consume acid.

  Two of the high-grade ore samples plot in the increased risk domain in the figure and represent material that may have a reduced factor of safety with respect to potential acid generation.

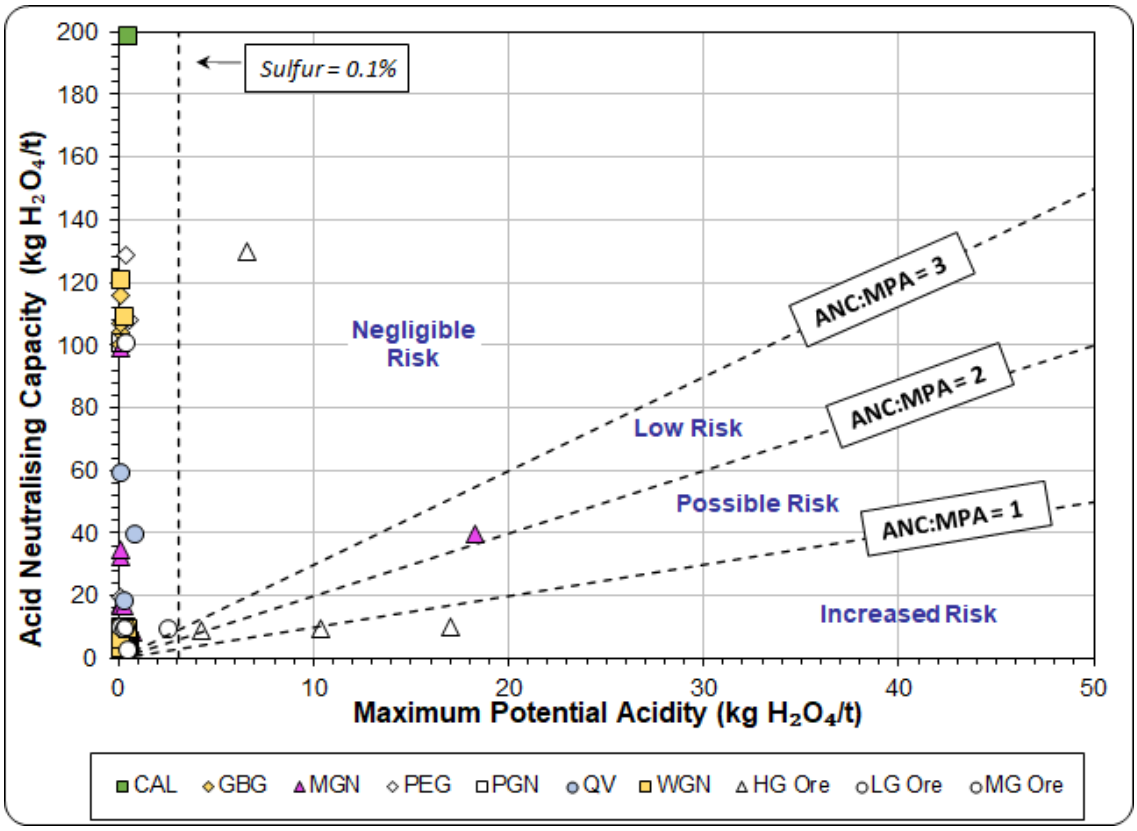

Figure 3-5: ANC v MPA for mine materials

The ABA test data has been used to classify the acid forming nature of the mine materials represented by the 96 samples. These classification criteria reflect Australian (COA, 2016) and international (INAP, 2023) guideline criteria for classification of mine materials. **Table 3-1** provides a summary of the criteria used by RGS to classify the acid forming nature of the samples and a breakdown of the number of samples in each classification category by material type.

The data presented in **Table 3-1** illustrate that the overwhelming majority of the mine materials as represented by the samples tested have low sulfur content, excess ANC and are classified as Non-Acid Forming (Barren). One MGN waste rock sample has an elevated sulfur content (0.6 %S) that is more than balanced by the ANC and this sample is classified as Non-Acid Forming.

[1] Four of the CAL waste rock samples are not shown on **Figure 3-5** as the ANC value is very high (greater than 200 kg H_2SO_4/t)

The six low-grade and medium-grade ore samples are classified as Non-Acid Forming (Barren). One of the high grade ore samples is classified as Non-Acid forming, two samples are classified as Uncertain and one sample is classified as Potentially Acid Forming (Low Capacity).

Table 3-1: Geochemical classification criteria for mine materials

Geochemical Classification	Total Sulfur[1] (%)	NAPP (kg H_2SO_4/t)	ANC: MPA Ratio	Waste Rock (n = 86)	Ore (n = 10)
Non-Acid Forming (Barren)[2]	≤ 0.1	-	-	85	6
Non-Acid Forming	> 0.1	< -5	-	1	1
Uncertain[3]	> 0.1	> -5 and ≤ 5	≤ 2	0	2
Potentially Acid Forming (Low Capacity	> 0.1	> 5	< 2	0	1
Potentially Acid Forming	> 0.1	> 10	< 2	0	0

Notes:
1. If total sulfur is less than or equal to 0.1 %, the NAPP and ANC:MPA ratio are not required for material classification as the sample is essentially barren of oxidisable sulfur.
2. A sample classified as NAF can be further described as 'barren' if the total sulfur and/or sulfide sulfur content is less than or equal to 0.1 per cent, as the sample essentially has negligible acid generating capacity.
3. Samples that fall outside the stated classification categories based on the criteria provided are also classified as Uncertain.

3.2 Multi-element concentration in solids

Multi-element assays were carried out on 13 composite samples made up from the 96 individual samples of mine materials as described in **Section 2.3.1** (10 waste rock samples and 3 ore samples) in order to identify any elements (metals or metalloids), and major ions that may be present in the mine materials at concentrations that could be of environmental concern with respect to materials handling, storage, revegetation and water quality.

Total metal/metalloid concentrations in mine materials can be compared to the median crustal abundance for unmineralised soils (Bowen, 1979, INAP, 2023). The extent of enrichment is reported as the Geochemical Abundance Index (GAI), which relates the actual concentration in a sample with the median crustal abundance on a $\log^{10}$ scale.

The GAI is expressed in integer increments from 0 to 6, where a GAI value of 0 indicates that the element is present at a concentration less than, or similar to, the median crustal abundance; and a GAI value of 6 indicates approximately a 100-fold enrichment above median crustal abundance (**Table 4-2**).

As a general rule, a GAI of greater than 3 signifies enrichment that may warrant further examination. This is particularly the case with some environmentally important 'trace' elements, such as As, Cr, Cd, Cu, Pb, Se and Zn, more so than with major rock-forming elements, such as Al, Ca, Fe, Mg and Na. Elements identified as enriched may not necessarily be a concern for revegetation, drainage water quality or public health, but their significance should still be evaluated.

Table 4-2: Geochemical Abundance Index values and enrichment factors

GAI	Enrichment Factor	GAI	Enrichment Factor
0	Less than 3-fold enrichment	**4**	24 – 48 fold enrichment
1	3 – 6 fold enrichment	**5**	48 – 96 fold enrichment
2	6 – 12 fold enrichment	**6**	Greater than 96 fold enrichment
3	12 – 24 fold enrichment		

The GAI provides an indication of metals/metalloids that may be enriched relative to the global median crustal abundance in unmineralised soils, however the following points should also be considered:

- The median crustal abundance varies between different literature sources, therefore affecting the calculated GAI values.
- If a sample is shown to be enriched relative to the median crustal abundance, there is no direct correlation that that particular sample will also leach metals/metalloids and major ions at elevated concentrations. The mobility of metals/metalloids and major ions are dependent on a number of factors including mineralogy, adsorption/desorption and the environment in which it occurs.
- Whilst some element concentrations can be elevated relative to the median crustal abundance, the nature of an ore deposit means the background levels are generally expected to be elevated.

Similarly, because an element is not enriched does not mean it will never be a concern, because under some conditions (e.g., low pH) the solubility of common environmentally important elements such as Al, Cu, Cd, Fe and Zn can increase significantly.

Table B2 (**Attachment B**) provides total metal/metalloid concentrations for the 13 composite samples of mine materials described in **Section 4.2**. The relative enrichment of metals/metalloids in these samples compared to median crustal abundance (GAI) in unmineralised soils is presented in **Table B3** (**Attachment B**).

The GAI results indicate that materials represented by the 10 composite waste rock and 3 composite ore samples are typically not significantly enriched with metals/metalloids compared to the median crustal abundance in unmineralised soils. The main exceptions for waste rock include calcium (1 sample), cadmium (1 sample), copper (5 samples) and molybdenum (7 samples). For ore, the main exceptions include cadmium, copper and molybdenum in all three of the composite ore samples tested.

Notwithstanding, the nature of a metalliferous copper mining deposit means some metals/metalloids are expected to be slightly elevated compared to background soil levels in some materials.

The solubility and potential mobility of metals/metalloids in the mine materials under expected site pH and EC conditions is investigated further in **Section 4.5**.

3.3 Water quality static tests

There are no specific regulatory criteria for metal/metalloid concentrations in leachate from mining materials on mine sites in Namibia. As such, RGS has compared the multi-element results in water extracts from the 13 composite samples (described in **Section 2.3.1** and **Section 3.2**) with Australian guideline values for livestock drinking water (ANZG, 2018). These guidelines are provided for context only and are not intended to be interpreted as “maximum permissible levels” for site water storage or discharge.

It should also be recognised that direct comparison of geochemical data with guideline values can be misleading. For the purpose of this study, guideline values are only provided for broad context and should not be interpreted as arbitrary “maximum” or “trigger” values. Using sample pulps (ground to passing 75µm) provides a high surface area to solution ratio, which encourages mineral reaction and dissolution of the solid phase. The results from screening tests on water extract solutions are assumed to represent a “worst case” scenario for initial surface runoff and seepage from mine materials.

The results from multi-element testing of water extracts (using a 1:5 sample to water ratio) from the 13 composite samples of mine materials are presented in **Table B4** (**Attachment B**). The pH of the water extracts ranges from 9.24 to 9.83 and is therefore slightly alkaline. The water extracts have low EC values (ranging from 57 to 249 µS/cm, indicating low salinity and low concentrations of dissolved solids.

The total alkalinity in the water extracts ranges from low to moderate (5 to 131 mg $CaCO_3$/L and most water extracts have an acidity value below the laboratory limit of reporting (LoR) (<0.1 mg $CaCO_3$/L) and excess alkalinity, leading to a positive net alkalinity value, and 4 of the water extracts have a slightly negative net alkalinity value.

The total concentration of major ions in the water extracts from the composite samples of mine materials is typically low for waste rock and ore. The concentration of fluoride was slightly elevated in one composite QV waste rock sample compared to the applied water quality guideline criterion of 2 mg/L for this ion in livestock drinking water (ANZG, 2018).

The concentration of trace metals/metalloids in the water extracts from the 13 composite samples of mine materials are typically low and predominantly below the laboratory LoR. Most of the metal/metalloid concentrations tested in the water extracts are below the applied water quality guideline criteria (ANZG, 2018). The only exceptions for waste rock are boron (1 sample), cadmium (2 samples) and molybdenum (3 samples), which can have concentrations in water extracts above applied guideline criteria for livestock drinking water. (although median values are typically less than the applied guideline criteria for livestock drinking water). The concentration of cadmium (a sample) and molybdenum (1 sample) is also slightly elevated water extracts from the composite ore samples.

Based on these results, it is expected that the risk of potential impact on the quality of surface and groundwater from initial contact with mine materials at the Project will be relatively low. However, it is recommended that pH, EC, fluoride and dissolved, boron, cadmium and molybdenum are included in the water quality monitoring program for the site to verify that this is the case.

It is also recommended that the Stage 3 KLC test program described in **Section 2.3.2** be completed to predict the ongoing dynamic geochemical characteristics and likely quality of any leachate from the mine materials over time and assist with optimising the planned methods for managing these materials in the field.

3.4 KLC Test Program

A KLC test program is proposed for six composite samples of mine materials as described in **Section 2.3.2**.

4 Conclusions and Recommendations

RGS has completed a static geochemical assessment program of representative samples of mine materials from the Project including waste rock and ore materials. The geochemistry assessment to date has involved reviewing relevant available information for the site, developing a GSAP, providing advice regarding GSAP implementation by ECC/ Craton personnel and collection of representative samples of mine materials. A total of 96 drill samples representing waste rock and ore materials associated with Project have been geochemically characterised using static test methods to date.

The results of the information review and static geochemical test program to date have been used to provide preliminary conclusions as to the characteristics of the various mine materials at the Project and whether these characteristics will present any environmental risks that will need to be managed.

The geochemical assessment to date has found that:

- The overwhelming majority of the mine materials as represented by the samples tested have low sulfur content, excess ANC and are classified as NAF (Barren). Some of the high-grade ore samples have elevated sulfur content and limited ANC and are classified as Uncertain or PAF-LC..
- The mine materials typically have low total metal and metalloid concentrations in waste rock compared to global median crustal abundance in unmineralised soils. The main exceptions are slight enrichments with cadmium, copper and molybdenum. Notwithstanding, the nature of a metalliferous copper mining deposit means some metals/metalloids are expected to be slightly elevated compared to background soil levels in some materials
- Surface runoff and seepage from mine materials is expected to be slightly alkaline, have low salinity and generate low concentrations of dissolved solids. Soluble major ion concentrations are expected to be relatively low in initial contact water with waste rock and ore materials.
- The concentration of trace metals/metalloids in surface runoff and seepage from mine materials is expected to be low and the risk of potential impact on the quality of surface and groundwater resources from initial contact with mine materials at the Project is also expected to be low. However, it is recommended that dissolved boron, cadmium and molybdenum are included in the water quality monitoring program for the site to verify that this is the case.
- It is recommended that the Stage 3 KLC test program described in **Section 2.3.2** of this Interim Technical Report be completed to predict the ongoing dynamic geochemical characteristics and likely quality of any leachate from the mine materials and assist with optimising the planned methods for managing these materials in the field.

5 References

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6 Attachments

ATTACHMENT A

Geochemical Assessment Methodology for Mine Materials

ATTACHMENT A

Geochemical Assessment of Mine Materials

Acid Generation and Prediction

Acid generation is caused by the exposure of sulfide minerals, most commonly pyrite (FeS_2), to atmospheric oxygen and water. Sulfur assay results are used to calculate the maximum amount of acid that could be generated by a material based on either direct measurement of the pyritic sulfur content, or assuming that all sulfur not present as sulfate occurs as pyrite. Pyrite reacts under oxidising conditions to generate acid according to the following overall reaction:

$$FeS_2 + 15/4\ O_2 + 7/2\ H_2O \text{ ---> } Fe(OH)_3 + 2\ H_2SO_4$$

According to this reaction, the maximum potential acidity (MPA) of a sample containing 1 %S as pyrite would be 30.6 kg H_2SO_4/t. The chemical components of the acid generation process consist of the above sulfide oxidation reaction and acid neutralization, which is mainly provided by inherent carbonates and to a lesser extent silicate materials. The amount and rate of acid generation is determined by the interaction and overall balance of the acid generation and neutralisation components.

Net Acid Producing Potential (NAPP)

The net acid producing potential (NAPP) is used as an indicator of materials that may be of concern with respect to acid generation. The NAPP calculation represents the balance between the maximum potential acidity (MPA) of a sample, which is derived from the sulfide sulfur content, and the acid neutralising capacity (ANC) of the material, which is determined experimentally. By convention, the NAPP result is expressed in units of kg H_2SO_4/t sample. If the capacity of the solids to neutralise acid (ANC) exceeds their capacity to generate acid (MPA), then the NAPP of the material is negative. Conversely, if the MPA exceeds the ANC, the NAPP of the material is positive. A NAPP assessment involves a series of analytical tests that include:

Determination of pH and EC

pH and EC measured on 1:5 w/w or saturated paste water extract. This gives an indication of the inherent acidity and salinity of the mining waste material when initially exposed in an emplacement area.

Total sulfur content and Maximum Potential Acidity (MPA)

Total sulfur content is determined by the Leco high temperature combustion method. The total sulfur content is then used to calculate the MPA which assumes that the entire sulfur content is present as reactive pyrite. Direct determination of the pyritic sulfur content can provide a more accurate estimate of the MPA.

Acid neutralising capacity (ANC)

The ANC is determined by addition of acid to a known weight of sample, then titration with NaOH to determine the amount of residual acid. The ANC measures the capacity of a sample to react with and neutralise acid. The ANC can be further evaluated by slow acid titration to a set end-point in the Acid Buffering Characteristic Curve (ABCC) test, calculation of the amount of acid consumed, and evaluation of the resultant titration curve.

Net Acid Generation (NAG)

The net acid generation (NAG) test involves the addition of hydrogen peroxide to a sample of mine rock or process residue to oxidise reactive sulfide, then measurement of pH and titration of any net acidity produced by the acid generation and neutralisation reactions occurring in the sample. A significant NAG result (*i.e.* final $NAG_{pH} < 4.5$) indicates that the sample is potentially acid forming (PAF) and the test provides a direct measure of the net amount of acid remaining in the sample after all acid generating and acid neutralising reactions have taken place. A $NAG_{pH} > 4.5$ indicates that the sample is non-acid forming (NAF). The NAG test provides a direct assessment of the potential for a material to produce acid after a period of exposure and weathering and is used to refine the results of the theoretical NAPP predictions. The NAG test can be used as a stand-alone test but is recommended that this only be considered after site specific calibration work is carried out.

Assessment of Element Enrichment and Solubility

In mineralised areas it is common to find a suite of enriched elements from natural geological processes. Multi-element scans are carried out to identify any elements that are present in a material (or readily leachable from a material) at concentrations that may be of environmental concern with respect to surface water quality, revegetation and public health. The samples are generally analysed for the following elements:

Major elements	Al, Ca, Fe, K, Mg, Na and S.
Minor elements	As, B, Cd, Co, Cr, Cu, F, Hg, Mn, Mo, Ni, Pb, Sb, Se, V and Zn.

The concentration of these elements in samples can be directly compared with the median concentration in un-mineralised soils to determine the Geochemical Abundance Index (GAI) and level of significance. Water extracts are used to determine the immediate element solubilities under the existing sample pH conditions of the sample. The following tests are normally carried out:

Multi-element composition of solids.

Multi-element composition of solid samples determined using a combination of ICP-mass spectroscopy (ICP-MS), ICP-optical emission spectroscopy (OES), and atomic absorption spectrometry (AAS).

Multi-element composition of water extracts (1:5 sample:deionised water).

Multi-element composition of 1:5 (solid:water) water extracts from solid samples determined using a combination of ICP-mass spectroscopy (ICP-MS), ICP-optical emission spectroscopy (OES), and atomic absorption spectrometry (AAS).

Under some conditions (e.g., low pH) the solubility and mobility of common environmentally important elements can increase significantly. If element mobility under initial pH conditions is deemed likely and/or subsequent low pH conditions may occur, kinetic leach column test work may be completed on representative samples.

Kinetic Leach Column Tests

Kinetic leach column (KLC) tests can be used to provide information on the reaction kinetics of mine waste materials. The major objectives of kinetics tests are to:

- Provide time-dependent data on the kinetics and rate of acid generation and acid neutralising reactions under laboratory controlled (or onsite conditions);
- Investigate metal release and drainage/seepage quality; and
- Assess treatment options such as addition of alkaline materials.

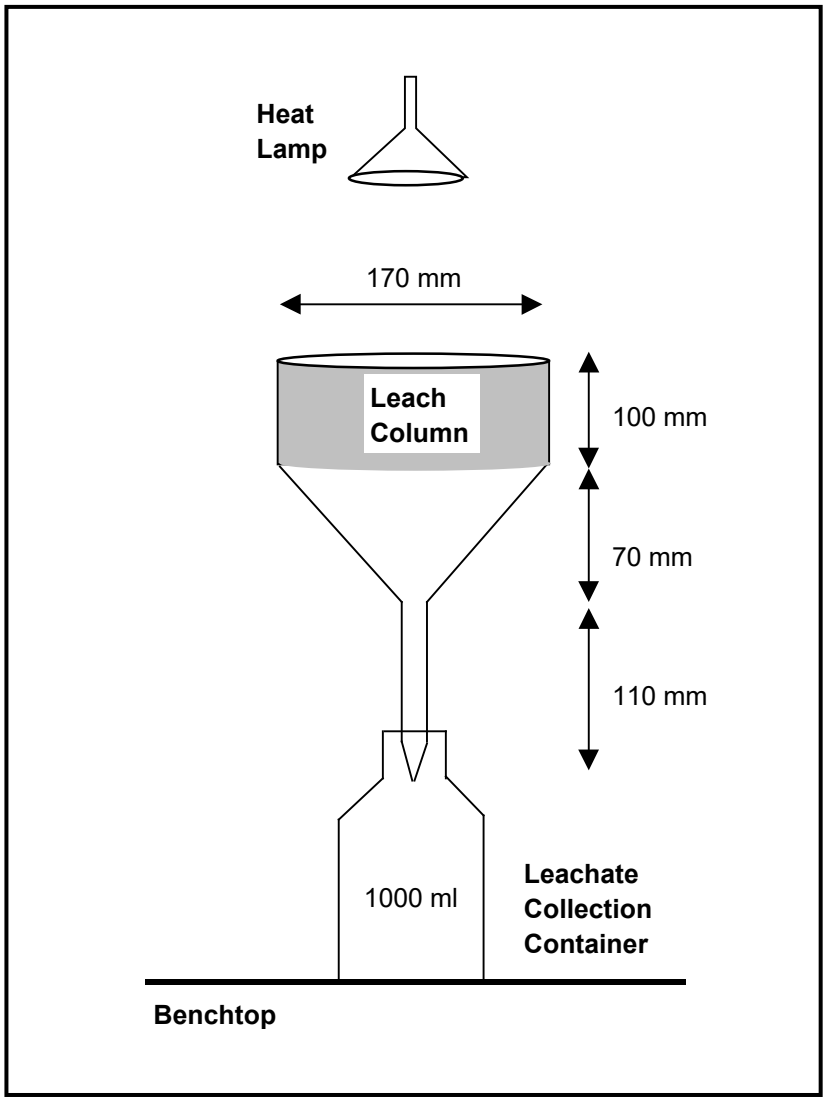
The KLC tests simulate the weathering process that leads to acid and base generation and reaction under laboratory controlled or site conditions. The kinetic tests allow an assessment of the acid forming characteristics and indicate the rate of acid generation, over what period it will occur, and what management controls may be required.

In KLC tests, water is added to a sample and the mixture allowed to leach products and by-products of acid producing and consuming reactions. Samples of leachate are then collected and analysed. Intermittent water application is applied to simulate rainfall and heat lamps are used to simulate sunshine. These tests provide real-time information and may have to continue for months or years. Monitoring includes trends in pH, sulfate, acidity or alkalinity, and metals, for example. The pH of the collected leachate simulates the acid drainage process, acidity or alkalinity levels indicate the rate of acid production and acid neutralisation, and sulfate production can be related to the rate of sulfide oxidation. Metal concentration data provides an assessment of metal solubility and leaching behaviour.

Figure A1 shows the kinetic leach column set up typically used by RGS/ECC adapted from *AMIRA, 2002*. The columns can be placed under heat lamps to allow the sample to dry between water additions to ensure adequate oxygen ingress into the sample material.

Approximately 2 kg of sample is accurately weighed and used in the leach columns and depending on the physical nature of the material and particle size can be used on an as-received basis (i.e., no crushing as with process residues) or crushed to nominal 5-10 mm particle size (as with waste rock). The sample in the column is initially leached with deionised water at a rate of about 400 ml/kg of sample and the initial leachate from the columns collected and analysed. Subsequent column leaching is carried out at a rate of about 400 ml/kg per month and again collected and analysed. The leaching rate can be varied to better simulate expected site conditions or satisfy test program data requirements. The column must be exposed to drying conditions in between watering events. The residual water content and air void content in the column can be determined by comparing the wet and dry column weights. A heat lamp can be used above the sample during daylight hours to maintain the leach column surface temperature at about 30^{o}C.

Figure A1: Kinetic leach column setup



ATTACHMENT B

Static Geochemical Test Result Summary Tables

Table B1: Acid Base Account Results for Mine Materials from the Omitiomire Project

Original Sample No.	RGS Sample Number	Date	RGS Sample ID	Lab ID	Drill Hole ID	Client Sample ID	Sample Lithology	Sample Type	From	To	Interval	pH (1:5)	EC (1:5)	Total S	ANC[2]	MPA[2]	NAPP[2]	ANC: MPA Ratio	Sample Classification[3]	ME-CEC	KLC
									(m)				(µS/cm)	(%)	(kg H_2SO_4/t)						
Waste Rock																					
28	1	24/01/2023	2022052_017	226232	PRC023	X3017	CAL	Waste Rock	3	4	1	10.2	520	0.04	678.0	1.3	-676.7	0.00	Non-Acid Forming (Barren)	Comp 1	
36	2	24/01/2023	2022052_025	226213	PRC027	X3025	CAL	Waste Rock	2	3	1	9.1	220	0.02	241.0	0.7	-240.3	0.00	Non-Acid Forming (Barren)		
43	3	24/01/2023	2022052_032	226251	PRC031	X3032	CAL	Waste Rock	1	2	1	9.0	130	0.03	398.0	0.8	-397.2	0.00	Non-Acid Forming (Barren)		
47	4	24/01/2023	2022052_036	226216	PRC035	X3036	CAL	Waste Rock	9	10	1	9.6	120	0.02	199.0	0.5	-198.5	0.00	Non-Acid Forming (Barren)		
65	5	24/01/2023	2022052_054	226259	PRC047	X3054	CAL	Waste Rock	3	4	1	9.4	220	0.03	399.0	0.9	-398.1	0.00	Non-Acid Forming (Barren)		
12	6	24/01/2023	2022052_001	226211	PRC010	X3001	GBG	Waste Rock	25	26	1	9.2	80	0.02	9.7	0.5	-9.2	0.05	Non-Acid Forming (Barren)	Comp 2	KLC 1
16	7	24/01/2023	2022052_005	226226	PRC014	X3005	GBG	Waste Rock	17	18	1	9.3	90	0.01	9.0	0.4	-8.6	0.04	Non-Acid Forming (Barren)		
19	8	24/01/2023	2022052_008	229270	PRC016	X3008	GBG	Waste Rock	40	41	1	9.5	70	0.01	4.3	0.2	-4.1	0.04	Non-Acid Forming (Barren)		
21	9	24/01/2023	2022052_010	226239	PRC018	X3010	GBG	Waste Rock	100	101	1	9.6	100	0.01	5.3	0.2	-5.2	0.03	Non-Acid Forming (Barren)		
22	10	24/01/2023	2022052_011	229275	PRC018	X3011	GBG	Waste Rock	146	147	1	9.6	70	0.01	7.2	0.3	-6.9	0.04	Non-Acid Forming (Barren)		
26	11	24/01/2023	2022052_015	226223	PRC020	X3015	GBG	Waste Rock	114	115	1	9.6	90	0.01	116.0	0.2	-115.8	0.00	Non-Acid Forming (Barren)		
31	12	24/01/2023	2022052_020	226246	PRC024	X3020	GBG	Waste Rock	122	123	1	9.4	80	0.01	7.6	0.4	-7.3	0.05	Non-Acid Forming (Barren)		
33	13	24/01/2023	2022052_022	226263	PRC025	X3022	GBG	Waste Rock	164	165	1	9.5	90	0.01	7.8	0.2	-7.6	0.02	Non-Acid Forming (Barren)		
40	14	24/01/2023	2022052_029	226236	PRC029	X3029	GBG	Waste Rock	74	75	1	9.6	100	0.01	9.0	0.2	-8.9	0.02	Non-Acid Forming (Barren)	Comp 3	
54	15	24/01/2023	2022052_043	229274	PRC040	X3043	GBG	Waste Rock	94	95	1	9.4	100	0.01	5.6	0.2	-5.4	0.03	Non-Acid Forming (Barren)		
59	16	24/01/2023	2022052_048	226230	PRC042	X3048	GBG	Waste Rock	7	8	1	9.6	180	0.01	104.0	0.2	-103.8	0.00	Non-Acid Forming (Barren)		
61	17	24/01/2023	2022052_050	228618	PRC044	X3050	GBG	Waste Rock	37	38	1	9.5	90	0.01	9.3	0.2	-9.2	0.02	Non-Acid Forming (Barren)		
62	18	24/01/2023	2022052_051	226227	PRC045	X3051	GBG	Waste Rock	17	18	1	9.3	90	0.01	8.4	0.4	-8.0	0.05	Non-Acid Forming (Barren)		
63	19	24/01/2023	2022052_052	229272	PRC045	X3052	GBG	Waste Rock	48	49	1	9.4	70	0.01	5.9	0.2	-5.7	0.03	Non-Acid Forming (Barren)		
74	20	24/01/2023	2022052_063	226253	PRC054	X3063	GBG	Waste Rock	49	50	1	9.7	110	0.01	8.4	0.4	-8.0	0.05	Non-Acid Forming (Barren)		
86	21	24/01/2023	2022052_075	226252	PRC009	X3075	GBG	Waste Rock	42	43	1	9.6	120	0.01	107.0	0.2	-106.8	0.00	Non-Acid Forming (Barren)		
4	22	24/01/2023	2022052_089	226106	ORC712	X3089	GBG	Waste Rock	86.09	88.09	1.00	9.9	80	0.01	7.3	0.2	-7.2	0.02	Non-Acid Forming (Barren)	Comp 4	
5	23	24/01/2023	2022052_090	226103	ORC712	X3090	GBG	Waste Rock	88.09	89.59	1.00	9.9	120	0.01	8.8	0.2	-8.6	0.02	Non-Acid Forming (Barren)		
7	24	24/01/2023	2022052_092	226108	ORC714	X3092	GBG	Waste Rock	131.00	133.00	1.00	9.4	110	0.01	100.0	0.2	-99.8	0.00	Non-Acid Forming (Barren)		
8	25	24/01/2023	2022052_093	226109	ORC714	X3093	GBG	Waste Rock	133.00	134.00	1.00	9.5	100	0.01	9.1	0.2	-9.0	0.02	Non-Acid Forming (Barren)		
9	26	24/01/2023	2022052_094	226105	ORC714	X3094	GBG	Waste Rock	134.00	135.38	1.00	9.5	70	0.01	8.6	0.4	-8.2	0.04	Non-Acid Forming (Barren)		
10	27	24/01/2023	2022052_095	228619	ORC716	X3095	GBG	Waste Rock	115.21	116.40	1.00	9.9	120	0.01	7.8	0.2	-7.7	0.02	Non-Acid Forming (Barren)		
17	28	24/01/2023	2022052_006	226271	PRC015	X3006	MGN	Waste Rock	25	26	1	9.3	90	0.01	17.3	0.2	-17.1	0.01	Non-Acid Forming (Barren)	Comp 5	KLC 2
20	29	24/01/2023	2022052_009	226225	PRC017	X3009	MGN	Waste Rock	49	50	1	9.6	100	0.03	8.5	0.8	-7.8	0.09	Non-Acid Forming (Barren)		
24	30	24/01/2023	2022052_013	229269	PRC019	X3013	MGN	Waste Rock	58	59	1	9.6	90	0.01	9.9	0.4	-9.4	0.04	Non-Acid Forming (Barren)		
34	31	24/01/2023	2022052_023	226240	PRC026	X3023	MGN	Waste Rock	53	54	1	9.6	100	0.01	16.6	0.2	-16.4	0.01	Non-Acid Forming (Barren)		
37	32	24/01/2023	2022052_026	226234	PRC027	X3026	MGN	Waste Rock	24	25	1	9.1	100	0.01	9.5	0.3	-9.2	0.04	Non-Acid Forming (Barren)		
39	33	24/01/2023	2022052_028	229271	PRC029	X3028	MGN	Waste Rock	21	22	1	9.3	90	0.01	99.3	0.2	-99.1	0.00	Non-Acid Forming (Barren)		
45	34	24/01/2023	2022052_034	226212	PRC032	X3034	MGN	Waste Rock	89	90	1	9.5	120	0.01	8.9	0.3	-8.6	0.03	Non-Acid Forming (Barren)		
46	35	24/01/2023	2022052_035	226210	PRC033	X3035	MGN	Waste Rock	29	30	1	9.4	80	0.01	8.8	0.4	-8.4	0.04	Non-Acid Forming (Barren)		

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Original Sample No.	RGS Sample Number	Date	RGS Sample ID	Lab ID	Drill Hole ID	Client Sample ID	Sample Lithology	Sample Type	From	To	Interval	pH (1:5)	EC (1:5)	Total S	ANC[2]	MPA[2]	NAPP[2]	ANC: MPA Ratio	Sample Classification[3]	ME-CEC	KLC
									(m)				(µS/cm)	(%)	(kg H_2SO_4/t)						
Waste Rock																					
48	36	24/01/2023	2022052_037	226255	PRC036	X3037	MGN	Waste Rock	77	78	1	9.6	90	0.01	32.4	0.2	-32.2	0.00	Non-Acid Forming (Barren)	Comp 6	KLC 2
51	37	24/01/2023	2022052_040	226209	PRC038	X3040	MGN	Waste Rock	73	74	1	9.7	80	0.01	9.5	0.4	-9.1	0.04	Non-Acid Forming (Barren)		
56	38	24/01/2023	2022052_045	226229	PRC040	X3045	MGN	Waste Rock	249	250	1	9.6	90	0.60	39.8	18.3	-21.5	0.46	Non-Acid Forming		
58	39	24/01/2023	2022052_047	226256	PRC041	X3047	MGN	Waste Rock	43	44	1	9.6	90	0.01	9.5	0.2	-9.3	0.02	Non-Acid Forming (Barren)		
60	40	24/01/2023	2022052_049	226249	PRC043	X3049	MGN	Waste Rock	20	21	1	9.3	80	0.02	8.8	0.6	-8.2	0.07	Non-Acid Forming (Barren)		
77	41	24/01/2023	2022052_066	226250	PRC002	X3066	MGN	Waste Rock	44	45	1	9.5	100	0.01	34.7	0.2	-34.5	0.00	Non-Acid Forming (Barren)		
83	42	24/01/2023	2022052_072	226274	PRC007	X3072	MGN	Waste Rock	10	11	1	10.0	340	0.01	16.7	0.3	-16.4	0.02	Non-Acid Forming (Barren)		
6	43	24/01/2023	2022052_091	226095	ORC712	X3091	MGN	Waste Rock	89.59	91.59	1.00	9.9	130	0.01	8.6	0.2	-8.4	0.02	Non-Acid Forming (Barren)		
11	44	24/01/2023	2022052_096	226092	ORC716	X3096	MNG	Waste Rock	116.40	117.86	1.00	9.6	60	0.01	9.9	0.2	-9.8	0.02	Non-Acid Forming (Barren)		
14	45	24/01/2023	2022052_003	229276	PRC011	X3003	PEG	Waste Rock	36	37	1	9.4	100	0.01	129.0	0.4	-128.6	0.00	Non-Acid Forming (Barren)	Comp 7	KLC 3
18	46	24/01/2023	2022052_007	228620	PRC015	X3007	PEG	Waste Rock	122	123	1	9.6	100	0.01	8.0	0.2	-7.9	0.02	Non-Acid Forming (Barren)		
30	47	24/01/2023	2022052_019	226243	PRC024	X3019	PEG	Waste Rock	55	56	1	9.3	90	0.01	9.8	0.4	-9.4	0.04	Non-Acid Forming (Barren)		
38	48	24/01/2023	2022052_027	226217	PRC028	X3027	PEG	Waste Rock	35	36	1	9.4	90	0.02	108.0	0.6	-107.4	0.01	Non-Acid Forming (Barren)		
50	49	24/01/2023	2022052_039	226222	PRC038	X3039	PEG	Waste Rock	44	45	1	9.4	90	0.01	10.0	0.2	-9.8	0.02	Non-Acid Forming (Barren)		
52	50	24/01/2023	2022052_041	226265	PRC039	X3041	PEG	Waste Rock	19	20	1	9.0	60	0.01	9.0	0.2	-8.8	0.02	Non-Acid Forming (Barren)		
57	51	24/01/2023	2022052_046	226228	PRC041	X3046	PEG	Waste Rock	14	15	1	9.1	100	0.01	19.4	0.2	-19.2	0.01	Non-Acid Forming (Barren)		
69	52	24/01/2023	2022052_058	226269	PRC051	X3058	PEG	Waste Rock	24	25	1	9.1	90	0.01	8.6	0.4	-8.2	0.05	Non-Acid Forming (Barren)		
75	53	24/01/2023	2022052_064	226237	PRC001	X3064	PEG	Waste Rock	1	2	1	8.1	150	0.01	7.2	0.2	-7.0	0.02	Non-Acid Forming (Barren)		
78	54	24/01/2023	2022052_067	226214	PRC003	X3067	PEG	Waste Rock	15	16	1	9.2	90	0.01	2.9	0.4	-2.5	0.14	Non-Acid Forming (Barren)		
82	55	24/01/2023	2022052_071	226273	PRC006	X3071	PEG	Waste Rock	65	66	1	9.4	100	0.02	9.9	0.5	-9.4	0.05	Non-Acid Forming (Barren)		
84	56	24/01/2023	2022052_073	226268	PRC008	X3073	PEG	Waste Rock	21	22	1	9.2	90	0.01	5.4	0.3	-5.1	0.06	Non-Acid Forming (Barren)		
13	57	24/01/2023	2022052_002	226242	PRC010	X3002	PGN	Waste Rock	38	39	1	9.4	120	0.01	9.0	0.2	-8.9	0.02	Non-Acid Forming (Barren)	Comp 8	
23	58	24/01/2023	2022052_012	226235	PRC019	X3012	PGN	Waste Rock	7	8	1	9.4	50	0.01	9.5	0.2	-9.4	0.02	Non-Acid Forming (Barren)		
27	59	24/01/2023	2022052_016	226238	PRC021	X3016	PGN	Waste Rock	45	46	1	9.5	90	0.01	6.5	0.2	-6.3	0.02	Non-Acid Forming (Barren)		
29	60	24/01/2023	2022052_018	226219	PRC023	X3018	PGN	Waste Rock	82	83	1	9.4	90	0.01	5.8	0.4	-5.5	0.06	Non-Acid Forming (Barren)		
32	61	24/01/2023	2022052_021	226221	PRC025	X3021	PGN	Waste Rock	52	53	1	9.6	160	0.02	4.1	0.6	-3.6	0.13	Non-Acid Forming (Barren)		
42	62	24/01/2023	2022052_031	226257	PRC030	X3031	PGN	Waste Rock	134	135	1	9.7	100	0.01	6.2	0.2	-6.0	0.02	Non-Acid Forming (Barren)		
53	63	24/01/2023	2022052_042	226231	PRC039	X3042	PGN	Waste Rock	150	151	1	9.6	90	0.02	4.9	0.5	-4.4	0.10	Non-Acid Forming (Barren)		
55	64	24/01/2023	2022052_044	226248	PRC040	X3044	PGN	Waste Rock	169	170	1	9.5	100	0.01	101.0	0.2	-100.8	0.00	Non-Acid Forming (Barren)		
66	65	24/01/2023	2022052_055	226233	PRC048	X3055	PGN	Waste Rock	12	13	1	9.2	100	0.01	9.9	0.2	-9.7	0.02	Non-Acid Forming (Barren)		
71	66	24/01/2023	2022052_060	226254	PRC052	X3060	PGN	Waste Rock	11	12	1	9.6	90	0.02	5.6	0.6	-5.0	0.10	Non-Acid Forming (Barren)		
79	67	24/01/2023	2022052_068	226264	PRC004	X3068	PGN	Waste Rock	24	25	1	9.0	60	0.02	7.7	0.5	-7.2	0.07	Non-Acid Forming (Barren)		
80	68	24/01/2023	2022052_069	226267	PRC005	X3069	PGN	Waste Rock	13	14	1	9.4	80	0.01	2.9	0.4	-2.5	0.15	Non-Acid Forming (Barren)		
81	69	24/01/2023	2022052_070	229273	PRC006	X3070	PGN	Waste Rock	40	41	1	9.5	90	0.01	4.7	0.3	-4.4	0.07	Non-Acid Forming (Barren)		
85	70	24/01/2023	2022052_074	226260	PRC008	X3074	PGN	Waste Rock	17	18	1	9.7	100	0.02	4.1	0.5	-3.6	0.12	Non-Acid Forming (Barren)		
1	71	24/01/2023	2022052_083	226099	ORC710	X3083	PGN	Waste Rock	73.48	74.34	1.00	8.8	60	0.01	9.0	0.2	-8.9	0.02	Non-Acid Forming (Barren)		

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Original Sample No.	RGS Sample Number	Date	RGS Sample ID	Lab ID	Drill Hole ID	Client Sample ID	Sample Lithology	Sample Type	From	To	Interval	pH (1:5)	EC (1:5)	Total S	ANC[2]	MPA[2]	NAPP[2]	ANC: MPA Ratio	Sample Classification[3]	ME-CEC	KLC
									(m)				(µS/cm)	(%)	(kg H_2SO_4/t)						
Waste Rock																					
72	72	24/01/2023	2022052_061	226262	PRC053	X3061	QV	Waste Rock	3	4	1	9.0	120	0.01	59.1	0.2	-58.9	0.00	Non-Acid Forming (Barren)	Comp 9	KLC 4
73	73	24/01/2023	2022052_062	226241	PRC054	X3062	QV	Waste Rock	4	5	1	9.5	140	0.01	18.5	0.3	-18.2	0.02	Non-Acid Forming (Barren)		
76	74	24/01/2023	2022052_065	226272	PRC001	X3065	QV	Waste Rock	8	9	1	9.8	340	0.03	39.5	0.8	-38.7	0.02	Non-Acid Forming (Barren)		
15	75	24/01/2023	2022052_004	226215	PRC011	X3004	WGN	Waste Rock	114	115	1	9.5	100	0.01	121.0	0.2	-120.8	0.00	Non-Acid Forming (Barren)	Comp 10	KLC 5
25	76	24/01/2023	2022052_014	226220	PRC020	X3014	WGN	Waste Rock	60	61	1	9.6	100	0.01	9.7	0.2	-9.6	0.02	Non-Acid Forming (Barren)		
35	77	24/01/2023	2022052_024	226261	PRC026	X3024	WGN	Waste Rock	84	85	1	9.6	100	0.01	8.1	0.2	-7.9	0.02	Non-Acid Forming (Barren)		
41	78	24/01/2023	2022052_030	226244	PRC030	X3030	WGN	Waste Rock	59	60	1	9.3	80	0.01	4.0	0.2	-3.9	0.04	Non-Acid Forming (Barren)		
44	79	24/01/2023	2022052_033	226218	PRC031	X3033	WGN	Waste Rock	65	66	1	9.6	90	0.01	8.8	0.2	-8.6	0.02	Non-Acid Forming (Barren)		
49	80	24/01/2023	2022052_038	226245	PRC036	X3038	WGN	Waste Rock	147	148	1	9.5	100	0.01	4.7	0.2	-4.6	0.03	Non-Acid Forming (Barren)		
64	81	24/01/2023	2022052_053	226224	PRC046	X3053	WGN	Waste Rock	12	13	1	9.0	100	0.01	9.8	0.4	-9.4	0.04	Non-Acid Forming (Barren)		
67	82	24/01/2023	2022052_056	226258	PRC049	X3056	WGN	Waste Rock	7	8	1	9.3	120	0.01	109.0	0.3	-108.7	0.00	Non-Acid Forming (Barren)		
68	83	24/01/2023	2022052_057	226247	PRC050	X3057	WGN	Waste Rock	15	16	1	9.5	90	0.01	3.2	0.2	-3.1	0.05	Non-Acid Forming (Barren)		
70	84	24/01/2023	2022052_059	226266	PRC052	X3059	WGN	Waste Rock	7	8	1	9.6	150	0.01	9.3	0.2	-9.1	0.02	Non-Acid Forming (Barren)		
2	85	24/01/2023	2022052_084	226098	ORC710	X3084	WGN	Waste Rock	74.34	75.53	1.00	9.2	60	0.01	6.3	0.2	-6.1	0.02	Non-Acid Forming (Barren)		
3	86	24/01/2023	2022052_085	226110	ORC710	X3085	WGN	Waste Rock	75.53	77.37	1.00	9.6	60	0.02	9.5	0.5	-9.0	0.05	Non-Acid Forming (Barren)		
Ore																					
87	87	24/01/2023	2022052_076	226097	ORC701	X3076	MGN	High Grade	180.63	182.86	2.23	10.0	140	0.14	9.0	4.3	-4.7	0.47	Uncertain	Comp 11	KLC 6
91	88	24/01/2023	2022052_080	226101	ORC703	X3080	MGN	High Grade	95.95	97.37	1.42	9.6	60	0.56	9.9	17.1	7.1	1.72	PAF-LC		
92	89	24/01/2023	2022052_081	226093	ORC710	X3081	PEG	High Grade	70.13	71.02	0.89	9.6	120	0.21	130.0	6.6	-123.4	0.05	Non-Acid Forming		
93	90	24/01/2023	2022052_082	226094	ORC710	X3082	WGN	High Grade	71.02	72.48	1.46	8.7	50	0.34	9.5	10.4	0.9	1.10	Uncertain		
88	91	24/01/2023	2022052_077	226096	ORC701	X3077	BAS	Low grade	184.01	185.33	1.32	9.5	100	0.01	9.9	0.2	-9.8	0.02	Non-Acid Forming (Barren)	Comp 12	
94	92	23/01/2023	2022052_086	226100	ORC712	X3086	MGN	Low grade	81.41	83.41	2.00	9.5	60	0.01	101.0	0.4	-100.6	0.00	Non-Acid Forming (Barren)		
95	93	23/01/2023	2022052_087	226102	ORC712	X3087	PEG	Low grade	83.41	85.00	1.59	10.0	150	0.01	9.7	0.3	-9.3	0.03	Non-Acid Forming (Barren)		
96	94	23/01/2023	2022052_088	226107	ORC712	X3088	WGN	Low grade	85.00	86.09	1.09	10.0	140	0.02	2.6	0.5	-2.2	0.19	Non-Acid Forming (Barren)		
89	95	24/01/2023	2022052_078	226091	ORC701	X3078	MGN	Medium Grade	193.99	195.00	1.01	10.1	130	0.08	9.5	2.5	-6.9	0.27	Non-Acid Forming (Barren)	Comp 13	
90	96	24/01/2023	2022052_079	226104	ORC702	X3079	MGN	Medium Grade	189.42	190.42	1.00	10.0	120	0.01	9.9	0.4	-9.5	0.04	Non-Acid Forming (Barren)		

Notes:

1. Current pH and EC for 1:5 sample:water extracts
2. MPA = Maximum Potential Acidity; ANC = Acid Neutralising Capacity; NAPP = Net Acid Producing Potential; PAF-LC = Potentially Acid Forming - Low Capacity
3. Sample classification criteria detail provided in report text.

Total	
13	6

Table B2: Multi-Element Results for Mine Materials from the Omitiomire Project

	RGS Sample Number →	2022052_C001	2022052_C002	2022052_C003	2022052_C004	2022052_C005	2022052_C006	2022052_C007	2022052_C008	2022052_C009	2022052_C010	2022052_C011	2022052_C012	2022052_C013
	Sampling Date →	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
	ALS Laboratory ID →	240543	240545	240546	240547	240548	240549	240550	240551	240552	240544	241231	241232	241233
	Sample Type →	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Ore	Ore	Ore
Parameters	**Limit of Reporting**	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7	Comp 8	Comp 9	Comp 10	Comp 11	Comp 12	Comp 13
Major Cations		All units mg/kg												
Calcium (Ca)	50	202,200	10,450	11,850	7,800	9,650	9,300	14,050	3,500	1,445	9,200	10,750	16,650	10,200
Magnesium (Mg)	50	11,250	2,390	4,320	9,700	6,150	7,700	7,000	2,260	1,710	2,945	12,800	16,150	17,550
Potassium (K)	50	5,300	2,225	3,850	3,890	4,395	6,450	3,120	2,120	1,115	2,480	10,650	9,700	14,250
Sodium (Na)	50	910	510	479	461	645	685	470	481	442	473	498	635	1,220
Aluminium (Al)	50	15,950	7,850	6,850	13,600	9,500	11,300	14,350	4,515	4,510	5,050	16,000	19,800	20,700
Iron (Fe)	50	13,650	9,700	12,350	21,550	15,600	18,250	17,100	9,150	4,425	8,650	20,850	23,550	24,750
Minor and Trace Elements		All units mg/kg												
Arsenic (As)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Boron (B)	0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65
Cadmium (Cd)	0.0007	3	2	3	5	4	4	4	2	1	2	4	5	5
Cobalt (Co)	0.15	9	4	7	15	9	12	11	4	<0.15	5	22	24	26
Chromium (Cr)	0.1	29	9	14	156	28	69	30	19	6	34	605	271	454
Copper (Cu)	1	159	237	313	491	474	2390	404	269	13	515	19350	4030	6750
Mercury (Hg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Manganese (Mn)	0.0001	293	180	192	448	252	329	314	168	48	161	361	343	367
Molybdenum (Mo)	0.2	46	15	18	23	19	22	24	9	<0.2	13	34	37	35
Nickel (Ni)	0.01	24	8	15	16	29	28	22	9	2	12	144	104	135
Phosphorous (P)**	0.1	12	20	20	27	54	48	49	3	1	30	78	89	71
Lead (Pb)	0.01	6	5	7	11	8	39	9	7	<0.2	9	364	80	125
Antimony (Sb)	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Selenium (Se)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Thorium (Th)	0.0001	9	26	26	38	27	26	23	29	15	24	39	37	17
Uranium (U)	0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
Vanadium (V)	0.01	33	11	24	40	31	39	35	17	7	18	54	57	62
Zinc (Zn)	0.01	31	26	33	65	40	47	46	25	5	25	70	79	84

Notes: < indicates less than the laboratory limit of reporting.

Table B3: Geochemical Abundance Index Results for Mine Materials from the Omitionire Project

	RGS Sample Number →		2022052_C001	2022052_C002	2022052_C003	2022052_C004	2022052_C005	2022052_C006	2022052_C007	2022052_C008	2022052_C009	2022052_C010	2022052_C011	2022052_C012	2022052_C013
	Sampling Date →		23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
	ALS Laboratory ID →		240543	240545	240546	240547	240548	240549	240550	240551	240552	240544	241231	241232	241233
	Sample Type →		Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Ore	Ore	Ore
Parameters	**Limit of Reporting**	Median Crustal Abundance[1,2,3]	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7	Comp 8	Comp 9	Comp 10	Comp 11	Comp 12	Comp 13
Major Cations	(All units in mg/kg)		Geochemical Abundance Index												
Calcium (Ca)	50	15,000	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magnesium (Mg)	50	5,000	0.6	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.1	1.2
Potassium (K)	50	14,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sodium (Na)	50	5,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aluminium (Al)	50	71,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Iron (Fe)	50	40,000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minor and Trace Elements	(All units in mg/kg)		Geochemical Abundance Index												
Arsenic (As)	0.3	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Boron (B)	0.65	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cadmium (Cd)	0.0007	0.35	2.6	1.9	2.4	3.3	2.7	2.9	2.8	1.9	0.9	1.7	3.1	3.3	3.4
Cobalt (Co)	0.15	8	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.0	1.1
Chromium (Cr)	0.1	70	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.4	2.1
Copper (Cu)	1	30	1.8	2.4	2.8	3.4	3.4	5.7	3.2	2.6	0.0	3.5	6.0	6.0	6.0
Mercury (Hg)	0.2	0.06	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Manganese (Mn)	0.0001	1000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Molybdenum (Mo)	0.2	1.2	4.7	3.1	3.3	3.7	3.4	3.6	3.7	2.4	0.0	2.8	4.2	4.4	4.3
Nickel (Ni)	0.01	50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.8
Phosphorous (P)	0.1	800	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead (Pb)	0.01	35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.6	1.3
Antimony (Sb)	0.05	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Selenium (Se)	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thorium (Th)	0.0001	9	0.0	1.0	1.0	1.5	1.0	0.9	0.8	1.1	0.2	0.8	1.5	1.5	0.4
Uranium (U)	0.75	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vanadium (V)	0.01	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zinc (Zn)	0.01	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: GAI's greater than or equal to 3 are highlighted.

1. Median Crustal Abundance values sourced from the "GARD Guide" (INAP, 2023).
2. When no GARD Guide value is available for particular element, then values are taken from Bowen (1979) Environmental Chemistry of the Elements, p 60-61.
3. If no guide value from GARD or Bowen H.J.M. (1979) exists, up to date, curated data is provided by CRC Handbook of Chemistry and Physics (2000).

Table B4: Multi-Element Test Results for Water Extracts from the Omitiomire Project

		RGS Sample Number →	2022052_C001	2022052_C002	2022052_C003	2022052_C004	2022052_C005	2022052_C006	2022052_C007	2022052_C008	2022052_C009	2022052_C010	2022052_C011	2022052_C012	2022052_C013
		Sample Date →	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023	23/02/2023
		ALS Laboratory ID →	238005	238006	238007	238008	238009	238010	238011	238012	238013	238014	238015	238016	238017
		Sample Type →	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Ore	Ore	Ore
Parameters	**Laboratory Limit of Reporting**	Livestock Drinking Water[1]	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7	Comp 8	Comp 9	Comp 10	Comp 11	Comp 12	Comp 13
pH	0.01 pH unit	-	9.46	9.63	9.57	9.70	9.52	9.83	9.24	9.49	9.53	9.51	9.70	9.60	9.87
Electrical Conductivity [3]	1 µS/cm	3,580*	249	80	92	97	91	129	102	88	57	102	144	122	130
Total Alkalinity (mg CaCO [3] /L)	0.1 mg/L	-	131	24	26	30	20	45	36	5	171	47	42	51	42
Acidity (mg CaCO [3] /L)	0.1 mg/L	-	<0.1	67	46	23	<0.1	56	27	24	39	27	<0.1	34	35
Net Alkalinity (mg CaCO /L)	0.1 mg/L	-	131	-44	-20	6	20	-11	9	-19	132	20	42	17	7
Major Ions	All units mg/L														
Calcium (Ca)	1	1,000	2.5	3.0	2.7	1.9	3.4	0.8	5.6	2.8	0.3	3.2	2.4	3.5	1.1
Magnesium (Mg)	0.001	-	1.3	<0.001	0.3	0.0	0.3	<0.001	1.4	0.19	0.2	1.1	0.2	0.6	0.2
Potassium (K)	0.1	-	4.5	6.1	6.1	10.6	7.3	8.1	6.1	6.5	3.0	7.8	28.5	17.3	27.8
Sodium (Na)	1	-	57.3	9.0	12.3	11.4	9.6	21.4	10.0	10.8	143.0	13.3	10.6	10.9	9.4
Chloride (Cl)	0.557	-	<0.557	2.7	2.2	2.7	2.2	1.9	2.4	2.8	79.2	4.2	4.2	3.5	1.8
Fluoride (F)[4]	0.263	2	0.9	<0.263	<0.263	<0.263	<0.263	0.3	0.5	<0.263	2.5	0.5	0.4	0.7	0.5
Sulfate (SO_4^{2-})	0.141	1,000	21	<0.141	1	<0.141	4	5	2	1	85	5	4	1	<0.141
Trace Metals/Metalloids	All units mg/L														
Aluminium (Al)	0.1	5	2.4	0.7	0.9	1.8	1.4	1.2	1.4	1.0	0.3	2.6	1.2	1.4	1.3
Arsenic (As)	0.006	0.5	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Boron (B)	0.013	5	0.037	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	9.180	<0.013	<0.013	<0.013	<0.013
Cadmium (Cd)	0.001	0.01	0.009	0.008	0.009	0.008	0.008	0.012	0.009	0.009	<0.001	0.008	0.011	0.010	0.006
Cobalt (Co)	0.001	1	0.016	0.023	0.023	0.024	0.017	0.024	0.024	0.021	0.051	0.015	0.021	0.025	0.017
Chromium (Cr)	0.001	1	0.050	0.045	0.047	0.030	0.034	0.055	0.040	0.044	0.060	0.042	0.067	0.051	0.049
Copper (Cu)	0.1	1	0.155	0.137	0.185	0.187	0.200	0.192	0.177	0.188	0.159	0.472	0.485	0.700	0.526
Iron (Fe)	1	-	1.710	0.191	0.325	0.871	0.946	0.753	0.754	0.354	0.045	1.530	0.701	0.897	0.964
Mercury (Hg)	0.004	0.002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Manganese (Mn)	0.01	-	0.053	0.029	0.032	0.040	0.032	0.037	0.037	0.034	0.064	0.066	0.037	0.034	0.036
Molybdenum (Mo)	0.001	0.15	0.150	0.142	0.144	0.140	0.151	0.150	0.153	0.146	0.122	0.158	0.141	0.141	0.158
Nickel (Ni)	0.001	1	0.028	0.030	0.020	0.017	0.023	0.033	0.026	0.026	0.054	0.022	0.009	0.023	0.023
Phosphorous (P)	0.004	-	0.370	0.120	1.110	0.300	0.500	0.390	0.330	0.140	0.030	0.220	0.500	0.930	0.980
Lead (Pb)	0.004	0.1	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.030	<0.004	0.044	0.026	0.038	0.034	<0.004
Antimony (Sb)	0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium (Se)	0.002	0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thorium (Th)	0.001	-	0.001	0.001	0.002	0.005	0.002	0.002	0.000	0.001	0.003	0.008	0.002	0.000	0.000
Uranium (U)	0.015	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Vanadium (V)	0.001	-	0.479	0.025	0.032	0.031	0.034	0.043	0.045	0.031	0.270	0.043	0.039	0.039	0.039
Zinc (Zn)	0.001	20	0.016	0.008	0.018	0.01800	0.01700	0.01800	0.01600	0.02100	0.02800	0.02800	0.01500	0.01700	0.02200

Notes: < indicates concentration less than the detection limit. Shaded cells exceed applied guideline values.
TDS is an approximate measure of inorganic dissolved salts and should not exceed 2,400mg/L for livestock drinking water.

ATTACHMENT C

Aquatico Scientific Laboratories Results

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 144436
Project: 134-439

Date of report: 09 February 2023
Date accepted: 24 January 2023
Date completed: 09 February 2023
Date received: 24 January 2023

					226091	226092	226093	226094	226095	226096	226097
Lab no:					226091	226092	226093	226094	226095	226096	226097
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3078	X3096	X3081	X3082	X3091	X3077	X3076
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	0.083	<0.010	0.214	0.339	<0.010	<0.010	0.139
A	AQL	pH @ 25°C	pH	ALM 20	10.1	9.63	9.63	8.69	9.89	9.53	10.0
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	12.8	5.84	12.4	5.20	13.1	9.75	14.2
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	72.2	71.4	46.1	15.5	64.2	53.4	55.4
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	37.7	84.7	<0.001	20.2	30.0	34.0	23.3
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	9.48	9.93	130	9.47	8.57	9.91	8.99
N	AQL	Fizz rating	-	Geochem	0	0	3	0	0	0	0

A = Accredited N = Non accredited Sub = Sub-contracted NR = Not requested RTF = Results to follow NATD = Not able to determine ATR = Alternative test report ; Results relate only to the items sampled and tested ; Results reported against the limit of detection; Results marked 'Non SANAS Accredited' in this report are not included in the SANAS Schedule of Accreditation for this laboratory; Uncertainty of measurement available on request for all methods included in the SANAS Schedule of Accreditation; The report shall not be reproduced except in full without approval of the laboratory

AQL = Aquatico Laboratories ; AQK = Aquatico Laboratories based in Kathu

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 144436
Project: 134-439

Date of report: 09 February 2023
Date accepted: 24 January 2023
Date completed: 09 February 2023
Date received: 24 January 2023

					226098	226099	226100	226101	226102	226103	226104
Lab no:											
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3084	X3083	X3086	X3080	X3087	X3090	X3079
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	<0.010	0.014	0.557	0.011	<0.010	0.012
A	AQL	pH @ 25°C	pH	ALM 20	9.20	8.83	9.53	9.58	10.0	9.92	9.96
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	5.77	5.68	5.79	6.46	15.0	11.5	11.5
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	29.8	19.6	12.1	22.3	63.3	56.7	50.4
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	37.7	9.84	9.30	61.1	29.6	34.4	28.1
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	6.28	9.03	101	9.93	9.67	8.76	9.89
N	AQL	Fizz rating	-	Geochem	0	0	3	0	0	0	0

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Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 144436
Project: 134-439

Date of report: 09 February 2023
Date accepted: 24 January 2023
Date completed: 09 February 2023
Date received: 24 January 2023

					226105	226106	226107	226108	226109	226110
Lab no:					226105	226106	226107	226108	226109	226110
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3094	X3089	X3088	X3092	X3093	X3085
		Analyses	**Unit**	**Method**						
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	0.012	<0.010	0.016	<0.010	<0.010	0.016
A	AQL	pH @ 25°C	pH	ALM 20	9.53	9.86	10.0	9.37	9.47	9.62
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	6.67	8.01	13.9	11.2	9.72	6.15
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	71.2	42.0	62.3	31.0	24.9	69.9
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	49.2	36.6	46.6	14.1	22.2	70.3
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	8.58	7.31	2.64	100	9.12	9.46
N	AQL	Fizz rating	-	Geochem	0	0	0	2	0	0

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Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 144467
Project: 134-439

Date of report: 09 February 2023
Date accepted: 25 January 2023
Date completed: 09 February 2023
Date received: 25 January 2023

					226209	226210	226211	226212	226213	226214	226215
Lab no:											
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3040	X3035	X3001	X3034	X3025	X3067	X3004
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	0.012	0.012	0.016	0.010	0.024	0.013	<0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.66	9.40	9.24	9.45	9.06	9.22	9.45
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	8.44	7.51	7.90	11.7	22.3	8.92	9.67
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	32.5	27.0	22.4	84.3	119	23.2	21.8
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	24.3	10.8	40.8	75.5	<0.001	41.8	87.0
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	9.49	8.77	9.66	8.86	241	2.89	121
N	AQL	Fizz rating	-	Geochem	0	0	0	0	4	0	3

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Report no: 144467
Project: 134-439

Date of report: 09 February 2023
Date accepted: 25 January 2023
Date completed: 09 February 2023
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Lab no:					226216	226217	226218	226219	226220	226221	226222
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3036	X3027	X3033	X3018	X3014	X3021	X3039
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	0.015	0.018	<0.010	0.012	<0.010	0.018	<0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.57	9.42	9.57	9.37	9.57	9.63	9.36
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	11.8	8.64	9.40	9.32	9.61	15.6	9.18
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	72.8	30.1	81.2	30.1	85.0	52.1	23.2
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	4.80	8.70	84.4	24.6	85.8	6.60	15.3
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	199	108	8.77	5.84	9.74	4.11	9.99
N	AQL	Fizz rating	-	Geochem	3	3	0	0	0	0	0

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Report no: 144467
Project: 134-439

Date of report: 09 February 2023
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		Analyses	Unit	Method	226223	226224	226225	226226	226227	226228	226229
Lab no:					226223	226224	226225	226226	226227	226228	226229
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3015	X3053	X3009	X3005	X3051	X3046	X3045
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	0.014	0.025	0.013	0.013	<0.010	0.596
A	AQL	pH @ 25°C	pH	ALM 20	9.55	9.02	9.59	9.33	9.28	9.13	9.61
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	8.95	10.3	9.54	9.49	8.89	10.3	9.40
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	77.5	30.8	32.7	48.5	26.1	38.5	20.3
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	81.4	37.7	7.10	<0.001	17.4	31.5	22.5
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	116	9.79	8.54	9.03	8.42	19.4	39.8
N	AQL	Fizz rating	-	Geochem	3	0	0	0	0	1	1

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Report no: 144468
Project: 134-439

Date of report: 09 February 2023
Date accepted: 25 January 2023
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					226230	226231	226232	226233	226234	226235	226236
Lab no:											
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3048	X3042	X3017	X3055	X3026	X3012	X3029
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	0.016	0.043	<0.010	0.011	<0.010	<0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.55	9.57	10.2	9.22	9.10	9.36	9.61
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	17.5	9.01	52.4	9.84	10.3	4.86	9.50
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	108	15.3	221	34.5	34.3	21.3	38.2
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	25.9	33.9	<0.001	46.6	36.6	27.0	23.7
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	104	4.87	678	9.89	9.53	9.53	9.02
N	AQL	Fizz rating	-	Geochem	3	0	5	0	0	0	0

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Report no: 144468
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Date of report: 09 February 2023
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					226237	226238	226239	226240	226241	226242	226243
Lab no:											
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3064	X3016	X3010	X3023	X3062	X3002	X3019
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	0.012
A	AQL	pH @ 25°C	pH	ALM 20	8.11	9.53	9.60	9.61	9.54	9.42	9.32
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	15.2	8.72	10.1	10.2	13.9	11.8	8.75
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	69.8	89.8	81.0	91.8	102	82.2	21.0
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	29.7	51.1	71.8	60.7	71.8	46.3	21.0
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	7.18	6.48	5.34	16.6	18.5	9.03	9.77
N	AQL	Fizz rating	-	Geochem	0	0	0	1	1	0	0

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Report no: 144468
Project: 134-439

Date of report: 09 February 2023
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Date completed: 09 February 2023
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		Analyses	Unit	Method	226244	226245	226246	226247	226248	226249
Lab no:					226244	226245	226246	226247	226248	226249
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3030	X3038	X3020	X3057	X3044	X3049
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	<0.010	0.012	<0.010	<0.010	0.020
A	AQL	pH @ 25°C	pH	ALM 20	9.26	9.52	9.38	9.54	9.54	9.29
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	7.89	10.2	8.18	9.15	10.1	8.35
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	82.6	23.7	26.7	82.1	87.0	21.2
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	84.7	17.4	26.4	71.4	70.3	27.9
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	4.03	4.73	7.62	3.23	101	8.77
N	AQL	Fizz rating	-	Geochem	0	0	0	0	3	0

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Test Report

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Report no: 144469
Project: 134-439

Date of report: 09 February 2023
Date accepted: 25 January 2023
Date completed: 09 February 2023
Date received: 25 January 2023

					226250	226251	226252	226253	226254	226255	226256
Lab no:											
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3066	X3032	X3075	X3063	X3060	X3037	X3047
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	0.025	<0.010	0.013	0.019	<0.010	<0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.49	9.02	9.55	9.73	9.57	9.61	9.58
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	10.4	13.3	12.4	10.6	8.73	9.00	9.42
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	31.6	92.8	87.1	86.1	76.1	32.0	25.0
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	11.7	<0.001	67.3	44.0	40.3	17.7	84.7
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	34.7	398	107	8.41	5.56	32.4	9.46
N	AQL	Fizz rating	-	Geochem	1	4	3	0	0	1	0

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					226257	226258	226259	226260	226261	226262	226263
Lab no:											
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3031	X3056	X3054	X3074	X3024	X3061	X3022
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	0.010	0.030	0.016	<0.010	<0.010	<0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.72	9.29	9.38	9.66	9.56	8.98	9.50
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	10.0	11.7	22.2	10.4	9.70	11.6	8.80
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	25.9	36.4	128	24.8	19.1	69.3	30.0
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	52.9	24.8	<0.001	41.1	31.8	38.4	23.7
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	6.15	109	399	4.09	8.09	59.1	7.79
N	AQL	Fizz rating	-	Geochem	0	3	4	0	0	2	0

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Lab no:					226264	226265	226266	226267	226268	226269
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3068	X3041	X3059	X3069	X3073	X3058
		Analyses	**Unit**	**Method**						
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	0.017	<0.010	<0.010	0.014	0.010	0.014
A	AQL	pH @ 25°C	pH	ALM 20	9.02	9.03	9.62	9.41	9.20	9.08
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	6.36	6.06	15.2	7.69	8.84	9.08
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	29.4	15.3	74.4	13.8	16.7	29.3
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	21.9	25.5	14.4	72.9	71.4	34.4
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	7.71	8.95	9.25	2.92	5.42	8.58
N	AQL	Fizz rating	-	Geochem	0	0	0	0	0	0

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ilac-MRA sanas Testing Laboratory T0685

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 144471
Project: 134-439

Date of report: 09 February 2023
Date accepted: 25 January 2023
Date completed: 09 February 2023
Date received: 25 January 2023

Lab no:					226271	226272	226273	226274
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem
Locality description:					X3006	X3065	X3071	X3072
		Analyses	**Unit**	**Method**				
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	0.027	0.016	0.011
A	AQL	pH @ 25°C	pH	ALM 20	9.27	9.75	9.40	9.95
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	8.87	34.1	9.51	33.5
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	24.9	134	25.4	168
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	29.1	<0.001	22.2	<0.001
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	17.3	39.5	9.92	16.7
N	AQL	Fizz rating	-	Geochem	1	1	0	1

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ilac-MRA sanas Testing Laboratory T0685

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 144903
Project: 134-439

Date of report: 09 February 2023
Date accepted: 30 January 2023
Date completed: 09 February 2023
Date received: 30 January 2023

Lab no:					228618	228619	228620
Date sampled:					23-Jan-23	23-Jan-23	23-Jan-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					X3050	X3095	X3007
		Analyses	**Unit**	**Method**			
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	<0.010	<0.010	<0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.48	9.86	9.57
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	8.94	11.6	9.79
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	39.8	55.0	43.0
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	37.7	42.9	32.6
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	9.31	7.83	8.01

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ilac-MRA sanas Testing Laboratory T0685

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 145024
Project: 134-439

Date of report: 09 February 2023
Date accepted: 01 February 2023
Date completed: 09 February 2023
Date received: 01 February 2023

Lab no:					229269	229270	229271	229272	229273	229274	229275
Date sampled:					24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					X3013	X3008	X3028	X3052	X3070	X3043	X3011
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Milling 75um	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total Sulphur	%	Geochem	0.014	<0.010	<0.010	<0.010	0.010	<0.010	0.010
A	AQL	pH @ 25°C	pH	ALM 20	9.58	9.48	9.33	9.40	9.49	9.40	9.57
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	8.70	7.39	9.43	7.03	8.68	10.2	7.13
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	47.6	41.6	45.1	39.8	40.0	29.2	34.4
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	<0.001	<0.001	5.04	<0.001	<0.001	<0.001	<0.001
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	9.85	4.28	99.3	5.86	4.66	5.59	7.23
N	AQL	Fizz rating	-	Geochem	0	0	2	0	0	0	0

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Client:	Environmental Compliance Consultancy (ECC)	**Date of report:**	09 February 2023
Address:	1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000	**Date accepted:**	01 February 2023
Report no:	145024	**Date completed:**	09 February 2023
Project:	134-439	**Date received:**	01 February 2023

Lab no:					229276
Date sampled:					24-Jan-23
Aquatico sampled:					No
Sample type:					Geochem
Locality description:					X3003
		Analyses	**Unit**	**Method**	
N	AQL	Geo - Milling 75um	-	Geochem	Yes
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes
N	AQL	Total Sulphur	%	Geochem	0.014
A	AQL	pH @ 25°C	pH	ALM 20	9.37
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	9.93
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	55.8
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	<0.001
N	AQL	Acid Neutralising Capacity (ANC)	H2SO4 kg/t	Geochem	129
N	AQL	Fizz rating	-	Geochem	3

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Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 147234
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 08 March 2023
Date received: 23 February 2023

Lab no:					240543	240544	240545	240546	240547	240548	240549
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					Comp 1	Comp 10	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6
		Analyses	**Unit**	**Method**							
A	AQL	Calcium (Ca)	mg/kg	ALM 30	202200	9200	10450	11850	7800	9650	9300
A	AQL	Magnesium (Mg)	mg/kg	ALM 30	11250	2945	2390	4320	9700	6150	7700
A	AQL	Sodium (Na)	mg/kg	ALM 30	910	473	510	479	461	645	685
A	AQL	Potassium (K)	mg/kg	ALM 30	5300	2480	2225	3850	3890	4395	6450
A	AQL	Aluminium (Al)	mg/kg	ALM 31	15950	5050	7850	6850	13600	9500	11300
A	AQL	Iron (Fe)	mg/kg	ALM 31	13650	8650	9700	12350	21550	15600	18250
A	AQL	Manganese (Mn)	mg/kg	ALM 31	293	161	180	192	448	252	329
A	AQL	Cadmium (Cd)	mg/kg	ALM 31	3.15	1.70	1.95	2.70	5.05	3.50	3.90
A	AQL	Cobalt (Co)	mg/kg	ALM 31	9.40	5.10	4.25	7.10	14.6	9.35	11.6
A	AQL	Chromium (Cr)	mg/kg	ALM 31	29.4	34.4	9.10	14.2	156	28.1	69.0
A	AQL	Copper (Cu)	mg/kg	ALM 31	159	515	237	313	491	474	2390
A	AQL	Nickel (Ni)	mg/kg	ALM 31	23.8	12.1	8.20	15.1	15.7	28.5	28.0
A	AQL	Lead (Pb)	mg/kg	ALM 31	5.90	8.90	4.60	7.40	11.1	7.95	39.2
A	AQL	Zinc (Zn)	mg/kg	ALM 31	30.5	25.3	26.3	33.0	64.5	40.4	46.5
A	AQL	Boron (B)	mg/kg	ALM 33	<0.650	<0.650	<0.650	<0.650	<0.650	<0.650	<0.650
A	AQL	Vanadium (V)	mg/kg	ALM 33	33.3	17.9	11.3	23.6	40.3	31.4	39.3
A	AQL	Molybdenum (Mo)	mg/kg	ALM 33	46.0	12.8	15.2	17.5	23.1	18.5	21.6
A	AQL	Arsenic (As)	mg/kg	ALM 34	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300
A	AQL	Antimony (Sb)	mg/kg	ALM 36	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
A	AQL	Selenium (Se)	mg/kg	ALM 34	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
A	AQL	Mercury (Hg)	mg/kg	ALM 35	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
A	AQL	Thorium (Th)	mg/kg	ALM 92	9.25	23.5	26.3	26.2	37.6	27.2	25.7
A	AQL	Uranium (U)	mg/kg	ALM 37	<0.750	<0.750	<0.750	<0.750	<0.750	<0.750	<0.750
A	AQL	HNO3-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	AQL	Total phosphorus	mg/kg	ALM 12	12.0	30.0	19.5	20.0	27.0	53.5	48.0

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Client:	Environmental Compliance Consultancy (ECC)	**Date of report:**	13 March 2023
Address:	1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000	**Date accepted:**	23 February 2023
Report no:	147234	**Date completed:**	08 March 2023
Project:	134-439	**Date received:**	23 February 2023

Lab no:					240543	240544	240545	240546	240547	240548	240549
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					Comp 1	Comp 10	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6
		Analyses		**Unit**	**Method**						
A	AQL	TP-Microwave digestion		mg/kg	ALM 90	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 147234
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 08 March 2023
Date received: 23 February 2023

Lab no:					240550	240551	240552
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 7	Comp 8	Comp 9
		Analyses	**Unit**	**Method**			
A	AQL	Calcium (Ca)	mg/kg	ALM 30	14050	3500	1445
A	AQL	Magnesium (Mg)	mg/kg	ALM 30	7000	2260	1710
A	AQL	Sodium (Na)	mg/kg	ALM 30	470	481	442
A	AQL	Potassium (K)	mg/kg	ALM 30	3120	2120	1115
A	AQL	Aluminium (Al)	mg/kg	ALM 31	14350	4515	4510
A	AQL	Iron (Fe)	mg/kg	ALM 31	17100	9150	4425
A	AQL	Manganese (Mn)	mg/kg	ALM 31	314	168	47.5
A	AQL	Cadmium (Cd)	mg/kg	ALM 31	3.55	1.95	0.950
A	AQL	Cobalt (Co)	mg/kg	ALM 31	10.5	4.45	<0.150
A	AQL	Chromium (Cr)	mg/kg	ALM 31	29.9	19.2	5.70
A	AQL	Copper (Cu)	mg/kg	ALM 31	404	269	13.4
A	AQL	Nickel (Ni)	mg/kg	ALM 31	21.5	9.40	2.05
A	AQL	Lead (Pb)	mg/kg	ALM 31	9.25	6.60	<0.200
A	AQL	Zinc (Zn)	mg/kg	ALM 31	45.6	25.2	4.75
A	AQL	Boron (B)	mg/kg	ALM 33	<0.650	<0.650	<0.650
A	AQL	Vanadium (V)	mg/kg	ALM 33	34.5	16.5	7.15
A	AQL	Molybdenum (Mo)	mg/kg	ALM 33	23.9	9.25	<0.200
A	AQL	Arsenic (As)	mg/kg	ALM 34	<0.300	<0.300	<0.300
A	AQL	Antimony (Sb)	mg/kg	ALM 36	<0.050	<0.050	<0.050
A	AQL	Selenium (Se)	mg/kg	ALM 34	<0.100	<0.100	<0.100
A	AQL	Mercury (Hg)	mg/kg	ALM 35	<0.200	<0.200	<0.200
A	AQL	Thorium (Th)	mg/kg	ALM 92	23.0	29.0	15.1
A	AQL	Uranium (U)	mg/kg	ALM 37	<0.750	<0.750	<0.750
A	AQL	HNO3-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes
N	AQL	Total phosphorus	mg/kg	ALM 12	48.5	3.00	1.00

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Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 147234
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 08 March 2023
Date received: 23 February 2023

Lab no:					240550	240551	240552
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 7	Comp 8	Comp 9
		Analyses	**Unit**	**Method**			
A	AQL	TP-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes

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Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 147378
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 09 March 2023
Date received: 23 February 2023

Lab no:					241231	241232	241233
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 11	Comp 12	Comp 13
		Analyses	**Unit**	**Method**			
A	AQL	Calcium (Ca)	mg/kg	ALM 30	10750	16650	10200
A	AQL	Magnesium (Mg)	mg/kg	ALM 30	12800	16150	17550
A	AQL	Sodium (Na)	mg/kg	ALM 30	498	635	1220
A	AQL	Potassium (K)	mg/kg	ALM 30	10650	9700	14250
A	AQL	Aluminium (Al)	mg/kg	ALM 31	16000	19800	20700
A	AQL	Iron (Fe)	mg/kg	ALM 31	20850	23550	24750
A	AQL	Manganese (Mn)	mg/kg	ALM 31	361	343	367
A	AQL	Cadmium (Cd)	mg/kg	ALM 31	4.35	5.25	5.45
A	AQL	Cobalt (Co)	mg/kg	ALM 31	21.6	24.3	25.7
A	AQL	Chromium (Cr)	mg/kg	ALM 31	605	271	454
A	AQL	Copper (Cu)	mg/kg	ALM 31	19350	4030	6750
A	AQL	Nickel (Ni)	mg/kg	ALM 31	144	104	135
A	AQL	Lead (Pb)	mg/kg	ALM 31	364	80.0	125
A	AQL	Zinc (Zn)	mg/kg	ALM 31	70.0	78.5	83.5
A	AQL	Boron (B)	mg/kg	ALM 33	<0.650	<0.650	<0.650
A	AQL	Vanadium (V)	mg/kg	ALM 33	54.0	57.0	62.0
A	AQL	Molybdenum (Mo)	mg/kg	ALM 33	34.0	36.8	34.9
A	AQL	Arsenic (As)	mg/kg	ALM 34	<0.300	<0.300	<0.300
A	AQL	Antimony (Sb)	mg/kg	ALM 36	<0.050	<0.050	<0.050
A	AQL	Selenium (Se)	mg/kg	ALM 34	<0.100	<0.100	<0.100
A	AQL	Mercury (Hg)	mg/kg	ALM 35	<0.200	<0.200	<0.200
A	AQL	Thorium (Th)	mg/kg	ALM 92	39.0	37.2	17.4
A	AQL	Uranium (U)	mg/kg	ALM 37	<0.750	<0.750	<0.750
A	AQL	HNO3-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes
N	AQL	Total phosphorus	mg/kg	ALM 12	78.0	88.5	70.5

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Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 147378
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 09 March 2023
Date received: 23 February 2023

Lab no:					241231	241232	241233
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 11	Comp 12	Comp 13
		Analyses	**Unit**	**Method**			
A	AQL	TP-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes

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aquatico Laboratories (Pty). Ltd.

ilac-MRA sanas Testing Laboratory T0685

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 146738
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 07 March 2023
Date received: 23 February 2023

					238018	238019	238020	238021	238022	238023	238024
Lab no:											
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					Comp 1	Comp 10	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6
		Analyses	**Unit**	**Method**							
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes	Yes	Yes	Yes	Yes
A	AQL	pH @ 25°C	pH	ALM 20	9.46	9.51	9.63	9.57	9.70	9.52	9.83
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	24.9	10.2	8.02	9.16	9.72	9.09	12.9
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	131	46.8	23.5	25.5	29.5	20.4	44.7
A	AQL	Chloride (Cl)	mg/kg	ALM 02	<2.79	20.9	13.4	10.9	13.6	11.2	9.30
A	AQL	Sulphate (SO4)	mg/kg	ALM 03	104	22.8	<0.705	2.87	<0.705	17.7	22.9
A	AQL	Fluoride (F)	mg/kg	ALM 08	4.61	2.54	<1.32	<1.32	<1.32	<1.32	1.69
A	AQL	Calcium (Ca)	mg/kg	ALM 30	12.6	15.9	14.8	13.6	9.50	16.8	3.79
A	AQL	Magnesium (Mg)	mg/kg	ALM 30	6.25	5.25	-0.005	1.53	0.150	1.65	-0.005
A	AQL	Sodium (Na)	mg/kg	ALM 30	287	66.5	45.2	61.5	57.0	48.0	107
A	AQL	Potassium (K)	mg/kg	ALM 30	22.3	38.9	30.3	30.3	53.0	36.7	40.7
A	AQL	Aluminium (Al)	mg/kg	ALM 31	12.0	13.2	3.43	4.72	8.95	6.85	6.05
A	AQL	Iron (Fe)	mg/kg	ALM 31	8.55	7.65	0.955	1.63	4.36	4.73	3.77
A	AQL	Manganese (Mn)	mg/kg	ALM 31	0.265	0.330	0.145	0.160	0.200	0.160	0.185
A	AQL	Cadmium (Cd)	mg/kg	ALM 31	0.045	0.040	0.040	0.045	0.040	0.040	0.060
A	AQL	Cobalt (Co)	mg/kg	ALM 31	0.080	0.075	0.115	0.115	0.120	0.085	0.120
A	AQL	Chromium (Cr)	mg/kg	ALM 31	0.250	0.210	0.225	0.235	0.150	0.170	0.275
A	AQL	Copper (Cu)	mg/kg	ALM 31	0.775	2.36	0.685	0.925	0.935	1.00	0.960
A	AQL	Nickel (Ni)	mg/kg	ALM 31	0.140	0.110	0.150	0.100	0.085	0.115	0.165
A	AQL	Lead (Pb)	mg/kg	ALM 31	<0.020	0.130	<0.020	<0.020	<0.020	<0.020	<0.020
A	AQL	Zinc (Zn)	mg/kg	ALM 31	0.080	0.140	0.040	0.090	0.090	0.085	0.090
A	AQL	Boron (B)	mg/kg	ALM 33	0.185	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065
A	AQL	Vanadium (V)	mg/kg	ALM 33	2.40	0.215	0.125	0.160	0.155	0.170	0.215
A	AQL	Molybdenum (Mo)	mg/kg	ALM 33	0.750	0.790	0.710	0.720	0.700	0.755	0.750
A	AQL	Arsenic (As)	mg/kg	ALM 34	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030

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Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 146738
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 07 March 2023
Date received: 23 February 2023

Lab no:					238018	238019	238020	238021	238022	238023	238024
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No	No	No	No	No
Sample type:					Geochem	Geochem	Geochem	Geochem	Geochem	Geochem	Geochem
Locality description:					Comp 1	Comp 10	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6
		Analyses	**Unit**	**Method**							
A	AQL	Antimony (Sb)	mg/kg	ALM 36	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
A	AQL	Selenium (Se)	mg/kg	ALM 34	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
A	AQL	Mercury (Hg)	mg/kg	ALM 35	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	<0.001	26.9	67.3	45.9	23.1	<0.001	56.1
A	AQL	Thorium (Th)	mg/kg	ALM 92	0.005	0.040	0.005	0.010	0.025	0.010	0.010
A	AQL	Uranium (U)	mg/kg	ALM 37	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075
N	AQL	Total phosphorus	mg/kg	ALM 12	1.85	1.10	0.600	5.55	1.50	2.50	1.95
A	AQL	TP-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Report no: 146738
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 07 March 2023
Date received: 23 February 2023

					238025	238026	238027
Lab no:							
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 7	Comp 8	Comp 9
		Analyses	**Unit**	**Method**			
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes
A	AQL	pH @ 25°C	pH	ALM 20	9.24	9.49	9.53
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	10.2	8.75	57.2
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	35.8	5.05	171
A	AQL	Chloride (Cl)	mg/kg	ALM 02	11.8	13.8	396
A	AQL	Sulphate (SO4)	mg/kg	ALM 03	11.0	3.31	424
A	AQL	Fluoride (F)	mg/kg	ALM 08	2.59	<1.32	12.5
A	AQL	Calcium (Ca)	mg/kg	ALM 30	28.1	14.2	1.64
A	AQL	Magnesium (Mg)	mg/kg	ALM 30	7.00	0.960	1.04
A	AQL	Sodium (Na)	mg/kg	ALM 30	50.0	54.0	715
A	AQL	Potassium (K)	mg/kg	ALM 30	30.3	32.7	15.2
A	AQL	Aluminium (Al)	mg/kg	ALM 31	6.90	5.05	1.31
A	AQL	Iron (Fe)	mg/kg	ALM 31	3.77	1.77	0.225
A	AQL	Manganese (Mn)	mg/kg	ALM 31	0.185	0.170	0.320
A	AQL	Cadmium (Cd)	mg/kg	ALM 31	0.045	0.045	<0.010
A	AQL	Cobalt (Co)	mg/kg	ALM 31	0.120	0.105	0.255
A	AQL	Chromium (Cr)	mg/kg	ALM 31	0.200	0.220	0.300
A	AQL	Copper (Cu)	mg/kg	ALM 31	0.885	0.940	0.795
A	AQL	Nickel (Ni)	mg/kg	ALM 31	0.130	0.130	0.270
A	AQL	Lead (Pb)	mg/kg	ALM 31	0.150	<0.020	0.220
A	AQL	Zinc (Zn)	mg/kg	ALM 31	0.080	0.105	0.140
A	AQL	Boron (B)	mg/kg	ALM 33	<0.065	<0.065	45.9
A	AQL	Vanadium (V)	mg/kg	ALM 33	0.225	0.155	1.35
A	AQL	Molybdenum (Mo)	mg/kg	ALM 33	0.765	0.730	0.610
A	AQL	Arsenic (As)	mg/kg	ALM 34	<0.030	<0.030	<0.030

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Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 146738
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 07 March 2023
Date received: 23 February 2023

					238025	238026	238027
Lab no:							
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 7	Comp 8	Comp 9
		Analyses		**Unit**	**Method**		
A	AQL	Antimony (Sb)		mg/kg	ALM 36	<0.005	<0.005	<0.005
A	AQL	Selenium (Se)		mg/kg	ALM 34	<0.010	<0.010	<0.010
A	AQL	Mercury (Hg)		mg/kg	ALM 35	<0.020	<0.020	<0.020
N	AQL	Acidity pH 8.3		mg $CaCO_3$/l	ALM 60	27.2	23.8	39.1
A	AQL	Thorium (Th)		mg/kg	ALM 92	0.000	0.005	0.015
A	AQL	Uranium (U)		mg/kg	ALM 37	<0.075	<0.075	<0.075
N	AQL	Total phosphorus		mg/kg	ALM 12	1.65	0.700	0.150
A	AQL	TP-Microwave digestion		mg/kg	ALM 90	Yes	Yes	Yes

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ilac-MRA sanas Testing Laboratory T0685

Test Report

Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 146739
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 06 March 2023
Date received: 23 February 2023

		Analyses	Unit	Method	238028	238029	238030
Lab no:							
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 11	Comp 12	Comp 13
N	AQL	Geo - Reagent water Leach 1:5	-	Geochem	Yes	Yes	Yes
A	AQL	pH @ 25°C	pH	ALM 20	9.70	9.60	9.87
A	AQL	Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	14.4	12.2	13.0
A	AQL	Total Alkalinity	mg $CaCO_3$/l	ALM 01	42.3	50.7	41.5
A	AQL	Chloride (Cl)	mg/kg	ALM 02	21.0	17.5	9.15
A	AQL	Sulphate (SO4)	mg/kg	ALM 03	20.3	5.10	<0.705
A	AQL	Fluoride (F)	mg/kg	ALM 08	2.03	3.33	2.28
A	AQL	Calcium (Ca)	mg/kg	ALM 30	11.9	17.3	5.70
A	AQL	Magnesium (Mg)	mg/kg	ALM 30	1.15	2.91	0.990
A	AQL	Sodium (Na)	mg/kg	ALM 30	53.0	54.5	47.1
A	AQL	Potassium (K)	mg/kg	ALM 30	143	86.5	139
A	AQL	Aluminium (Al)	mg/kg	ALM 31	6.05	6.90	6.45
A	AQL	Iron (Fe)	mg/kg	ALM 31	3.51	4.49	4.82
A	AQL	Manganese (Mn)	mg/kg	ALM 31	0.185	0.170	0.180
A	AQL	Cadmium (Cd)	mg/kg	ALM 31	0.055	0.050	0.030
A	AQL	Cobalt (Co)	mg/kg	ALM 31	0.105	0.125	0.085
A	AQL	Chromium (Cr)	mg/kg	ALM 31	0.335	0.255	0.245
A	AQL	Copper (Cu)	mg/kg	ALM 31	2.43	3.50	2.63
A	AQL	Nickel (Ni)	mg/kg	ALM 31	0.045	0.115	0.115
A	AQL	Lead (Pb)	mg/kg	ALM 31	0.190	0.170	<0.020
A	AQL	Zinc (Zn)	mg/kg	ALM 31	0.075	0.085	0.110
A	AQL	Boron (B)	mg/kg	ALM 33	<0.065	<0.065	<0.065
A	AQL	Vanadium (V)	mg/kg	ALM 33	0.195	0.195	0.195
A	AQL	Molybdenum (Mo)	mg/kg	ALM 33	0.705	0.705	0.790
A	AQL	Arsenic (As)	mg/kg	ALM 34	<0.030	<0.030	<0.030

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Client: Environmental Compliance Consultancy (ECC)
Address: 1 Jan Jonker Avenue, Klein Windhoek, Windhoek,Namibia, 9000
Report no: 146739
Project: 134-439

Date of report: 13 March 2023
Date accepted: 23 February 2023
Date completed: 06 March 2023
Date received: 23 February 2023

Lab no:					238028	238029	238030
Date sampled:					23-Feb-23	23-Feb-23	23-Feb-23
Aquatico sampled:					No	No	No
Sample type:					Geochem	Geochem	Geochem
Locality description:					Comp 11	Comp 12	Comp 13
		Analyses	**Unit**	**Method**			
A	AQL	Antimony (Sb)	mg/kg	ALM 36	<0.005	<0.005	<0.005
A	AQL	Selenium (Se)	mg/kg	ALM 34	<0.010	<0.010	<0.010
A	AQL	Mercury (Hg)	mg/kg	ALM 35	<0.020	<0.020	<0.020
N	AQL	Acidity pH 8.3	mg $CaCO_3$/l	ALM 60	<0.001	34.0	35.0
A	AQL	Thorium (Th)	mg/kg	ALM 92	0.010	<0.000	0.000
A	AQL	Uranium (U)	mg/kg	ALM 37	<0.075	<0.075	<0.075
N	AQL	Total phosphorus	mg/kg	ALM 12	2.50	4.65	4.90
A	AQL	TP-Microwave digestion	mg/kg	ALM 90	Yes	Yes	Yes

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MINE WASTE AND
WATER MANAGEMENT