

# Factual Report: Column Leach Test

## *Bendigo-Ophir Gold Project*

*11 September 2025*

*J-NZ0233-015-R-Rev3*



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### *Bendigo-Ophir Gold Project*

Document Number: J-NZ0233-015-R-Rev3

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Prepared for:

### *Matakanui Gold Limited*

15a Chardonnay Street, Cromwell, 9310

Prepared by:

### *Mine Waste Management Limited*

5 Sir William Pickering Drive, Burnside, Christchurch 8053, New Zealand

+64 3 242 0221

[www.minewaste.com.au](http://www.minewaste.com.au)

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## EXECUTIVE SUMMARY

Mine Waste Management Limited (MWM) has developed this factual report on column leach test results for the Bendigo-Ophir Gold Project (BOGP) for Matakanui Gold Limited (MGL) to support a comprehensive geochemical assessment and characterisation of materials associated with the BOGP.

### Objectives of this Study

The objectives of this report are to:

- Assess the leachate characteristics for the materials including potential constituents of concern (PCOC) for the BOGP by the column leach test (CLT).
- Provide recommendations on what PCOC monitoring should be undertaken.

### Findings

CLTs are used to compliment other environmental geochemistry investigations for the BOGP to understand potential geoenvironmental hazards. Testing has been completed for 7 of the 10 columns after 12 to 13 months. Testing of the remaining three columns will continue until a minimum of 12 months of data are available to confirm observed geochemical trends. No significant geochemical changes are expected for these three columns in the remaining timeframe, and the columns will be run for 12 months for completeness.

Representative BOGP materials were selected from TZ3, TZ4/RSSZ, legacy historic mining and TZ4 surface materials, and tailings:

- TZ3 – 3 drill core samples: Data available for between 12 to 13 months of testing.
- TZ4/RSSZ – 3 drill core samples: Data available for 13 months.
- Weathered grab samples from a road cutting at CIT (1 sample – TZ4) and historic mullock piles at RAS and RSSZ (2 samples) with 11 months of available data.
- A composite metallurgical tailings sample with 13 months of available data.

All samples are classified as non-acid forming and acid rock drainage is not expected, which is demonstrated by the CLT results.

### Management

Based on the results of this report, the following PCOC are elevated in the CLT. It is recommended that compliance monitoring should be undertaken for:

- Al, As, Co, Cu, Fe, Sb, Zn.

Performance monitoring of seepage from the ELF, TSF, and the underground should be undertaken as these PCOC could become concentrated when there is a large volume rock interacting with seepage waters:

- B, Cr, Mo, Se, V.

## General Background

MGL is proposing to establish the BOGP, which comprises gold mining operations, processing operations, ancillary facilities and environmental mitigation measures on Bendigo and Ardgour Stations in the Dunstan Mountains of Central Otago. The project site is located approximately 20 km north of Cromwell and will have a maximum disturbance footprint of 550 hectares.

The total Mineral Resource Estimate for the BOGP using a 0.5 g/t cut-off for open pit and 1.5 g/t for underground is 34.3 Mt at 2.1 g/t for 2.34 M oz (MGL, 2025). The Bendigo-Ophir resources occur in four deposits: Come in Time (CIT), Rise and Shine (RAS), Srex (SRX), Srex East (SRE). The majority of identified mineral resources are located within the RAS deposit. Three primary geological units are recognised at site:

- RSSZ – Rise and Shine Shear Zone
- TZ3 – Lower Greenschist facies Textural Zone 3 rocks of the Otago Schist
- TZ4 – Upper Greenschist facies Textural Zone 4 rocks of the Otago Schist

The resources will be mined by open pit methods at each deposit within the project site, with underground mining methods also proposed to be utilised at RAS to access the deeper gold deposits. The majority of the mining activities, ancillary facilities and associated infrastructure will be located in the Shepherds Valley – which includes a conventional carbon-in-leach (CIL) gold processing plant and water treatment plant, a tailing storage facility, three engineered landforms, internal haul roads, topsoil stockpiles, water pipelines, underground utilities and electrical supply - with non-operational infrastructure located on the adjoining Ardgour Terrace. The BOGP also involves the taking of groundwater from the Bendigo Aquifer for use in mining-related activities and the realignment of Thomson Gorge Road via Ardgour Station.

The following mine facilities are proposed:

- Open pits targeting the RAS, SRX, SRE, and CIT deposits.
- An underground mine targeting the RAS deposit.
- Three ex-pit engineered landforms (ELFs) – Shepherds ELF, SRX ELF, and West ELF (WELF).
- Two in-pit landforms (backfill) – CIT and SRE<sup>1</sup>.
- Plant and processing area, where CIL extraction technologies will be used as part of the ore recovery process.
- A tailings storage facility (TSF) and TSF Embankment.
- Other ancillary support services / structures (e.g., roads, water management infrastructure, water treatment plants, etc).

## Geochemical Investigation

Selected samples were analysed for a typical ABA static testing suite. General findings are:

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<sup>1</sup> Note: SRE Pit is backfilled by the SRX ELF.

- Total sulfur content ranges from 0.006 wt% to 0.488 wt%.
- Paste pH ranges from 7.6 to 9.5.
- NAG pH ranges from 6 to 9.7.
- NAG acidity (to pH 7.0) is 0 kg H<sub>2</sub>SO<sub>4</sub>/t for all samples with the exception of the weathered CIT road cutting sample that has a NAG acidity of 11 kg H<sub>2</sub>SO<sub>4</sub>/t.
- Maximum Potential Acidity (MPA) ranges from 0.18 to 14.9 kg H<sub>2</sub>SO<sub>4</sub>/t.
- Acid neutralisation capacity (ANC) ranges from 6 to 67 kg H<sub>2</sub>SO<sub>4</sub>/t
- NAPP<sup>2</sup> ranges from -60.08 kg H<sub>2</sub>SO<sub>4</sub>/t to -5.92 kg H<sub>2</sub>SO<sub>4</sub>/t.

All samples are classified as NAF using AMIRA (2002) and Price (2009) classification systems as per previous ABA analysis on BOGP material (MWM, 2025a).

### Column Leach Testing

CLT were run for between 11 to 13 months at the time of compilation of this report from representative material from the BOGP. The following are general observations from the column leach testing program:

- pH ranges from 6.7 to 10.1 and indicates that acid rock drainage is not expected from the materials.
- Sulfate decreases over time in TZ3 material and grab sample columns CIT24 and CIT RSSZ. Sulfate increase in TZ4 materials and then stabilises.
- Arsenic is the only analyte consistently increasing in the TZ4 materials over time with data stabilising for the last 3 to 4 months of testing.

### PCOC

Column leach testing data was compared to proposed surface water quality guidelines (Ryder, 2025) for the BOGP. Where no limit was provided by Ryder (2025), other guideline values, together with Ryder (2025), were applied to have a water quality limit (WQ Limit) for assessment purposes.

Time series plots indicate the following PCOC are elevated (where 2 or more months of data exceed the WQ Limit):

- TZ3: Al, As, Cu, Sb, V.
- TZ4: Al, As, Co, Mo.
- Historic material: Al, As, Co, Cu, Fe, NH<sub>3</sub>-N, NO<sub>3</sub>-N.
- Tailings: As, B, Co, Cu, Zn.

Results indicate the following PCOC are elevated (where 1 month of data exceed the WQ Limit):

- TZ3: Fe, Mo, Se.

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<sup>2</sup> Net acid producing potential where  $NAPP = MPA - ANC$

- TZ4: Cu.
- Historic material: Cr, Mn, Pb.
- Tailings: NH<sub>3</sub>-N.

### **Recommended Water Quality Monitoring**

Based on the results of this report, the following PCOC are elevated in the CLT. It is recommended that compliance monitoring should be undertaken for:

- Al, As, Co, Cu, Fe, Sb, Zn.

Performance monitoring of seepage from the ELF, TSF, and the underground should be undertaken as these PCOC could become concentrated when there is a large volume rock interacting with seepage waters:

- B, Cr, Mo, Se, V.

Data for NH<sub>3</sub>-N and NO<sub>3</sub>-N, when elevated, is related to surface samples and are not considered applicable to unweathered waste rock. Data for Pb indicted concentrations were low and Pb is not considered problematic (as supported by shake flask testing (MWM, 2025a) and SPLP testing (MWM, 2025b)).

## TABLE OF CONTENTS

1	Introduction .....	1
1.1	Project Description.....	1
1.2	Report Objectives .....	2
2	Background.....	3
2.1	Introduction .....	3
2.2	Geology .....	4
2.2.1	Regional Geology.....	4
2.2.2	Project Geology.....	4
2.3	Geoenvironmental Hazards.....	5
2.3.1	Potential Constituents of Concern (PCOC).....	5
2.3.2	Water Quality Assessment .....	6
3	Sampling and Analysis Plan .....	8
3.1	Sample Selection.....	8
3.2	ABA Data Review .....	10
3.3	Quality Assurance / Quality Control.....	11
4	CLT Methodology.....	12
4.1	Method Summary .....	12
5	CLT Results .....	14
5.1.1	pH and EC .....	14
5.1.2	Acidity .....	15
5.1.3	Sulfate .....	15
5.1.4	PCOC .....	16
5.1.5	PCOC Load .....	21
6	CLT Analysis.....	24
6.1.1	EC and Sulfate Data.....	24
6.1.2	Shake Flask Data and Column Leach Test Data Analysis .....	24
6.1.3	Intrinsic Oxidation Rate .....	25
6.2	Sulfate Data .....	26
7	Summary.....	27
7.1	Introduction .....	27
7.2	Column Leach Test Data .....	27
7.3	PCOC .....	27
7.4	Recommended Water Quality Monitoring .....	28
8	References.....	29
9	Limitations.....	31
Appendix A	Abbreviations .....	32
Appendix B	Tabulated Laboratory Data.....	34
Appendix C	Laboratory Certificates of Analysis .....	35
Appendix D	Sulfate Relationship Analysis .....	36

Appendix E	Limitations.....	37
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## LIST OF TABLES

Table 1. PCOC and proposed WQ Limits modified for screening purposes. ....	6
Table 2: Column leach test samples. ....	8
Table 3. ABA data for Column Leach Test Samples .....	10
Table 4. Sample weights and CLT leachate volumes .....	13
Table 5: PCOC identified in the CLT data.....	21
Table 6: Average mg/kg/month of column leach test data.....	22
Table 7. IOR for column leach test materials.....	26

## LIST OF FIGURES

Figure 1. Bendigo-Ophir Gold Project mineral permit boundaries: MEP60311 and PEP60882.....	3
Figure 2. Location of drillhole collars for each column leach test. ....	9
Figure 3. Cross-section of drill core sample locations – RAS Deposit. ....	9
Figure 4. Grab sample locations. ....	10
Figure 5. CLT results for pH.....	14
Figure 6. CLT results for conductivity (EC). ....	15
Figure 7. Column leach results for sulfate. ....	16
Figure 8. Column leach test results for PCOC.....	18
Figure 9. Column leach test results for water quality monitoring and additional metals.....	19
Figure 10. Column leach test data for EC and sulfate. ....	24
Figure 11. Sulfur content (wt%) versus IOR for average CLT data. ....	26

## 1 INTRODUCTION

Mine Waste Management Limited (MWM) has developed this factual report on column leach test results for the Bendigo-Ophir Gold Project (BOGP) for Matakanui Gold Limited (MGL) to support a comprehensive geochemical assessment and characterisation of materials associated with the BOGP. Such data are used to understand geoenvironmental hazards for the project.

### 1.1 Project Description

MGL is proposing to establish the BOGP, which comprises gold mining operations, processing operations, ancillary facilities and environmental mitigation measures on Bendigo and Ardgour Stations in the Dunstan Mountains of Central Otago. The project site is located approximately 20 km north of Cromwell and will have a maximum disturbance footprint of 550 hectares.

The total Mineral Resource Estimate for the BOGP using a 0.5 g/t cut-off for open pit and 1.5 g/t for underground is 34.3 Mt at 2.1 g/t for 2.34 M oz (MGL, 2025). The Bendigo-Ophir resources occur in four deposits: Come in Time (CIT), Rise and Shine (RAS), Srex (SRX), Srex East (SRE). The majority of identified mineral resources are located within the RAS deposit. Three primary geological units are recognised at site:

- RSSZ – Rise and Shine Shear Zone
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The resources will be mined by open pit methods at each deposit within the project site, with underground mining methods also proposed to be utilised at RAS to access the deeper gold deposits. The majority of the mining activities, ancillary facilities and associated infrastructure will be located in the Shepherds Valley – which includes a conventional carbon-in-leach (CIL) gold processing plant and water treatment plant, a tailing storage facility, three engineered landforms, internal haul roads, topsoil stockpiles, water pipelines, underground utilities and electrical supply - with non-operational infrastructure located on the adjoining Ardgour Terrace. The BOGP also involves the taking of groundwater from the Bendigo Aquifer for use in mining-related activities and the realignment of Thomson Gorge Road via Ardgour Station.

The following mine facilities are proposed:

- Open pits targeting the RAS, SRX, SRE, and CIT deposits.
- An underground mine targeting the RAS deposit.
- Three ex-pit engineered landforms (ELFs) – Shepherds ELF, SRX ELF, and West ELF (WELF).
- Two in-pit landforms (backfill) – CIT and SRE<sup>3</sup>.
- Plant and processing area, where CIL extraction technologies will be used as part of the ore recovery process.
- A tailings storage facility (TSF) and TSF Embankment.

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<sup>3</sup> Note: SRE Pit is backfilled by the SRX ELF.

- Other ancillary support services / structures (e.g., roads, water management infrastructure, water treatment plants, etc).

## 1.2 Report Objectives

Materials that will be generated by the project (e.g., waste rock, ore, low grade ore, tailings, and legacy materials) need to be assessed by laboratory testing to understand their potential environmental geochemistry risks and develop source terms to be included in the water and load balance model for the project.

The objectives of this report are to:

- Assess the leachate characteristics for the materials including potential constituents of concern (PCOC) for the BOGP by the column leach test (CLT).
- Provide recommendations on what PCOC monitoring should be undertaken.

To following tasks were undertaken to achieve the objectives:

- Summarise the rationale for sample selection.
- Tabulate CLT data and undertake QA/QC<sup>4</sup> of these data to ensure they are suitable for subsequent analysis and interpretation.
- Present time series plots for the columns.
- Compare results to the additional static testing data for BOGP material.

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<sup>4</sup> *Quality assurance / Quality control*

## 2 BACKGROUND

The following section summarises the relevant background information for the BOGP.

### 2.1 Introduction

The BOGP sits within MEP 60311 as shown in Figure 1. MEP60311 is owned by Matakanui Gold Ltd (MGL) (NZBN 9429041420614), which is a NZ-registered company and is a fully owned subsidiary of Santana Minerals Limited (ACN 161 946 989) an Australian-registered company and is dual listed on the Australian (ASX:SML) and New Zealand (NZX:SML) Stock Exchanges .

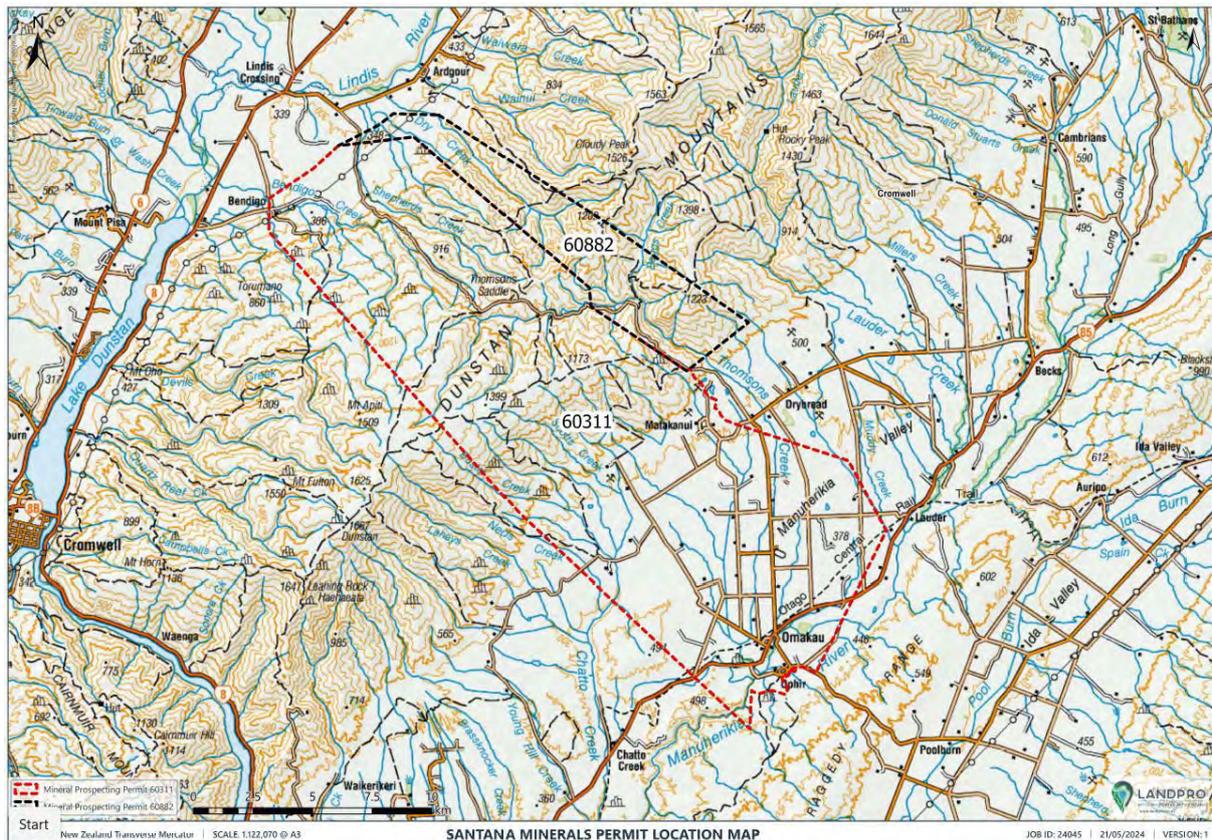


Figure 1. Bendigo-Ophir Gold Project mineral permit boundaries: MEP60311 and PEP60882.

The area has a rich gold endowment with approximately 300,000 ounces of gold produced up to the 1940's from the rich Bendigo lodes of the Bendigo goldfield (grades reported of 1-6 oz/t [30-180 g/t Au]) and from numerous smaller alluvial / workings along the Rise and Shine Creek valley and the Manuherikia Basin at Tinkers / Matakanui and Devonshire goldfields.

The local area is known as Bendigo. The name Bendigo was given to the area in the 1860s by miners coming from the Australian (Bendigo, Victoria) goldfields. The area is most well-known today for the number of recently planted vineyards at the boundary between the base of the Dunstan Mountains and the outwash gravels of the terraces.

At a local scale, the proposed mine sits between two incised valleys. The Rise and Shine Creek valley to the south follows the contact between the unconforming and overlying schist rocks (TZ3 schist) and the underlying TZ4 schist, which is the host to mineralisation. To the northeast the deposit is bisected by the Shepherds Creek valley.

## 2.2 Geology

### 2.2.1 Regional Geology

The Dunstan Mountains is an uplifted block of the Otago Schists tilted to the northwest with remnants of a Cretaceous peneplain well preserved on its northern slopes. The Otago Schist is formed from sedimentary and minor intermediate volcanics and volcanoclastics of the Caples and Torlesse tectono-stratigraphic terranes. The Otago schist is sub-divided into four textural zones (TZ1 to TZ4) based on mineralogy and mineral textures. Peak metamorphic grades in the Otago Schist occurred during the Jurassic when the Zealandia micro continent formed the outboard subduction complex of the Gondwana continental margin.

The basement rocks of the Otago region surrounding the Project consists of chlorite and biotite schists. The Rise & Shine Shear Zone (RSSZ), a late metamorphic deformation zone (Cox et al., 2006) hosting gold mineralisation, runs through the project area dipping at 20-30 degrees northeast. The RSSZ occurs only in the footwall Textural Zone 4 (TZ4) schist in close association with the Thomsons Gorge Fault (TGF), which cuts and truncates the RSSZ against unmineralised TZ3 schist (Cox et al., 2006). There is no mineralisation associated with the TGF itself, and Au mineralisation had ceased by the time of formation of the TGF (c. 100 Ma) (Cox et al., 2006).

### 2.2.2 Project Geology

The project area contains four discrete mineral occurrences:

- RAS deposit
- CIT deposit
- SRX deposit
- SRE deposit

The Rise and Shine Shear Zone (RSSZ) has been traced for 1.7km north-northeast beneath the unconforming TZ3 cover rocks with the bulk of the mineralisation sitting beneath 150-300 m of the cover rock (TZ3). The gently north – northeast plunging deposit sits within a zone up to 400 m wide and can be up to 90 m in thickness (typically 30 – 40 m).

The TGF is a post metamorphic, post mineralisation cataclastic fault zone developed more or less along the hanging wall of the RSSZ. It separates chlorite rich, TZ3 schists in the hanging wall from biotite rich TZ4 schists in the shear zone and foot wall.

Gold mineralisation at RAS is associated with silica-siderite/ankerite alteration with minor arsenopyrite sulfides associated with the gold. In some areas a cataclastite (brecciated) network of anastomosing, post-metamorphic quartz, occur with minor sulfide veins in a halo of the core mineralisation. Allibone (2023) identified trace amounts of sphalerite ((Zn,Fe)S) and galena (PbS) at the BOGP.

Gold occurs as free gold particles, typically up to 400 µm but with some coarser visible gold. A minor gold component occurs associated with the arsenopyrite grains, but typically not in solid solution, giving rise to the free milling and highly gravity recoverable components expressed by metallurgical testing.

## 2.3 Geoenvironmental Hazards

Over 1,600 samples were analysed as part of the geoenvironmental hazard assessment for the BOGP, including acid-base accounting (ABA), compositional and mineralogical studies, and leachate testing (MWM, 2025a). Key findings of these studies, relevant to this report are:

- All materials, including ore and waste rock, and the three geological units, are classified as NAF (within the exception of one ore sample that was classified as Uncertain by the Price (2009) Classification). Acid rock drainage is not expected from these materials.
- Mineralogical analysis (XRD<sup>5</sup>) identified arsenopyrite as the main sulfide mineral and dolomite as the main carbonate mineral, although siderite was also identified in some samples. The oxidation and dissolution of arsenopyrite can release arsenic, sulfate, and iron to solution. The dissolution of dolomite can release calcium, magnesium, and alkalinity, that will neutralise any acidity generation by sulfide mineral oxidation.
- SEM-EDS<sup>6</sup> studies (MWM, 2025b) identified anglesite, arsenopyrite, chalcopyrite, chalcocite, cobaltite, galena, pyrite and sphalerite.

### 2.3.1 Potential Constituents of Concern (PCOC)

The identification of PCOC was conducted by assessment of elemental enrichment of different materials and by the assessment of laboratory leachate tests (MWM, 2025a). Arsenic (As) was identified as the main PCOC, with elevated concentrations across all geological units. The following potential constituents of concern (PCOC) are identified in this report:

Based on geochemical composition (and supporting data):

- TZ3 materials are enriched in As and cobalt (Co). Antimony (Sb) is possibly elevated.
- RZ4 and RSSZ materials are enriched in As, sulfur (S). Sb is possibly elevated.

Based on static leach testing:

- TZ3 materials were not assessed in this report (see MWM 2025c) for further details.
- TZ4 & RSSZ materials: aluminium (Al), As, chromium (Cr), and zinc (Zn)
- Soils: Al, As, iron (Fe), Co, copper (Cu), and Zn.

Based on analogue data and general geoenvironmental hazards:

- Nitrogenous compounds (nitrate, nitrite, and ammoniacal nitrogen) are expected due to the use on ammonium-nitrate based explosives and cyanide.
- Sulfate is considered a PCOC based on sulfate being elevated at the Macraes Gold Mine, which has a similar sulfur content.

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<sup>5</sup> X-ray Diffraction

<sup>6</sup> Scanning electron microscopy with Energy Dispersive X-ray Spectroscopy.

### 2.3.2 Water Quality Assessment

Water quality limits (WQ Limit) are used in this report to identify potential constituents of concern (PCOC) that may be elevated in the CLT with respect to water quality guidelines, compliance limits, or trigger values that manage ecotoxicity risks (Weber and Olds, 2016). For this report, the proposed BOGP water quality compliance limits (Ryder, 2025) are used as a screening tool to determine whether baseline water quality data were elevated. The approach does not use toxicity modification factors and uses conservative data when available (e.g., chronic limits rather than acute limits).

Where no limit was provided by Ryder (2025), other guideline values, together with Ryder (2025), were applied to have a WQ Limit for assessment purposes:

- The 95% ANZG (2018) DGVs.
- The 90% ANZG (2018) DGVs for Al, Cu, and Zn.
- Guidelines from the NPS<sup>7</sup> for Freshwater Management (MfE, 2020) for ammoniacal-N in groundwater: 0.24 mg/L.
- A limit of 2.5 mg/L was applied to Sr in surface and groundwater. This guideline is based on the Canadian Federal Environmental Quality Guidelines (2020), but its noted Ryder (2025) recommends 4 mg/L for groundwater.

The WQ Limits serve as a screening tool to identify PCOC for the BOGP. For this report surface water quality limits were used, with the exception of Fe and U where groundwater quality limits are applied.

Table 1. PCOC and proposed WQ Limits modified for screening purposes.

PARAMETER	SURFACE WATER*	GROUND WATER
<i>Units are mg/L unless stated otherwise</i>	<i>Recommended compliance limit(s)</i>	<i>Recommended compliance limit(s)</i>
pH (unitless)	6.5 - 9.0	–
NH <sub>3</sub> -N (Annual 95 <sup>th</sup> oile)	<0.4	0.24 <sup>1</sup>
NO <sub>3</sub> -N (Annual 95 <sup>th</sup> oile)	<3.5	11.3 (MAV)
BOD <sub>5</sub>	≤2	–
Cyanide (CN <sup>-</sup> )	0.011 <sup>2</sup>	0.6 (MAV)
Sulfate	500 <sup>3</sup>	≤250
Sulfide	≤0.0015	–
Ag (diss)	0.00005 <sup>4</sup>	0.00005 <sup>4</sup>
Al (diss)	0.08 <sup>5</sup>	1 (MAV)
As(V) (diss)	≤0.042	0.01 (MAV)
B (diss)	0.94 <sup>4</sup>	0.94 <sup>4</sup>
Cd (diss)	≤0.0004 <sup>6</sup>	0.004 (MAV)
Co (diss)	0.001 (chronic)	<1 (LDW)
Cr (diss)	≤0.0033 (Cr(III)) <sup>6</sup>	≤0.05 (MAV, Total)
Cu (diss)	0.0018 <sup>7</sup>	≤0.5
Fe (total)	–	≤0.3*
Pb (diss)	0.0034 <sup>4</sup>	0.01 (MAV)
Mn (diss)	-	0.4 (MAV)

NPS = National Policy Statement

PARAMETER	SURFACE WATER*	GROUND WATER
Mo (diss)	0.034	<0.01 (LDW)
Ni (diss)	0.011 <sup>4</sup>	0.011 <sup>4</sup>
Sb (total)	0.074 (chronic)	0.02 (MAV)
Se (diss)	0.011 <sup>4</sup>	<0.02 (LDW)
Sr (diss)	2.5 <sup>8</sup>	4
U (diss)	–	0.03 (MAV)*
V (diss)	0.006 <sup>4</sup>	≤0.1 (LDW)
Zn (diss)	0.015 <sup>9</sup>	≤1.5

Source: Ryder (2025) and other guidelines as shown in blue.

\* Surface water quality limits applied with the exception of Fe and U where groundwater limits are applied.

1. – NPS for Freshwater Management (MfE, 2020)

2. – ANZG (2018) guidelines – modification for pH and temperature

3. – Modification for hardness and chloride concentrations

4. – ANZG (2018) guidelines for 95% protection of freshwater species.

5. – ANZG (2018) guidelines for 90% protection of freshwater species. This was done to simplify calculations

6. – Modification for hardness

7. – ANZG (2018) guidelines for 90% protection of freshwater species. Modification for dissolved organic carbon (DOC)

8. – Canadian Federal Environmental Quality Guidelines (2020)

9. – ANZG (2018) guidelines for 90% protection of freshwater species. Modification for hardness.

MAV = Maximum Acceptable Value

LDW = Livestock drinking water (ANZG, 2023)

### 3 SAMPLING AND ANALYSIS PLAN

#### 3.1 Sample Selection

The objective of the sample selection process was to provide representative samples from the project for geochemical testing to understand the geoenvironmental hazards. The sampling program considered the following:

- Spatial distribution (areal and by depth).
- Geological units.
- Arsenic and sulfur distribution.

Drill core and grab samples from TZ3 and TZ4/RSSZ and a composite metallurgical sample of tailings were selected for column leach testing, details are provided in Table 2 with locations provided in Figure 2 to Figure 4.

Table 2: Column leach test samples.

COLUMN ID	SAMPLE TYPE	HOLE ID	FROM m	TO m	LOCATION	ZONE/TYPE
MG19838	Drill core	MDD187R	55	60	RAS	TZ3
MG19875/ MG19876*	Drill core	MDD206	135	145	RAS	TZ3
MG43524/ MG43525 <sup>#</sup>	Drill core	MDD207	115	125	RAS	TZ3
MG37922 (MG55796)	Drill core	MDD210	173	174	RAS	TZ4/RSSZ
MG40061 (MG55795)	Drill core	MDD236	252.1	253	RAS	TZ4/RSSZ
MG46045 (MG55790)	Drill core	MDD206	301	302	RAS	TZ4/RSSZ
CIT T24	Grab Sample	Weathered road cutting			CIT	TZ4 legacy material
RAS Mullock	Grab Sample	Historic mullock pile			RAS	RAS legacy material
CIT RSSZ	Grab Sample	Historic mullock pile			CIT	RSSZ legacy material
Tailings <sup>1</sup>	Composite Metallurgical Sample <sup>1</sup>					

\* Two samples combined MG19875 and MG19876

<sup>#</sup> Two samples combined MG43524 and MG43525

<sup>1</sup> Sample details provided in Mintrex (2024).

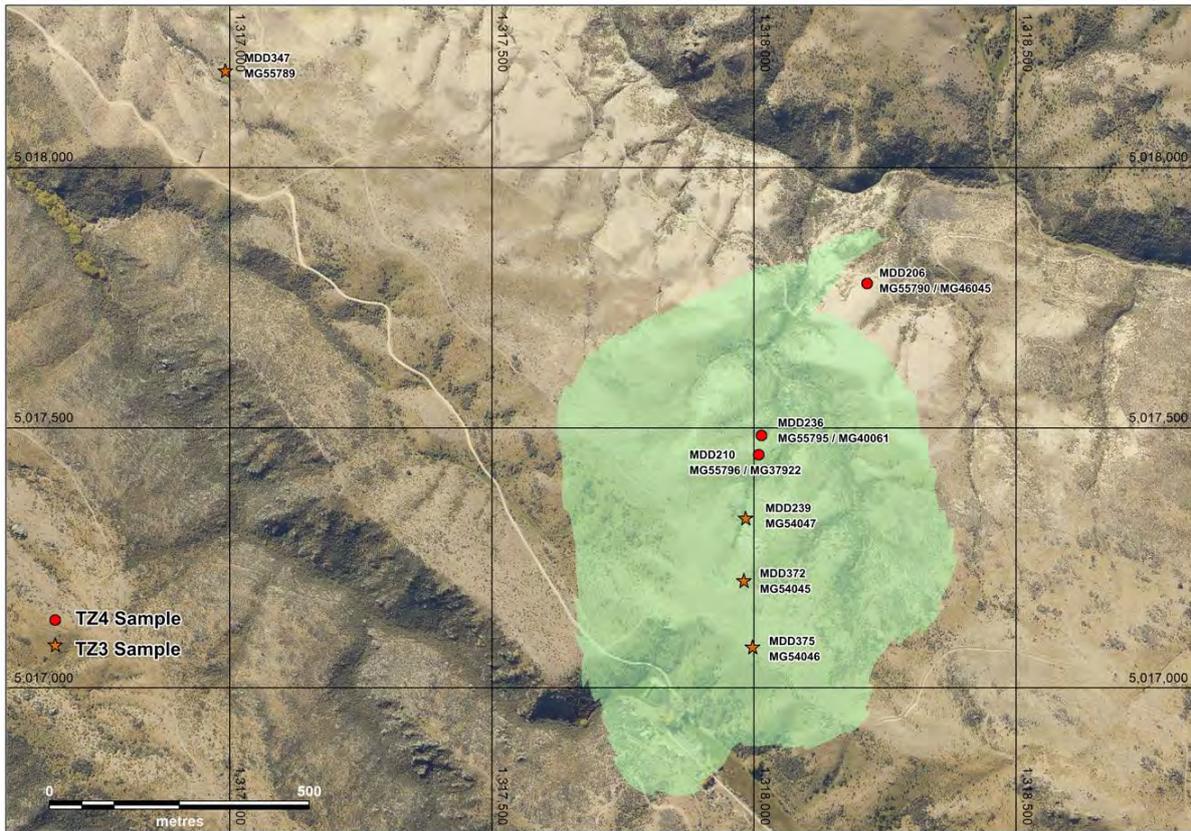


Figure 2. Location of drillhole collars for each column leach test.

*Rise and Shine deposit proposed pit outline in green.*

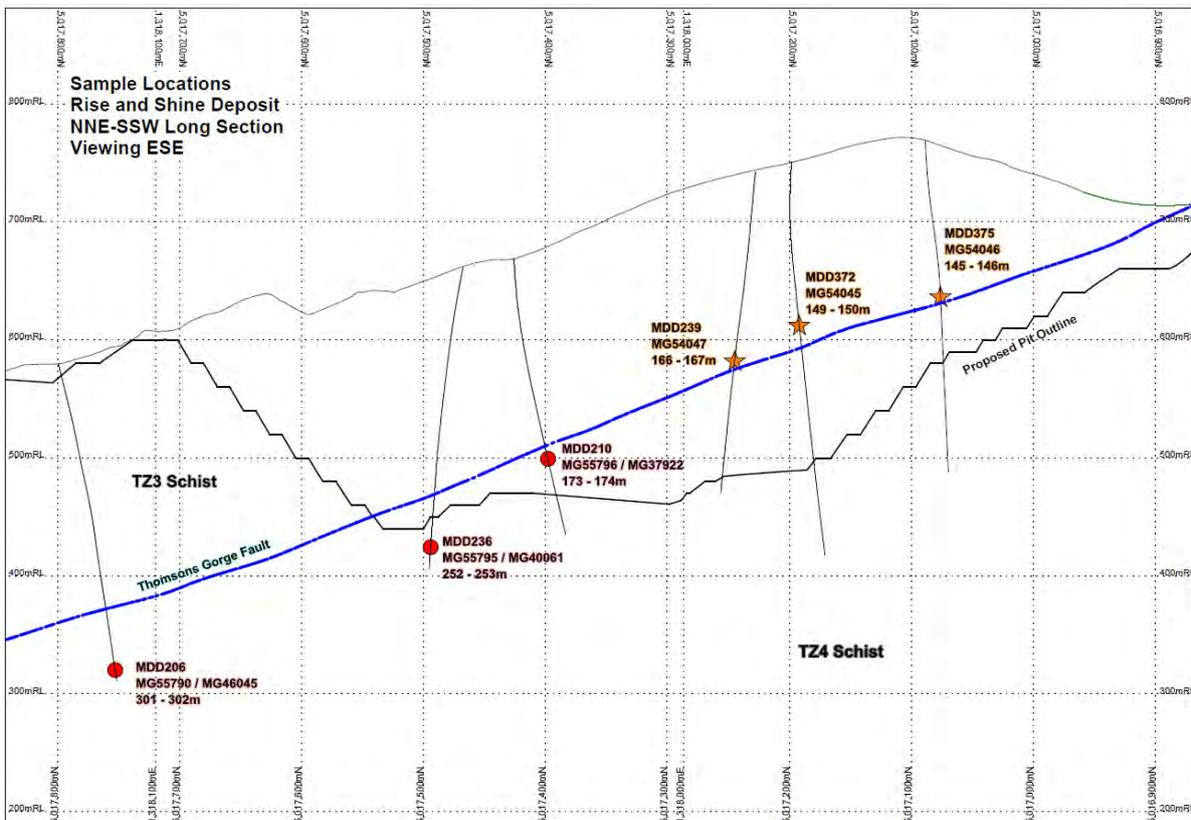


Figure 3. Cross-section of drill core sample locations – RAS Deposit.

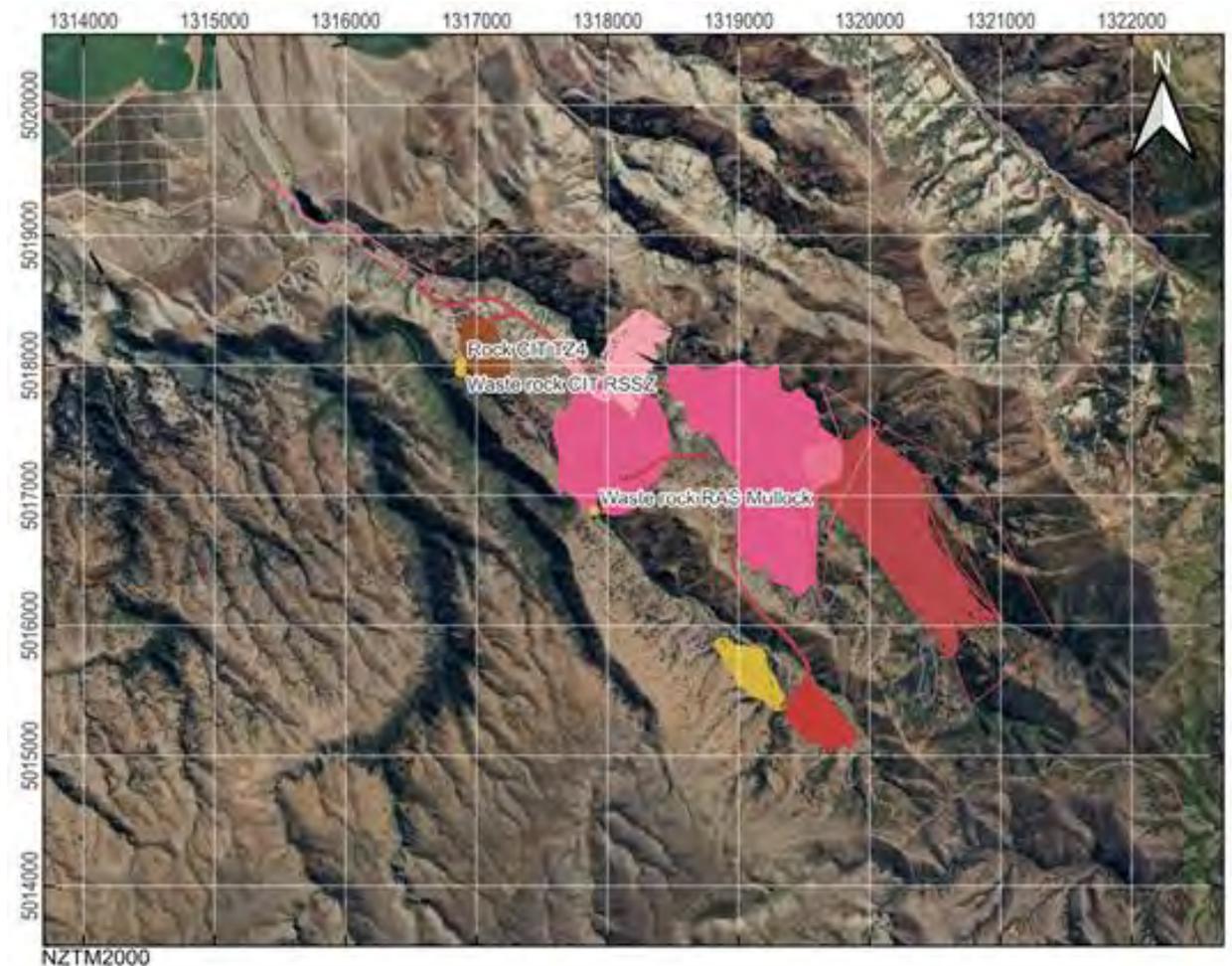


Figure 4. Grab sample locations.

### 3.2 ABA Data Review

ABA testing was undertaken on CLT samples to provide supporting data (Table 3). All column samples are classified as NAF using the AMIRA (2002) and Price (2009) classification systems. Circum-neutral pH drainage is expected from the materials based on the ABA data. Although, neutral drainage is likely to occur, MWM (2025a) identified the potential for elevated levels of As, SO<sub>4</sub>, and other trace metals, hence there is a risk for neutral metalliferous drainage (NMD).

Table 3. ABA data for Column Leach Test Samples

COLUMN	ZONE	PASTE pH	S (wt%)	MPA (kg/H <sub>2</sub> SO <sub>4</sub> /t)	ANC (kg/H <sub>2</sub> SO <sub>4</sub> /t)	NAPP (kg/H <sub>2</sub> SO <sub>4</sub> /t)	NAG pH
MG19838	TZ3	9.3	0.113	3.46	37	-33.54	7.5
MG19875/ MG19876*	TZ3	9.35	0.103	3.14	51	-47.86	7.6
MG43524/ MG43525#	TZ3	9.35	0.089	2.71	39.5	-36.79	7.8
MG37922	TZ4/ RSSZ	-	0.226	6.92	67	-60.08	7.8
MG40061	TZ4/ RSSZ	-	0.267	8.17	59	-50.83	8.1

COLUMN	ZONE	PASTE pH	S (wt%)	MPA (kg/H <sub>2</sub> SO <sub>4</sub> /t)	ANC (kg/H <sub>2</sub> SO <sub>4</sub> /t)	NAPP (kg/H <sub>2</sub> SO <sub>4</sub> /t)	NAG pH
MG46045	TZ4/ RSSZ	-	0.488	14.93	64	-49.07	7.4
CIT T24	CIT TZ4	7.6	0.0025	0.08	6	-5.92	6
RAS Mullock	RAS	9.5	0.093	2.85	52	-49.15	7.1
CIT RSSZ	CIT RSSZ	8.9	0.006	0.18	36	-35.82	7.2
Tailings	Composite Met sample	8.6	0.31	9.49	65.2	-55.71	9.7

\*ABA data is an average of sample MG19875 and MG19876

#ABA data is an average of sample MG43524 and MG43525

Hyphen "-" indicates no data

### 3.3 Quality Assurance / Quality Control

AMIRA (2002) column leach testing was undertaken by SGS Laboratory in Westport for the majority of column samples. Testing of the composite metallurgical sample (Tailings column) was undertaken by ALS Laboratory in Brisbane. ABA and shake-flask testing was undertaken on samples selected for column leach testing to provide additional supporting information. Results of shake flask testing are provided in MWM (2025b).

To ensure data reliability, a brief Quality assurance/Quality control (QA/QC) program was undertaken on the data to ensure its reliability. This included:

- Checking for data that are elevated or significantly less than other column data recorded for the same sample analyte.
- Unusual trends identified in the time-series plots.

## 4 CLT METHODOLOGY

CLT (AMIRA, 2002) are used to compliment environmental geochemical investigations on mine rock and waste materials. The CLT provide information on sulfide oxidation rates, neutralisation rates, metal solubility, and the leaching behaviour of the test materials. The CLT period varies depending on material characteristics and the investigation requirements.

### 4.1 Method Summary

Free draining CLT are used to provide information on material reactivity and the leaching behaviour of materials under optimum oxidising conditions. This process is achieved by applying a weekly rinse cycle and a monthly flush cycle, which is analysed for PCOC. Heat lamps were used to ensure drying of the sample between wetting cycles.

Typically, 2.0 to 2.5 kg of crushed rock, tailings or sediment is required for the test (AMIRA, 2002). At the time of finalising this report, CLT had concluded for 7 columns after 12 to 13 months. The grab sample columns (CIT 24, CIT RSSZ and RAS Mullock) had been in operation for 11 months. These columns will continue for a minimum of 12 months to confirm PCOC and the geochemical signature of water from the project materials. No significant geochemical changes are expected for these three columns in the remaining timeframe, and the columns will be run for 12 months for completeness.

Testing was undertaken by SGS Laboratory from January 2024 (for all samples excluding the tailings column) and is ongoing for 3 columns for the following:

- Volume of leachate, pH, EC, acidity, alkalinity, and DO.
- Dissolved metals / metalloids: Al, Ag, As, B, Ba, Cd, Cr, Co, Cu, Fe, Hg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, U, V, and Zn.
- Major anions / cations: Ammonia-N, Cl, F, SO<sub>4</sub>, Ca, K, Mg, Na, NO<sub>2</sub>, NO<sub>3</sub>, P, and Si.

Testing at ALS Brisbane for the tailings column commenced in July 2024 for the following:

- Volume of leachate, pH, EC, acidity, and alkalinity.
- Dissolved metals / metalloids: Al, Ag, As, B, Ba, Cd, Cr, Co, Cu, Fe, Hg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, U, V, and Zn.
- Major anions / cations: Ammonia-N, Cl, F, SO<sub>4</sub>, Ca, K, Mg, Na, NO<sub>2</sub>, NO<sub>3</sub>, and P.

Material weights and leachate volumes are presented in Table 4. Results indicate a solid:liquid ratio of 0.20 – 0.54 (average of 0.25), which is lower than the SPLP test of 1:20 or the shake flask test of 1:10.

Table 4. Sample weights and CLT leachate volumes.

COLUMN ID	SAMPLE WEIGHT (g)	LEACHATE VOLUME PER MONTHLY FLUSH CYCLE (mL)													SOLID: LIQUID RATIO	
		1	2	3	4	5	6	7	8	9	10	11	12	13	MEAN	MEAN
MG19838	877.2	457	467	481	478	480	485	480	480	470	480	480	462	470	475	0.54
MG19875 /MG19876	2,185.6	430	522	523	555	518	560	440	440	475	520	480	530	n/a	499	0.23
MG43524 /MG43525	2,062.1	450	465	480	445	445	450	425	545	460	430	440	470	n/a	459	0.22
MG46045	2,006.8	402	427	420	405	410	405	390	410	415	400	395	390	395	405	0.20
MG40061	2,078.5	430	442	440	445	440	460	440	450	420	435	435	430	460	441	0.21
MG37922	2,043.4	433	456	460	450	450	460	450	470	475	465	440	450	470	456	0.22
CIT T24	2,001	330	310	880	50	445	460	510	450	540	510	470	-	-	450	0.23
CIT RSSZ	2,000	420	470	490	50	580	545	545	680	570	550	530	-	-	494	0.25
RAS Mullock	2,000.8	398	425	410	50	470	460	475	530	500	495	475	-	-	426	0.21
Tailings	2,000	480	550	350	350	410	400	400	370	380	470	460	310	350	406	0.20

Note: Sample weight (g) at the beginning of testing.

Hyphen "-" indicates no data (i.e., the CLT is still in progress).

"n/a" indicates no data as the CLT has been stopped.

## 5 CLT RESULTS

This section summarises the key data from the CLT. Full tabulated data are provided in Appendix B. Proposed water quality guidelines from Table 1 are compared where data are available.

### 5.1.1 pH and EC

Figure 5 and Figure 6 provide pH and electrical conductivity (EC) results, respectively, for the CLT. Key observations include:

- TZ3 column pH ranged from 6.7 to 8.5, with an exception in Month 5 where it peaked at 10.1 (MG19875/MG19876)<sup>8</sup>. EC declined rapidly during the first 3 months from a maximum of 870  $\mu\text{S}/\text{cm}$  (MG43524/MG43525), followed by a slower rate of decrease. EC in MG19838 stabilised from Month 5 between 110–140  $\mu\text{S}/\text{cm}$ , while MG19875/MG19876 and MG43524/MG43525 stabilised from Month 8 between 130–150  $\mu\text{S}/\text{cm}$ .
- TZ4 column pH remained between 7.0 to 8.1, peaking in Month 4 and stabilising by Month 7. EC increased gradually from a minimum of 97  $\mu\text{S}/\text{cm}$  to a maximum of 330  $\mu\text{S}/\text{cm}$  with data peaking between Month 5 and 6, followed by a gradual decline.
- Grab sample pH ranged from 7.1 to 8.3 for RAS Mullock and CIT RSSZ, with an exception in Month 6 where CIT RSSZ peaked at 9.4. CIT T24 pH ranged from 6.5 to 8.5. EC for grab samples ranged from 62 to 300  $\mu\text{S}/\text{cm}$ .
- Tailings pH ranged from 7.2 to 7.9. EC decreased from 484  $\mu\text{S}/\text{cm}$  at Month 1 to 148  $\mu\text{S}/\text{cm}$  at Month 7 then increased Month 8 to 13 from 359 to 249  $\mu\text{S}/\text{cm}$ .

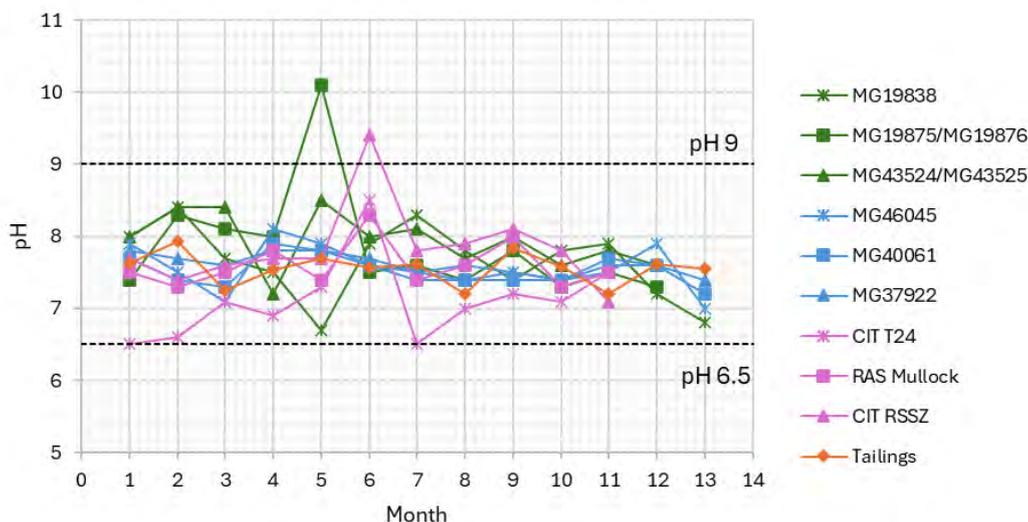


Figure 5. CLT results for pH.

Data colour coded as Green = TZ3, Blue = TZ4, Grab samples = Pink, Tailings = Orange.

Proposed water quality range for pH indicated by black dashed lines.

<sup>8</sup> It is possible this is a laboratory error.

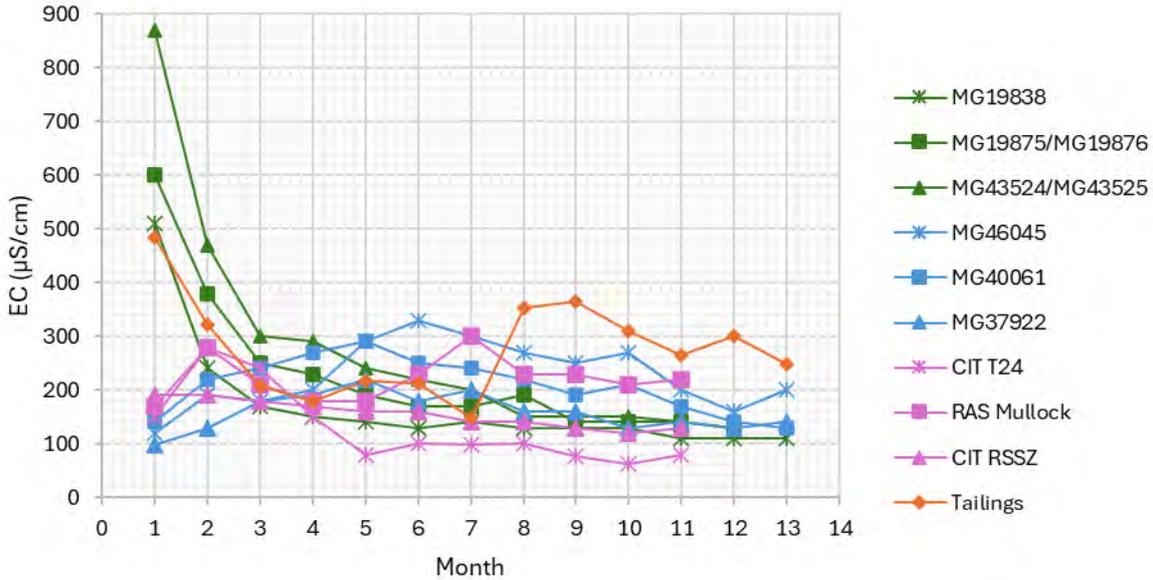


Figure 6. CLT results for conductivity (EC).

Data colour coded as Green = TZ3, Blue = TZ4, Grab samples = Pink, Tailings = Orange.

### 5.1.2 Acidity

Column MG19838 recorded acidity of 2 mg CaCO<sub>3</sub>/L to pH 7.0 at Month 4, and 7 mg CaCO<sub>3</sub>/L to pH 7.0 at Month 13. Column CIT24 recorded acidity between 1 to 4 CaCO<sub>3</sub>/L to pH 7.0 over four months of data. All other CLT data showed 0 mg CaCO<sub>3</sub>/L indicating the non-acid forming nature of the materials, supported by low concentrations of Fe, Al, and other acidity-contributing elements.

### 5.1.3 Sulfate

Sulfate trends are presented in Figure 7. Key observations include:

- TZ3 columns showed a gradual decrease in sulfate from a maximum of 170 mg/L (MG43524/MG43525). From Month 7 to 13, sulfate stabilised between 1.9 – 2.5 mg/L for MG19838, with continued decrease observed for MG19875/MG19876 (14.4 – 9.2 mg/L), and MG43524/MG43525 (21.4 – 5.0 mg/L).
- TZ4 columns showed a gradual increase in sulfate to a maximum of 95.7 mg/L at Month 5, followed by a gradual decrease for MG40061 and MG37922. MG6045 increased gradually to a peak of 124 mg/L at Month 6, then declined and stabilised between 53.6 and 73.4 mg/L after Month 10.
- The CIT grab sample columns (CIT T24 and CIT RSSZ) follow a similar trend to TZ3 column MG19838. The RAS Mullock column data follow a similar trend to TZ4 columns.
- The tailings column data initially follow a similar trend to TZ3 column data to Month 7. From Month 8 tailings column data follows a similar trend to TZ4 column data.

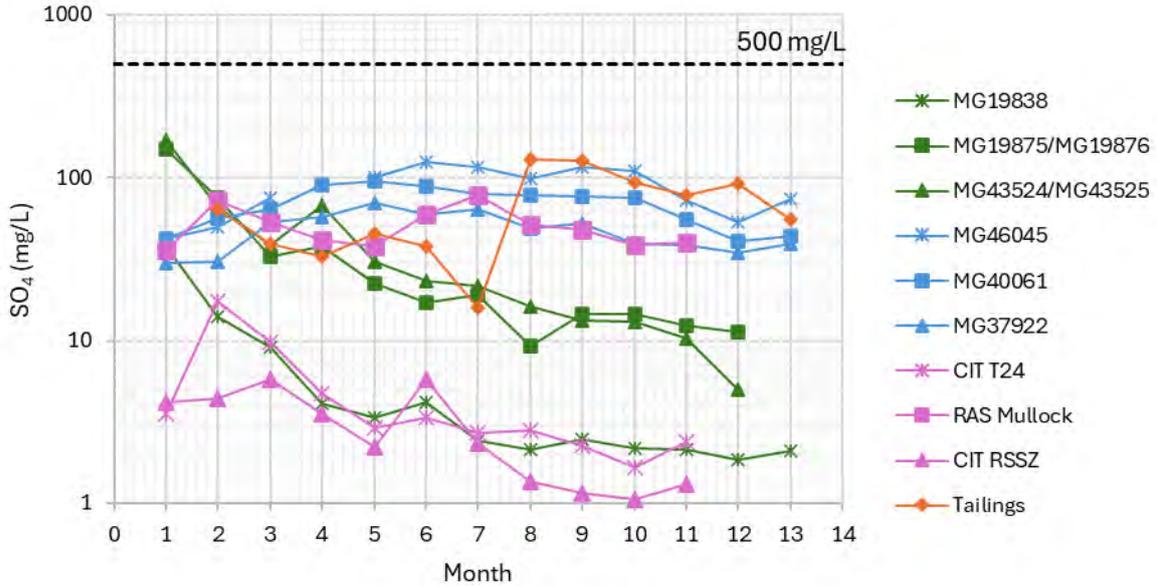


Figure 7. Column leach results for sulfate.

Data colour coded as Green = TZ3, Blue = TZ4, Grab samples = Pink, Tailings = Orange.

Proposed water quality limit for SO<sub>4</sub> is indicated by black dashed line.

5.1.4 PCOC

Figure 8 provides results for PCOC as identified in MWM (2025a) compared to proposed water quality (WQ) limits as provided in Table 1.

All LOR data is plotted as ½ LOR. As LOR has varied for analytes over time this can appear as a variation in the time series plots in Figure 8. Key observations include:

- Al has a proposed WQ limit of 0.08 mg/L. This limit was exceeded for three or more months for columns MG19838 (TZ3), MG19875/MG19876 (TZ3), MG43524/MG43525 (TZ3), MG40061 (TZ4), MG37922 (TZ4), and CIT T24. A single exceedance was recorded for MG6045 (TZ4).
- As is the only analyte consistently increasing in TZ4 materials over the testing period. All columns recorded instances above the proposed WQ limit.
- Co has a proposed WQ limit of 0.001 mg/L. The tailings column reached a maximum of 0.005 mg/L, TZ4 columns up to 0.002 mg/L, and RAS Mullock column up to 0.001 mg/L. Co concentrations in TZ3 columns and CIT RSSZ column were <LOR.
- Cr concentrations were generally <LOR. Six results exceeded LOR, with a maximum of 0.004 mg/L (CIT T24), with one exceedance of the WQ limit of 0.0033 mg/L.
- Cu has a proposed WQ limit of 0.0018 mg/L. All TZ3 columns exceeded WQ limits for 3 or more months for a maximum of 0.016 mg/L. TZ4 column data were <LOR, except for MG46045, which recorded one result at 0.003 mg/L. All grab sample columns exceeded WQ limits for 2 or more months, reaching a maximum of 0.011 mg/L for CIT T24. Cu peaked at 0.005 mg/L in Month 4 for the tailings column.
- Pb concentrations were below WQ limits, except for CIT TZ4 (0.004 mg/L in Month 5). TZ4 and the tailings data were <LOR. TZ3 recorded two results > LOR.

- Sb exceeded WQ limits for TZ3 columns MG19875/MG19876 and MG43524/ MG43525 over 2 or more months.
- Zn concentrations in the tailings column exceeded WQ limits. All TZ4 data were <LOR.

Additional PCOC identified for the BOGP are shown in Figure 9 with proposed WQ limits from Table 1.

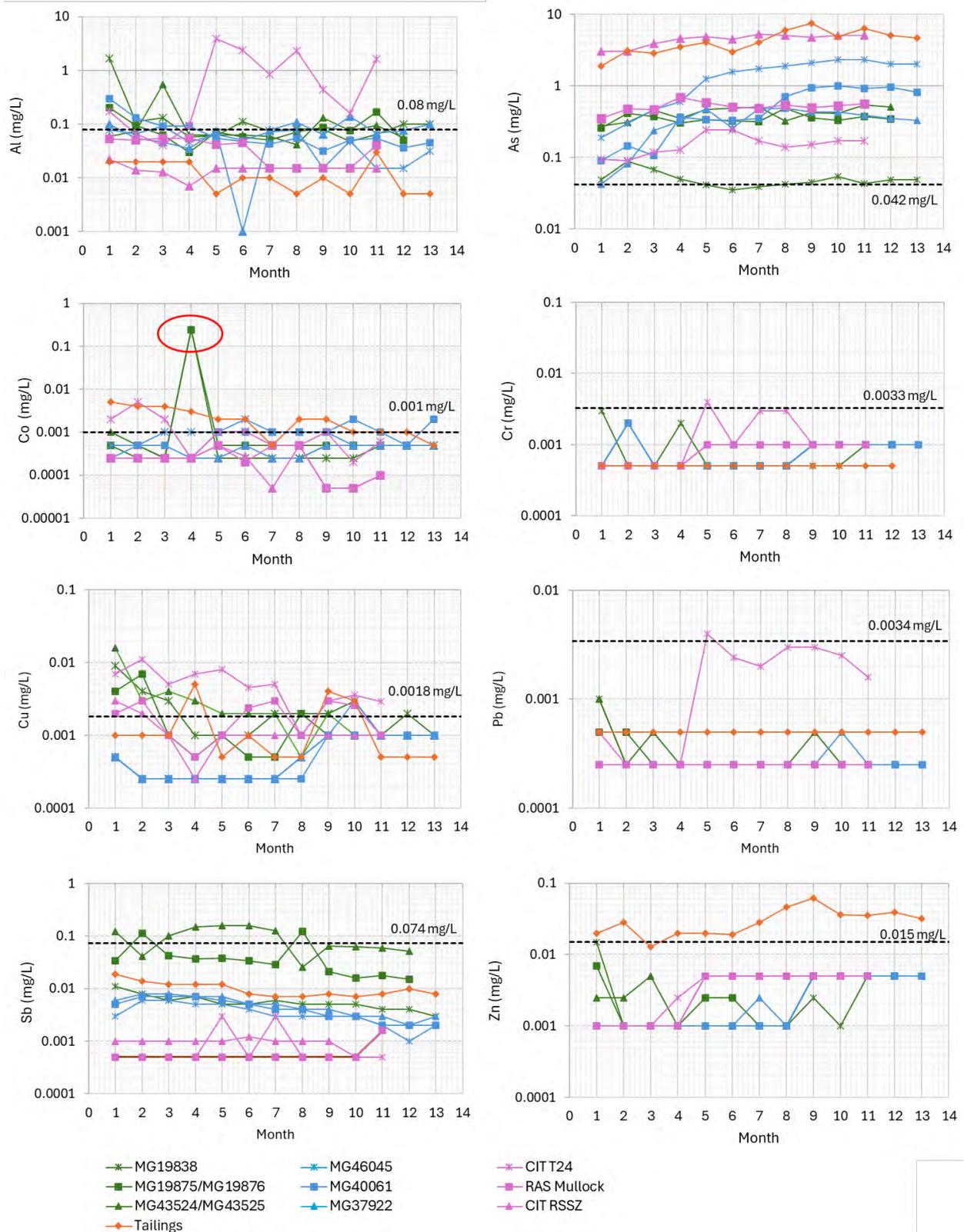


Figure 8. Column leach test results for PCOC.

Note: All data <LOR is presented as ½ LOR. There is variable LOR across laboratory analysis.

Data colour coded as Green = TZ3, Blue = TZ4, Grab samples = Pink, Tailings = Orange.

WQ Limits indicated by black dashed lines.

Erroneous Co data indicated by red circle, both results are from the same laboratory report and have not been included in any calculations as remaining Co data is similar to or <LOR.

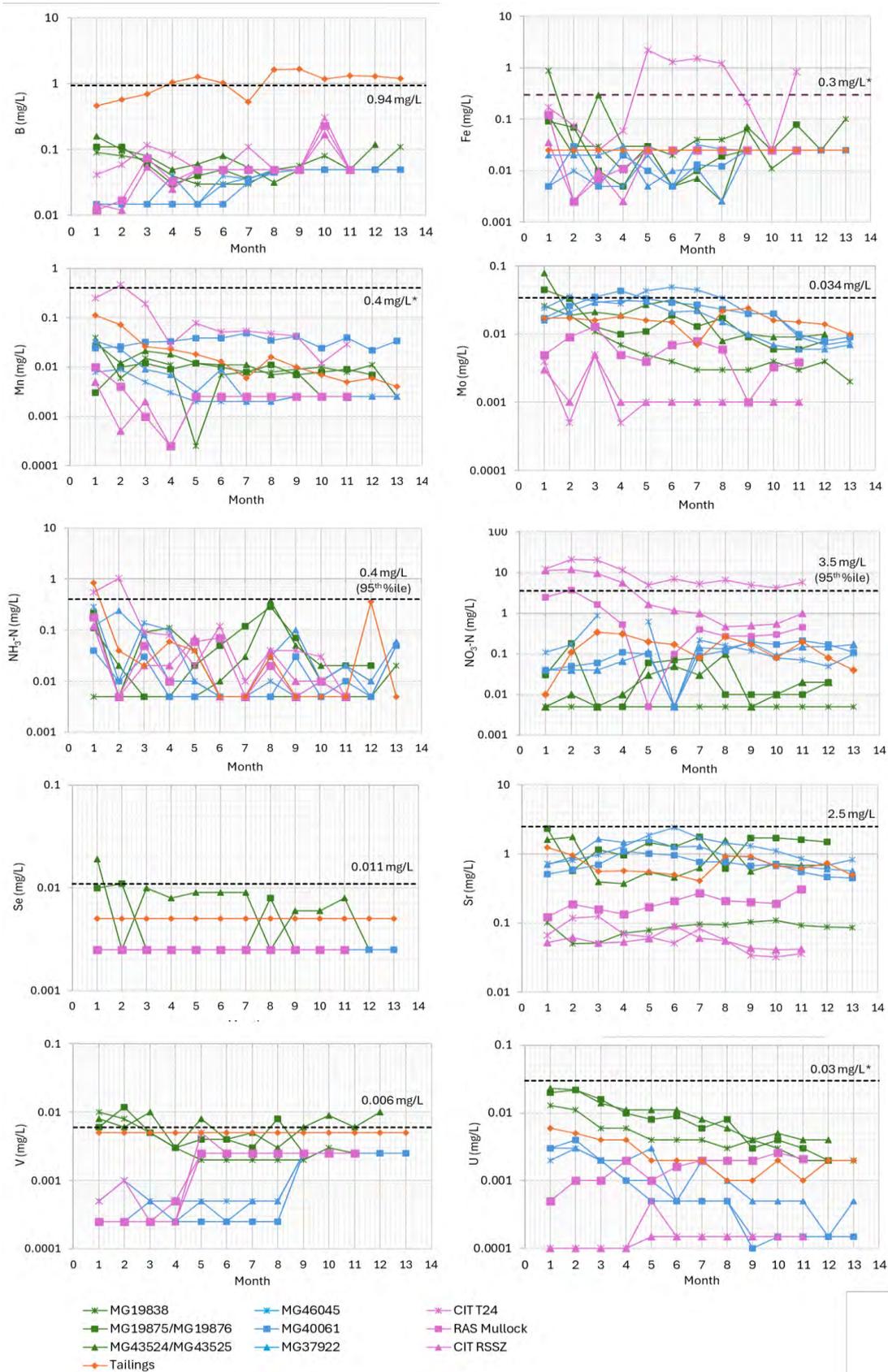


Figure 9. Column leach test results for water quality monitoring and additional metals.

Note: All data <LOR is presented as ½ LOR. There is variable LOR across laboratory analysis.

Data colour coded as Green = TZ3, Blue = TZ4, Grab samples = Pink, Tailings = Orange.

WQ Limits indicated by black dashed lines. \* Groundwater WQ Limits.

The following are key observations from Figure 9:

- B concentrations in TZ3, TZ4, and grab samples columns were below the WQ limit (0.94 mg/L). Tailings data was approximately an order of magnitude higher than other columns and exceeded the WQ limit from Month 4 onward, except in Month 7.
- Fe concentrations were all below the proposed groundwater WQ limit (0.3 mg/L), except for column MG19838 in Month 1 and CIT T24 in Month 5-8 and Month 11.
- Mn concentrations generally declined across all columns from Month 1 data, except for column CIT 24, which exceeded the groundwater WQ limit (0.4 mg/L) in Month 2 (0.47 mg/L).
- Mo exceeded the WQ limit (0.034 mg/L) for one month for TZ3 columns MG19875/MG19876 and MG43524/ MG43525, and two or more months for TZ4 columns MG46045 and MG40061. All other columns were below the WQ limit.
- NH<sub>3</sub>-N has a WQ limit based on the annual 95<sup>th</sup> percentile (0.4 mg/L). All columns were below this limit except column CIT T24 (0.55 and 1.04 mg/L in Month 1 and 2) and tailings (0.85 mg/L in Month 1).
- NO<sub>3</sub>-N WQ also has an annual 95<sup>th</sup> percentile WQ limit (3.5 mg/L). All data for column CIT T24 exceeded this limit. Other grab sample columns exceeded this limit during one month (RAS Mullock) and 4 months (CIT RSSZ). All other columns were below the WQ limit.
- Se concentrations were <LOR for all columns except TZ3 columns MG19875/MG19876 and MG43524/ MG43525. MG43524/ MG43525 exceeded the WQ limit (0.011 mg/L) in Month 1 (0.19 mg/L).
- Sr concentration in grab samples and TZ3 column MG19838 were lower than in other columns. All data were below the WQ limit (2.5 mg/L).
- U concentrations decreased over time. TZ3 columns recorded the highest values, followed by tailings, TZ4 columns, and grab sample columns. All data were below the groundwater WQ limit (0.03mg/L).
- V exceeded the WQ limit (0.006 mg/L) in all TZ3 columns over two or more months. All other columns remains below the WQ limit.

Data not presented due to high proportion of results <LOR:

- Ag, Cd, and Tl: All data were <LOR.
- Hg: Only 2 results exceeded LOR, with a maximum of 0.0026 mg/L (MG19875/MG19876).
- Ni: All data were below the WQ limit; the majority were at or below LOR for a maximum of 0.009 mg/L.

The following PCOC (Table 5) have been identified from CLT results where data exceeds WQ limits, as identified in Table 1, at least once over the reported time period.

Table 5: PCOC identified in the CLT data.

COLUMN ID	ZONE/TYPE	PCOC - PRIMARY <sup>1</sup>	PCOC – POTENTIAL <sup>2</sup>
MG19838	TZ3	Al, As, Cu, V	Fe
MG19875/ MG19876	TZ3	Al, As, Cu, Sb, V	Mo
MG43524/ MG43525	TZ3	Al, As, Cu, Sb, V	Mo, Se
MG37922 (MG55796)	TZ4/RSSZ	Al, As	
MG40061 (MG55795)	TZ4/RSSZ	Al, As, Co, Mo	
MG46045 (MG55790)	TZ4/RSSZ	As, Mo	Al, Co, Cu
CIT T24	Weathered TZ4 material	Al, As, Co, Cu, Fe, NH <sub>3</sub> -N, NO <sub>3</sub> -N	Cr, Mn, Pb
RAS Mullock	Historic Mullock	As, Cu	NO <sub>3</sub> -N
CIT RSSZ	Historic Mullock	As, Cu, NO <sub>3</sub> -N	
Tailings	Composite metallurgical sample	As, B, Co, Cu, Zn	NH <sub>3</sub> -N

<sup>1</sup> Where  $\geq 2$  exceedances of WQ Limits over reported period of column leach testing.

<sup>2</sup> Where 1 exceedance of WQ Limits over reported period of column leach testing.

### 5.1.5 PCOC Load

CLT results are converted to mg/kg/month to determine the PCOC load. The following process is applied to CLT results to produce mg/kg/month:

$$\text{Equation 1} = C \times (V/1000) \times (1000/w)$$

Where:  $C$  = Original value (mg/L);  $V$  = Sample volume (mL);  $w$  = Sample weight (g).

Average mg/kg/month results for the CLT samples are provided in Table 6. It is assumed that averaging results provides a fair representation of the shorter- and longer-term effects and the associated PCOC loads.

Variation in length of testing periods for CLT samples can affect average data as depletion increases over time i.e. Sb depletion in Figure 8.

Table 6: Average mg/kg/month of column leach test data.

SAMPLE ID	MG19838	MG19875/ MG19876	MG43524/ MG43525	MG46045	MG40061	MG37922	CIT T24 (MG41751)	RAS MULLOCK (MG41752)	CIT RSSZ (MG41753)	TAILINGS (M754 JR024 CN DE-TOX FILTER CAKE)
ZONE	TZ3	TZ3	TZ3	TZ4/RSSZ	TZ4/RSSZ	TZ4/RSSZ				
MONTHS	13	12	12	13	13	13	11	11	11	13
Acidity (mg CaCO <sub>3</sub> /L) pH 7.0	0.09	0	0	0	0	0	0.14	0	0	-
Total Alkalinity (CaCO <sub>3</sub> )	42.1	17.3	23.3	3.7	5.6	5.3	3.5	10.1	13.3	10.8
EC	91.0	51.2	61.1	45.9	44.2	35.3	29.1	48.2	37.5	57.5
SO <sub>4</sub>	3.6	7.7	8.7	17.3	14.4	10.6	1.1	10.9	0.7	13.5
Ca	9.0	3.3	3.6	3.1	2.7	1.9	3.8	3.5	5.7	12.2
Cl	1.06	0.43	0.67	0.19	0.11	0.11	0.23	0.24	0.12	1.15
F	0.128	0.058	0.070	0.009	0.011	0.008	0.042	0.016	0.017	0.041
Mg	0.87	0.56	0.47	2.10	1.82	1.66	0.48	2.90	0.30	1.80
Na	8.34	5.99	7.79	1.26	1.32	0.90	0.49	0.77	0.37	3.23
K	2.48	2.48	2.32	2.26	2.96	1.66	1.52	1.93	1.94	1.38
Al	0.109	0.019	0.025	0.011	0.017	0.016	0.250	0.007	0.004	0.003
As	0.027	0.080	0.093	0.288	0.115	0.074	0.036	0.108	1.123	0.87
B	0.032	0.013	0.016	0.007	0.007	0.008	0.021	0.014	0.014	0.21
Cd	0.00005	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00001
Co	0.00018	0.00011	0.00010	0.00017	0.00020	0.00008	0.00029	0.00006	0.00006	0.00045
Cr	0.0005	0.0002	0.0001	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002	0.0001
Cu	0.0013	0.0004	0.0007	0.0001	0.0001	0.0001	0.0011	0.0004	0.0003	0.0003

SAMPLE ID	MG19838	MG19875/ MG19876	MG43524/ MG43525	MG46045	MG40061	MG37922	CIT T24 (MG41751)	RAS MULLOCK (MG41752)	CIT RSSZ (MG41753)	TAILINGS (M754 JR024 CN DE-TOX FILTER CAKE)
ZONE	TZ3	TZ3	TZ3	TZ4/RSSZ	TZ4/RSSZ	TZ4/RSSZ				
Fe	0.053	0.007	0.012	0.004	0.004	0.004	0.159	0.006	0.005	0.005
Mn	0.0056	0.0020	0.0026	0.0007	0.0072	0.0017	0.0250	0.0007	0.0006	0.0055
Mo	0.0039	0.0035	0.0049	0.0055	0.0049	0.0038	0.0004	0.0012	0.0004	0.0032
Ni	0.0003	0.0002	0.0003	0.0002	0.0002	0.0001	0.0004	0.0002	0.0002	0.0002
Pb	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	0.0001	0.0001
Sb	0.0031	0.0098	0.0205	0.0007	0.0009	0.0011	0.0002	0.0001	0.0003	0.0021
Se	0.0014	0.0010	0.0017	0.0005	0.0005	0.0006	0.0006	0.0005	0.0006	0.0010
Sr	0.0463	0.3121	0.1884	0.2480	0.1506	0.2263	0.0155	0.0434	0.0137	0.15
Tl	0.00011	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003	0.00002	0.00003	0.00010
U	0.0026	0.0021	0.0023	0.0002	0.0002	0.0003	0.0000	0.0003	0.00003	0.0006
V	0.0019	0.0010	0.0014	0.0003	0.0002	0.0003	0.0005	0.0004	0.0005	0.0010
Zn	0.0017	0.001	0.001	0.0005	0.0005	0.0006	0.0008	0.0008	0.0010	0.0062
Ammonia-N	0.013	0.014	0.014	0.010	0.003	0.012	0.032	0.008	0.007	0.023
Nitrate-N	0.003	0.009	0.006	0.044	0.023	0.023	2.157	0.189	0.855	0.031

Data recorded as LOR has been calculated as ½ LOR.

Red text indicates all data are below LOR. Blue text indicates at least half of all data are below the LOR. Black text indicates over half of data is above LOR.

LOR varies across laboratory analysis explaining variation in columns where all data is returned <LOR (i.e. Cd and Tl).

## 6 CLT ANALYSIS

### 6.1.1 EC and Sulfate Data

Figure 10 illustrates the relationship between EC and sulfate for CLT data. The trend differs between TZ3 and TZ4 column, with TZ3 showing lower sulfate concentrations than TZ4 at similar EC values. Tailings and RAS Mullock data fall between the TZ3 and TZ4 trends. CIT T24 and CIT RSSZ exhibit high EC with low sulfate concentration.

The data suggest that EC is dominated by other dissolved constituents when sulfate concentrations are near zero (e.g., EC ~100 µS/cm). TZ4 columns show less variability in the EC-sulfate relationship, while greater variability is observed in other sample types.

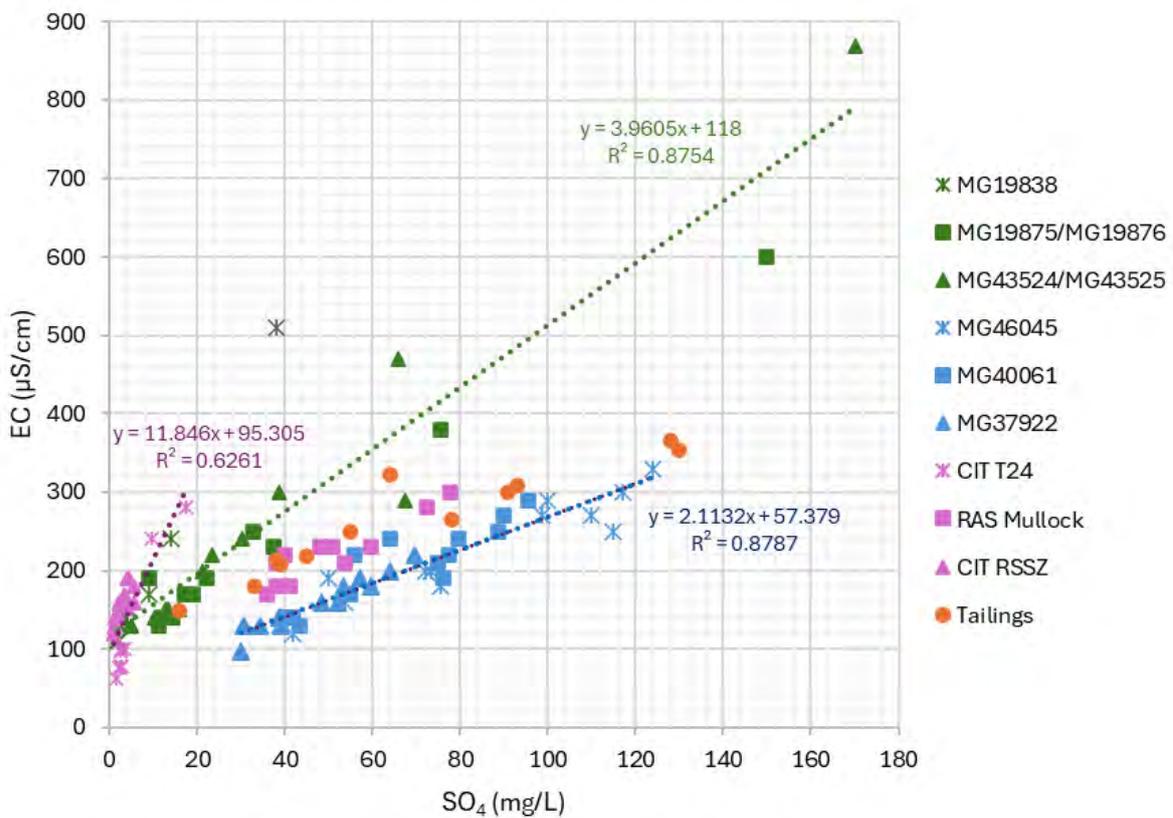


Figure 10. Column leach test data for EC and sulfate.

Data colour coded as Green = TZ3, Blue = TZ4, Grab samples = Pink, Tailings = Orange.

### 6.1.2 Shake Flask Data and Column Leach Test Data Analysis

Shake flask testing of TZ4 and RSSZ materials identified elevated Al, As, Cr, Zn above the WQ Limits (MWM, 2025a).

SPLP test data (MWM, 2025b) for TZ3 and TZ4/RSSZ indicated that:

- Al – all sample data is above the WQ limits (TZ3 and TZ4/RSSZ).
- As – all TZ4 sample data is above the WQ limits, all TZ3 data is below.
- Cd – one TZ4 test is above the WQ limits.

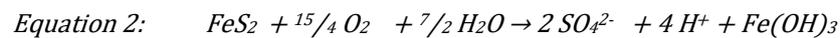
- Cr – no exceedance above the WQ limits, all data at or < LOR.
- Cu – all data is at or < LOR.
- Ag, Fe, Pb – all data is < LOR.
- SO<sub>4</sub>, Sb, and Zn – all data below the WQ Limits.
- U – all sample data below the groundwater WQ Limits
- V – TZ3 data above the WQ Limits.

SPLP test data (MWM, 2025b) for weathered grab samples indicated the following PCOC elevated above WQ limits:

- CIT TZ4 (weathered TZ4 road cutting) – Al, As, Co, Cu
- RAS Mullock – Al, As
- CIT RSSZ – As

### 6.1.3 Intrinsic Oxidation Rate

The intrinsic oxidation rate (IOR) (Bennett et al., 1995, Ritchie, 1994) can be derived by measuring the total oxygen consumption rate of samples where sulfate production rates of samples in columns are converted to pyritic oxidation rates using the stoichiometry of the pyritic oxidation reaction:



The laboratory based IOR for CLTs provides a good indication of the pyrite reaction rate under laboratory conditions where oxygen is freely available. Application of the IOR to the field requires adjustments (scaling) due to the following influences:

- Sulfur mineralogy (if other minerals are present e.g., pyrrhotite, gypsum, jarosite, melanterite, etc).
- Assumption that Equation 2 proceeds to completion (e.g., no intermediate reaction products such as jarosite and melanterite).
- Water content.
- Pore gas concentration (e.g., oxygen concentration).
- Particle size distribution and mineral surface area.
- Bacterial effects.
- Temperature, pH, ferric ion concentrations, etc.

IOR rates for the column leach tests for TZ3 and TZ4 are reported in Table 7.

Table 7. IOR for column leach test materials

COLUMN	MG19838	MG1987/ MG19876	MG4352/ MG43525	MG46045	MG40061	MG37922
ZONE	TZ3	TZ3	TZ3	TZ4/RSSZ	TZ4/RSSZ	TZ4/RSSZ
IOR kg O <sub>2</sub> /m <sup>3</sup> /s	MONTH 1	8.6E-09	1.3E-08	1.2E-09	3.6E-09	2.8E-09
	AVERAGE	1.6E-09	3.3E-09	3.8E-09	7.5E-09	4.6E-09
	MINIMUM	4.2E-10	8.0E-10	4.9E-10	3.6E-09	2.8E-09
	MAXIMUM	8.6E-09	1.3E-08	1.6E-08	1.1E-08	8.8E-09

IOR do not normalise the reaction rates to the sulfide content, so it is difficult to apply the rate to materials of differing sulfur content or consider what the data means if this interpretation is not completed. To account for this, the sulfur content (wt%) is plotted against the sulfate release rate (mg/kg) and the IOR as shown in Figure 11. The relationship derived can then be used to assign an IOR to a material of differing sulfur content, this can then be scaled with consideration for the above adjustment factors to consider reaction rates in the field.

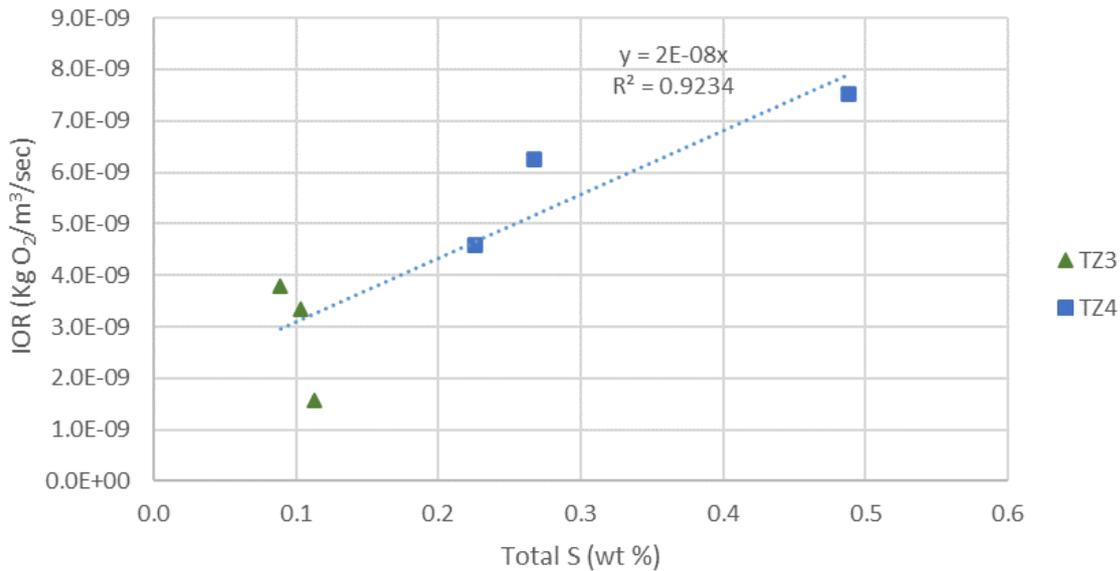


Figure 11. Sulfur content (wt%) versus IOR for average CLT data.

## 6.2 Sulfate Data

Sulfate relationship data to PCOC are provided in Appendix D. This provides context for modelling.

## 7 SUMMARY

### 7.1 Introduction

CLT data are often used to develop geochemical models when no other empirical data are available and confirm likely geoenvironmental hazards for the BOGP. Data has also been obtained to improve the geochemical understanding of the project area from shake flask test data, which provides an indication of the stored water soluble PCOC. Such data from shake flask testing and CLT can be used to develop source terms for predictive modelling purposes.

### 7.2 Column Leach Test Data

CLTs were run for between 11 to 13 months at the time of compilation of this report from representative material from the BOGP. The following are general observation from the CLT program:

- pH ranges from 6.7 to 10.1 and indicates that acid rock drainage is not expected from the materials.
- Differences in sulfate behaviour between TZ3 and TZ4 material. Sulfate decreases over time in TZ3 material and grab sample columns CIT24 and CIT RSSZ, and an early increase in sulfate then stabilisation in TZ4 materials.
- Arsenic is the only analyte consistently increasing in the TZ4 materials over time with data stabilising for the last 3 to 4 months of testing.
- There is a variation in NMD risk between TZ3 and TZ4 material with different PCOC being elevated in the different materials.
- CLT data were used to develop source terms for the project water and load balance model.

### 7.3 PCOC

Time series plots indicate the following PCOC are elevated (where 2 or more months of data exceed the WQ Limit):

- TZ3: Al, As, Cu, Sb, V.
- TZ4: Al, As, Co, Mo.
- Historic material: Al, As, Co, Cu, Fe, NH<sub>3</sub>-N, NO<sub>3</sub>-N.
- Tailings: As, B, Co, Cu, Zn.

Results indicate the following PCOC are elevated (where 1 month of data exceed the WQ Limit):

- TZ3: Fe, Mo, Se.
- TZ4: Cu.
- Historic material: Cr, Mn, Pb.
- Tailings: NH<sub>3</sub>-N.

Data for NH<sub>3</sub>-N, NO<sub>3</sub>-N where it was elevated is related to surface samples and are not considered applicable to unweathered waste rock. Data for Pb indicted concentrations were low and Pb is not considered problematic (as supported by shake flask testing (MWM, 2025a) and SPLP testing (MWM, 2025b)).

#### **7.4 Recommended Water Quality Monitoring**

Based on the results of this report, the following PCOC are elevated in the CLT. It is recommended that compliance monitoring should be undertaken for:

- Al, As, Co, Cu, Fe, Sb, Zn.

Performance monitoring of seepage from the ELF, TSF, and the underground should be undertaken as these PCOC could become concentrated when there is a large volume rock interacting with seepage waters:

- B, Cr, Mo, Se, V.

Data for NH<sub>3</sub>-N and NO<sub>3</sub>-N, when elevated, is related to surface samples and are not considered applicable to unweathered waste rock. Data for Pb indicted concentrations were low and Pb is not considered problematic (as supported by shake flask testing (MWM, 2025a) and SPLP testing (MWM, 2025b)).

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## 9 LIMITATIONS

Attention is drawn to the document “Limitations”, which is included in Appendix E of this report. The statements presented in this document are intended to provide advice on what the realistic expectations of this report should be, and to present recommendations on how to minimise the risks associated with this project. The document is not intended to reduce the level of responsibility accepted by Mine Waste Management, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in doing so.

## APPENDIX A ABBREVIATIONS

ABBREVIATION	DEFINITION
ABA	Acid base accounting
AEE	Assessment of environmental effects
AMD	Acid and metalliferous drainage, which can also include low metal saline drainage
ANC	Acid neutralisation capacity
ARD	Acid Rock Drainage
BOGP	Bendigo-Ophir Gold Project
CIT	Come in Time
CLT	Column leach test
CODC	Central Otago District Council
PCOC	Potential constituents of concern
EC	Electrical conductivity
ELF	Engineered landforms
IOR	Intrinsic oxidation rate
MGL	Matakanui Gold Ltd
MPA	Maximum potential acidity
MWM	Mine Waste Management Ltd
NAF	Non-acid forming
NAPP	Net acid production potential
NMD	Neutral Metalliferous Drainage
ORC	Otago Regional Council
QA/QC	Quality assurance and quality control
RAS	Rise and Shine
RSSZ	Rise and Shine Shear Zone
SD	Saline drainage
SRX	Srex
SRE	Srex East
TGF	Thomsons Gorge Fault
TSF	Tailings storage facility
TZ3	Textural Zone 3
TZ4	Textural Zone 4
XRD	X-ray Diffraction

## APPENDIX B TABULATED LABORATORY DATA

**Column Leach Test MG19838**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Laboratory Job	WP24-13610	WP24-13611	WP24-13647	WP24-13772	WP24-13902	WP24-14043	WP24-14183	WP24-14298	WP24-14453	WP24-14566	WP24-14780	WP24-14781	WP24-14782
pH	8	8.4	7.7	7.5	6.7	7.9	8.3	7.8	7.4	7.8	7.9	7.2	6.8
Sample Volume ml	457	467	481	478	480	485	480	480	470	480	480	462	470
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	2	0	0	0	0	0	0	0	7
Total Alkalinity as CaCO3	200	130	80	70	67	70	60	64	66	74	56	25	55
Dissolved Oxygen	10.6	10.3	9.9	8.9	8.6	10.7	8.8	9.8	8.8	10.1	10.2	8.8	8.1
Conductivity @25 °C (µS/cm)	510	240	170	150	140	130	140	130	130	130	110	110	110
Fluoride	1.2	0.65	0.37	0.22	0.16	0.08	0.08	0.08	0.08	0.07	0.04	0.03	0.05
Chloride	18	2	1.9	0.26	0.48	0.27	0.19	0.76	0.3	0.77	0.27	0.42	0.41
Nitrate Nitrogen, NO3-N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrite Nitrogen, NO2-N	0.09	<0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate, SO4	38	14	9	4.11	3.35	4.14	2.4	2.15	2.46	2.16	2.15	1.86	2.08
Total N	1.27	0.46	0.27	0.11	0.11	0.1	0.1	0.12	0.18	0.13	0.12	0.2	0.16
Ammonia N	<0.01	<0.01	0.09	0.11	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
Total phosphorus	0.248	0.101	0.096	0.038	0.028	0.027	0.021	0.026	0.038	0.038	0.043	0.068	0.043
Aluminium, Al	1.65	0.11	0.132	0.057	0.061	0.11	0.073	0.083	0.081	0.048	0.065	0.1	0.1
Antimony, Sb	0.011	0.008	0.006	0.007	0.005	0.005	0.006	0.005	0.005	0.005	0.004	0.004	0.003
Arsenic, As	0.049	0.089	0.068	0.05	0.041	0.035	0.039	0.042	0.045	0.054	0.043	0.049	0.049
Barium, Ba	0.024	0.005	0.004	0.006	0.006	0.007	0.008	0.008	0.008	0.007	0.0071	0.0065	0.0072
Boron, B	0.09	0.08	0.07	0.04	0.03	0.03	0.03	0.05	0.057	0.08	<0.10	<0.10	0.11
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020
Calcium, Ca	23	9.9	9.7	14.4	14.5	12.9	17.7	17.4	19.9	22.9	19	18	18
Chromium, Cr	0.003	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001
Copper, Cu	0.009	0.004	0.003	0.001	0.001	0.001	0.002	0.002	0.002	0.003	<0.0020	0.002	<0.0020

**Column Leach Test MG19838**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Iron, Fe	0.88	0.03	0.03	0.01	0.03	0.02	0.04	0.04	0.062	0.011	<0.050	<0.050	0.1
Lead, Pb	0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050
Magnesium, Mg	1.8	0.62	0.86	1.69	1.74	1.8	2.12	2.11	2.01	2.02	1.4	1.4	1.4
Manganese, Mn	0.04	0	0.015	0.011	<0.0005	0.007	0.008	0.008	0.009	0.01	0.008	0.011	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.026	0.019	0.011	0.007	0.005	0.004	0.003	0.003	0.003	0.004	0.003	0.004	0.002
Nickel, Ni	0.002	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020
Potassium, K	6.2	4.2	4.7	4.8	5.3	4.4	4.9	5.5	4.5	5.3	3.2	3.3	3.2
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-
Sodium, Na	78.1	42.9	27.5	19.2	9.7	5.7	4.3	4.1	3.1	3	1.7	2	1.8
Strontium, Sr	0.102	0.05	0.051	0.072	0.079	0.089	0.096	0.094	0.103	0.109	0.093	0.088	0.086
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020
Titanium, Ti	0.023	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.0005	<0.0005	<0.0005	-	-
Uranium, U	0.013	0.011	0.006	0.006	0.004	0.004	0.004	0.003	0.004	0.003	0.002	0.002	0.002
Vanadium, V	0.01	0.008	0.005	0.003	0.002	0.002	0.002	0.002	0.002	0.003	<0.0050	<0.0050	<0.0050
Zinc, Zn	0.015	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

**Column Leach Test MG19875/MG19876**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Laboratory Job	WP24-13694	WP24-13825	WP24-13962	WP24-14103	WP24-14245	WP24-14387	WP24-14499	WP24-14643	WP24-14768	WP24-14775	WP24-14778	WP25-15151
pH	7.4	8.3	8.1	8	10.1	7.5	7.6	7.4	7.8	7.3	7.5	7.3
Sample Volume ml	430	522	523	555	518	560	440	440	475	520	480	530
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	119	110	96	80	72	70	62	90	56	55	52	49
Dissolved Oxygen	9.6	9	12.1	9.1	10.3	9.6	10.3	9	8.5	9.8	8.4	15.3
Conductivity @25 °C (µS/cm)	600	380	250	230	190	170	170	190	140	140	140	130
Fluoride	0.59	1.2	0.38	0.12	0.16	0.11	0.1	0.2	0.06	0.04	0.06	0.05
Chloride	17	3.51	1.07	0.44	0.71	0.31	0.32	0.34	0.19	0.25	0.36	0.31
Nitrate Nitrogen, NO3-N	0.03	0.18	<0.01	<0.01	0.06	0.07	0.08	0.01	0.01	0.01	0.01	0.02
Nitrite Nitrogen, NO2-N	0.13	<0.01	0.04	0.07	0.1	0.02	0.04	<0.01	0.04	0.04	0.05	0.05
Sulphate, SO4	150	75.5	32.8	37.6	22.2	17.1	19.1	9.19	14.4	14.4	12.3	11.3
Total N	2.07	0.38	0.27	0.22	0.29	0.16	0.25	0.11	0.22	0.17	0.16	0.17
Ammonia N	0.22	<0.01	<0.01	<0.01	0.02	0.05	0.12	0.29	0.07	0.01	0.02	0.02
Total phosphorus	0.252	0.491	0.071	0.034	0.026	0.042	0.017	0.025	0.021	0.03	0.022	0.018
Aluminium, Al	0.203	0.094	0.063	0.03	0.072	0.058	0.05	0.072	0.088	0.076	0.17	0.05
Antimony, Sb	0.034	0.113	0.042	0.037	0.038	0.034	0.029	0.123	0.021	0.016	0.018	0.015
Arsenic, As	0.256	0.412	0.373	0.304	0.333	0.324	0.314	0.487	0.36	0.33	0.37	0.34
Barium, Ba	0.042	0.02	0.018	0.016	0.023	0.031	0.03	0.018	0.034	0.037	0.035	0.034
Boron, B	0.11	0.11	0.06	0.03	0.04	0.05	0.036	0.05	<0.10	<0.10	<0.10	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, Ca	19.7	13.1	8.8	6.5	9	15.2	15.4	16.3	19	18	17	18
Chromium, Cr	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.001	<0.001	<0.0005	0.239	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper, Cu	0.004	0.007	0.001	<0.001	0.001	<0.001	<0.001	0.002	<0.0020	<0.0020	<0.0020	<0.0020

**Column Leach Test MG19875/MG19876**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Iron, Fe	0.09	0.07	0.01	<0.01	0.03	<0.01	0.01	0.019	<0.050	<0.050	0.079	<0.050
Lead, Pb	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium, Mg	2.49	1.57	1.78	1.46	2.18	2.53	3.13	2.89	2.9	3.3	2.8	2.9
Manganese, Mn	0.003	0.01	0.012	0.009	0.012	0.01	0.008	0.011	0.007	0.008	0.009	0.007
Mercury, Hg	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0026	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.045	0.033	0.013	0.01	0.011	0.019	0.013	0.017	0.009	0.006	0.006	0.008
Nickel, Ni	0.004	0.003	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	11.2	12.3	11.9	9.2	11.5	12.8	13.7	13.6	9.8	8.8	8.3	7.6
Selenium, Se	0.01	0.011	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	#N/A	#N/A	#N/A	#N/A
Sodium, Na	98.8	83.7	40.4	23.5	22.2	11.2	9.5	19	3.5	3.4	3.2	2.6
Strontium, Sr	2.31	0.572	1.16	0.957	1.45	1.26	1.77	0.607	1.7	1.7	1.6	1.5
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	0.005	0.002	<0.001	<0.0005	0.003	0.001	<0.001	<0.001	#N/A	#N/A	#N/A	#N/A
Uranium, U	0.02	0.022	0.016	0.01	0.008	0.009	0.006	0.008	0.003	0.004	0.003	0.002
Vanadium, V	0.006	0.012	0.005	0.003	0.004	0.004	0.003	0.008	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	0.007	<0.002	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

**Column Leach Test MG43524/MG43525**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Laboratory Job	WP24-13694	WP24-13825	WP24-13962	WP24-14103	WP24-14245	WP24-14387	WP24-14499	WP24-14643	WP24-14768	WP24-14775	WP24-14778	WP25-15151
pH	8	8.4	8.4	7.2	8.5	8	8.1	7.7	8	7.6	7.8	7.6
Sample Volume ml	450	465	480	445	445	450	425	545	460	430	440	470
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	320	160	120	100	94	90	72	70	58	64	56	55
Dissolved Oxygen	9.7	9	12.2	9	10.6	9.6	10	10.5	8.4	9.8	8.4	15
Conductivity @25 °C (µS/cm)	870	470	300	290	240	220	200	150	150	150	140	130
Fluoride	1	0.51	0.66	0.08	0.41	0.31	0.27	0.08	0.13	0.1	0.14	0.12
Chloride	28	4.41	1.02	0.4	0.41	0.37	0.34	0.3	0.25	0.34	0.42	0.36
Nitrate Nitrogen, NO3-N	<0.01	0.01	<0.01	0.01	0.03	0.05	0.03	0.1	<0.01	0.01	0.02	0.02
Nitrite Nitrogen, NO2-N	0.22	0.08	<0.01	0.05	0.1	0.01	0.01	0.04	0.02	0.03	0.02	0.03
Sulphate, SO4	170	66	38.6	67.3	30.2	23.3	21.4	16.1	13.3	12.9	10.3	5
Total N	1.77	0.67	0.05	0.19	0.2	0.31	0.07	0.24	0.12	0.17	0.23	0.13
Ammonia N	0.11	0.02	<0.01	<0.01	<0.01	0.01	0.03	0.38	0.05	0.02	0.02	0.01
Total phosphorus	1.35	0.114	0.224	0.08	0.045	0.021	0.034	0.015	0.03	0.036	0.053	0.023
Aluminium, Al	0.06	0.074	0.539	0.063	0.063	0.062	0.059	0.042	0.13	0.075	0.094	0.056
Antimony, Sb	0.124	0.041	0.101	0.15	0.157	0.16	0.128	0.026	0.065	0.063	0.059	0.052
Arsenic, As	0.276	0.308	0.462	0.351	0.468	0.482	0.508	0.324	0.42	0.41	0.54	0.51
Barium, Ba	0.07	0.026	0.015	0.011	0.014	0.016	0.016	0.033	0.015	0.02	0.016	0.017
Boron, B	0.16	0.1	0.08	0.05	0.06	0.08	0.054	0.032	<0.10	<0.10	<0.10	0.12
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, Ca	38.4	12.7	11.9	9.3	11.2	16.8	18.2	12.5	17	17	16	17
Chromium, Cr	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	0.001	<0.001	<0.0005	0.25	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001
Copper, Cu	0.016	0.003	0.004	0.003	0.002	0.002	0.002	<0.001	0.002	<0.0020	<0.0020	<0.0020

**Column Leach Test MG43524/MG43525**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Iron, Fe	0.12	0.02	0.29	0.03	0.03	<0.01	0.007	<0.005	0.071	<0.050	<0.050	<0.050
Lead, Pb	0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.00050	<0.00050	<0.00050
Magnesium, Mg	4.19	2.18	1.37	1.3	1.67	1.8	2.23	3.35	1.7	2.1	1.7	1.8
Manganese, Mn	0.031	0.012	0.021	0.018	0.012	0.011	0.011	0.007	0.008	<0.0050	<0.0050	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.078	0.019	0.021	0.019	0.027	0.032	0.023	0.008	0.01	0.009	0.009	0.01
Nickel, Ni	0.009	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	14.1	13.5	10.7	9.1	10.3	11.3	12.1	12.8	7.4	8.5	7.8	7.3
Selenium, Se	0.019	<0.005	0.01	0.008	0.009	0.009	0.009	<0.005	0.006	0.006	0.008	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Sodium, Na	154	59.5	54.4	39.5	33.9	24.8	21.7	6.8	7.9	8.3	7	5.8
Strontium, Sr	1.6	1.77	0.393	0.368	0.552	0.458	0.621	1.57	0.56	0.73	0.69	0.68
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	0.004	0.001	0.007	0.001	0.001	0.001	<0.0005	<0.0005	-	-	-	-
Uranium, U	0.023	0.022	0.014	0.011	0.011	0.011	0.008	0.006	0.004	0.005	0.004	0.004
Vanadium, V	0.008	0.006	0.01	0.003	0.008	0.004	0.005	0.003	0.006	0.009	0.006	0.01
Zinc, Zn	<0.005	<0.005	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

**Column Leach Test MG46045**

<b>Analyte Name</b>	<b>Month 1</b>	<b>Month 2</b>	<b>Month 3</b>	<b>Month 4</b>	<b>Month 5</b>	<b>Month 6</b>	<b>Month 7</b>	<b>Month 8</b>	<b>Month 9</b>	<b>Month 10</b>	<b>Month 11</b>	<b>Month 12</b>	<b>Month 13</b>
Laboratory Job	WP24-13647	WP24-13772	WP24-13902	WP24-14043	WP24-14183	WP24-14298	WP24-14453	WP24-14566	WP24-14780	WP24-14781	WP24-14782	WP25-15079	WP25-15234
pH	7.9	7.5	7.1	8.1	7.9	7.6	7.5	7.6	7.5	7.4	7.5	7.9	7
Sample Volume ml	402	427	420	405	410	405	390	410	415	400	395	390	395
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	16	30	23	30	20	14	15	22	15	7	15	15	17
Dissolved Oxygen	9.8	8.9	8.6	10.8	8.9	9.6	8.6	10	10.7	8.9	8.2	9.3	10.3
Conductivity @25 °C (µS/cm)	120	190	180	200	290	330	300	270	250	270	200	160	200
Fluoride	0.1	0.1	0.1	-	0.05	0.04	0.03	0.03	<0.02	<0.02	0.03	<0.02	<0.02
Chloride	2.6	2.79	1.49	-	1	0.57	0.62	0.51	0.38	0.3	0.35	0.22	0.31
Nitrate Nitrogen, NO3-N	0.11	0.17	0.87	-	0.62	<0.01	0.22	0.16	0.12	0.08	0.07	0.05	0.1
Nitrite Nitrogen, NO2-N	0.02	0.4	<0.01	-	0.02	0.36	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate, SO4	42	49.9	75.5	-	100	124	117	98.8	115	110	72.1	53.6	73.4
Total N	0.43	0.68	1	0.8	0.73	0.39	0.28	0.24	0.2	0.18	0.12	0.09	0.16
Ammonia N	0.29	0.01	0.14	0.1	0.01	<0.01	<0.01	0.01	<0.01	0.01	0.02	<0.01	0.05
Total phosphorus	0.017	0.007	0.007	0.012	0.02	0.016	0.02	0.018	0.06	0.201	0.063	0.17	0.012
Aluminium, Al	0.078	0.066	0.092	0.046	0.065	0.051	0.072	0.077	<0.030	0.049	<0.030	<0.030	0.032
Antimony, Sb	0.003	0.006	0.006	0.005	0.005	0.004	0.003	0.003	0.003	0.003	0.002	0.001	0.002
Arsenic, As	0.188	0.297	0.465	0.598	1.26	1.57	1.74	1.89	2.1	2.3	2.3	2	2
Barium, Ba	0.009	0.017	0.016	0.017	0.027	0.029	0.025	0.02	0.018	0.017	0.011	0.0097	0.01
Boron, B	<0.03	<0.03	<0.03	0.04	<0.03	0.04	0.036	0.05	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, Ca	3.3	5.1	6.9	11.2	15.8	20.2	20.5	20.9	23	22	18	15	18
Chromium, Cr	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.001	<0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001
Copper, Cu	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0020	0.003	<0.0020	<0.0020	<0.0020

**Column Leach Test MG46045**

<b>Analyte Name</b>	<b>Month 1</b>	<b>Month 2</b>	<b>Month 3</b>	<b>Month 4</b>	<b>Month 5</b>	<b>Month 6</b>	<b>Month 7</b>	<b>Month 8</b>	<b>Month 9</b>	<b>Month 10</b>	<b>Month 11</b>	<b>Month 12</b>	<b>Month 13</b>
Iron, Fe	<0.01	0.01	<0.01	<0.01	0.02	<0.01	0.032	0.026	<0.050	<0.050	<0.050	<0.050	<0.050
Lead, Pb	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium, Mg	2.08	4.01	4.75	8.17	13.3	16.2	15.6	16	13	15	9.6	8.1	10
Manganese, Mn	0.008	0.009	0.005	0.003	0.002	0.002	0.002	0.002	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.024	0.036	0.03	0.028	0.043	0.049	0.045	0.034	0.02	0.02	0.009	0.007	0.008
Nickel, Ni	0.003	0.002	0.001	<0.001	<0.0005	<0.001	0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	11.3	13.7	15.7	15.6	15.4	14.7	12.1	12.2	8.8	9.5	5.9	5.2	5
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Sodium, Na	12.3	16.8	10.6	8.4	6.4	5.8	4.6	3.9	2.5	3.8	1.6	1.7	1.6
Strontium, Sr	0.729	0.806	0.966	1.29	1.87	2.42	1.7	1.43	1.3	1.1	0.85	0.69	0.82
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Uranium, U	0.002	0.003	0.002	0.001	0.001	<0.001	<0.001	<0.001	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Vanadium, V	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

**Column Leach Test MG40061**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Laboratory Job	WP24-13647	WP24-13772	WP24-13902	WP24-14043	WP24-14183	WP24-14298	WP24-14453	WP24-14566	WP24-14780	WP24-14781	WP24-14782	WP25-15079	WP25-15234
pH	7.7	7.4	7.3	7.9	7.8	7.6	7.4	7.4	7.4	7.4	7.5	7.9	7
Sample Volume ml	430	442	440	445	440	460	440	450	420	435	395	390	395
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	40	40	40	35	30	24	23	27	27	6	15	15	17
Dissolved Oxygen	10	8.9	8.5	10.7	8.8	9.7	8.9	10.6	10.7	9	8.2	9.3	10.3
Conductivity @25 °C (µS/cm)	140	220	240	270	290	250	240	220	190	210	200	160	200
Fluoride	0.14	0.1	0.09	-	0.06	0.04	0.03	0.03	0.03	<0.02	0.03	<0.02	<0.02
Chloride	1.1	1.12	0.94	-	0.58	0.3	0.4	0.4	0.33	0.23	0.35	0.22	0.31
Nitrate Nitrogen, NO3-N	0.04	0.05	0.06	-	0.1	<0.01	0.09	0.12	0.2	0.17	0.07	0.05	0.1
Nitrite Nitrogen, NO2-N	0.02	0.04	0.03	-	<0.01	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate, SO4	42	55.8	63.9	-	95.7	88.6	79.7	77.4	76.1	74.9	72.1	53.6	73.4
Total N	0.13	0.17	0.2	0.19	0.19	0.13	0.15	0.1	0.21	0.23	0.12	0.09	0.16
Ammonia N	0.04	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.02	<0.01	0.05
Total phosphorus	0.016	0.01	0.015	0.015	0.009	0.005	0.158	0.127	0.311	0.348	0.063	0.17	0.012
Aluminium, Al	0.302	0.132	0.093	0.091	0.054	0.048	0.043	0.054	0.032	0.051	<0.030	<0.030	0.032
Antimony, Sb	0.005	0.007	0.007	0.007	0.006	0.005	0.004	0.004	0.003	0.003	0.002	0.001	0.002
Arsenic, As	0.09	0.144	0.106	0.362	0.335	0.329	0.35	0.71	0.94	1	2.3	2	2
Barium, Ba	0.007	0.013	0.011	0.014	0.013	0.011	0.01	0.009	0.0081	0.0099	0.011	0.0097	0.01
Boron, B	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.032	0.045	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, Ca	6.9	7.4	9.8	10.2	14.3	13.5	14.7	15.7	16	16	18	15	18
Chromium, Cr	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.0005	<0.001	<0.001	<0.0005	0.001	0.001	0.001	0.001	0.001	0.002	<0.001	<0.001	<0.001
Copper, Cu	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Column Leach Test MG40061													
Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Iron, Fe	<0.01	0.03	<0.01	0.02	0.01	<0.01	0.013	0.012	<0.050	<0.050	<0.050	<0.050	<0.050
Lead, Pb	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium, Mg	2.62	3.7	4.94	9.45	12.4	11.7	11.7	12.1	9.3	11	9.6	8.1	10
Manganese, Mn	0.024	0.026	0.032	0.033	0.039	0.039	0.049	0.035	0.042	0.024	<0.0050	<0.0050	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.017	0.026	0.035	0.043	0.033	0.029	0.027	0.023	0.02	0.02	0.009	0.007	0.008
Nickel, Ni	0.001	0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	14.3	22.3	26.5	18.9	20	16.9	13	13.3	8.5	11	5.9	5.2	5
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Sodium, Na	11.4	18.3	13.5	8.8	7.1	5.3	4.2	3.7	2.1	2.1	1.6	1.7	1.6
Strontium, Sr	0.505	0.593	0.696	1.08	1.01	0.954	0.771	0.771	0.67	0.71	0.85	0.69	0.82
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Uranium, U	0.003	0.004	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.00030	<0.00030	<0.00030	<0.00030
Vanadium, V	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

**Column Leach Test MG37922**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Laboratory Job	WP24-13647	WP24-13772	WP24-13902	WP24-14043	WP24-14183	WP24-14298	WP24-14453	WP24-14566	WP24-14780	WP24-14781	WP24-14782	WP25-15079	WP25-15234
pH	7.8	7.7	7.6	7.8	7.8	7.7	7.5	7.4	7.5	7.4	7.6	7.6	7.4
Sample Volume ml	433	456	460	450	450	460	450	470	475	465	440	450	470
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	30	30	22	25	20	16	21	37	23	9	25	25	27
Dissolved Oxygen	9.8	8.9	8.5	10.8	8.8	10.4	8.7	10.5	11	9	8.2	9.7	10.4
Conductivity @25 °C (µS/cm)	97	130	180	190	220	180	200	160	160	130	140	130	140
Fluoride	0.09	0.08	0.07	-	0.04	0.04	0.03	0.02	0.02	<0.02	0.02	<0.02	<0.02
Chloride	0.94	0.93	0.83	-	0.68	0.39	0.46	0.35	0.33	0.18	0.31	0.32	0.25
Nitrate Nitrogen, NO3-N	0.04	0.04	0.04	-	0.11	<0.01	0.14	0.13	0.19	0.09	0.15	0.15	0.17
Nitrite Nitrogen, NO2-N	<0.01	<0.01	0.01	-	0.04	0.12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate, SO4	30	30.5	53.3	-	69.5	59.5	64.1	48.3	52.1	38.9	38.6	34.4	39.2
Total N	0.26	0.18	0.17	0.14	0.17	0.15	0.18	0.19	0.23	0.12	0.18	0.17	0.21
Ammonia N	0.12	0.24	0.08	0.01	0.01	<0.01	<0.01	0.03	0.1	0.01	0.02	0.01	0.06
Total phosphorus	<0.005	0.007	0.005	0.007	0.008	<0.005	0.006	0.007	0.014	0.009	0.019	0.029	<0.005
Aluminium, Al	0.101	0.055	0.046	0.035	0.073	<0.002	0.077	0.107	0.064	0.14	0.068	0.076	0.1
Antimony, Sb	0.006	0.008	0.008	0.007	0.007	0.005	0.005	0.004	0.004	0.003	0.003	0.002	0.003
Arsenic, As	0.042	0.081	0.235	0.323	0.481	0.256	0.481	0.488	0.43	0.43	0.39	0.35	0.33
Barium, Ba	0.006	0.01	0.014	0.015	0.016	0.012	0.013	0.009	0.01	0.0071	0.0074	0.0061	0.0063
Boron, B	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	0.037	0.045	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, Ca	5.2	5.2	7.6	4.7	11	9.5	10.3	9.6	12	9.9	9.1	8.2	9.5
Chromium, Cr	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001

**Column Leach Test MG37922**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Copper, Cu	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Iron, Fe	0.02	0.02	0.02	0.03	<0.01	0.01	0.011	<0.005	<0.050	<0.050	<0.050	<0.050	<0.050
Lead, Pb	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.001	<0.00050	<0.00050	<0.00050
Magnesium, Mg	2.29	3.75	5.66	4.51	10.5	9.18	9.91	9.04	9.1	7	8.2	8.1	9.2
Manganese, Mn	0.034	0.023	0.009	0.007	0.003	0.009	0.002	0.002	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.016	0.021	0.029	0.031	0.03	0.021	0.022	0.015	0.01	0.007	0.006	0.006	0.007
Nickel, Ni	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	7.1	7.1	10.8	6.1	11.6	9.8	9	7.8	7	5.8	5.5	4.9	4.4
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Sodium, Na	8	9.1	7.5	3.9	5.8	4.8	3.7	2.7	2	1.5	1.4	1.3	1.2
Strontium, Sr	0.699	0.907	1.63	1.46	1.6	1.26	1.29	0.938	0.9	0.67	0.66	0.6	0.57
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Uranium, U	0.003	0.003	0.002	0.002	0.003	<0.001	0.002	0.001	<0.001	<0.001	<0.001	<0.00030	<0.001
Vanadium, V	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.010	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data

**Column Leach Test Tailings (M754 JR024 CN de-tox filter cake)**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Laboratory Job	EB24265 10	EB24300 26	EB24334 78	EB24370 27	EB24408 31	EB24449 23	EB25020 47	EB24265 10	EB24300 26	EB251264 8	EB251591 1	EB251853 5	EB252341 5
pH	7.63	7.93	7.25	7.53	7.69	7.57	7.61	7.63	7.93	7.58	7.21	7.62	7.55
Sample Volume ml	480	550	350	350	410	400	400	480	550	470	460	310	350
Acidity pH 4.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity pH 5.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity pH 7.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Alkalinity as CaCO3	62	61	53	48	51	53	48	62	61	49	47	64	58
Dissolved Oxygen	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity @25 °C (µS/cm)	484	322	208	180	218	213	148	484	322	309	265	300	249
Fluoride	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.1	0.2	0.2
Chloride	33	16	4	1	1	1	0.5	33	16	1	0.5	0.5	0.5
Nitrate Nitrogen, NO3-N	0.01	0.11	0.34	0.31	0.2	0.17	0.08	0.01	0.11	0.08	0.2	0.08	0.04
Nitrite Nitrogen, NO2-N	0.06	0.09	0.1	0.07	0.1	0.09	0.005	0.06	0.09	0.06	0.06	0.16	0.07
Sulphate, SO4	0	64	39	33	45	38	16	0	64	93	78	91	55
Total N	0.2	0.4	0.7	0.6	0.6	0.3	0.2	0.2	0.4	0.2	0.4	0.9	0.1
Ammonia N	0.85	0.04	0.02	0.06	0.04	0.005	0.005	0.85	0.04	0.005	0.005	0.36	0.005
Total phosphorus	0.79	1.25	1.25	1.48	1.59	1.21	1.73	0.79	1.25	1.96	2.29	2	2
Aluminium, Al	0.02	0.02	0.02	0.02	0.005	0.01	0.01	0.02	0.02	0.005	0.03	0.005	0.005
Antimony, Sb	0.019	0.014	0.012	0.012	0.012	0.008	0.007	0.019	0.014	0.007	0.008	0.01	0.008
Arsenic, As	1.9	3.1	2.87	3.52	4.01	2.96	4.04	1.9	3.1	4.85	6.29	5.06	4.62
Barium, Ba	0.168	0.165	0.24	0.262	0.278	0.282	0.227	0.168	0.165	0.173	0.18	0.217	0.181
Boron, B	0.46	0.57	0.7	1.05	1.26	1.02	0.53	0.46	0.57	1.17	1.31	1.3	1.21
Cadmium, Cd	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Calcium, Ca	25	359	14	14	18	18	13	25	359	32	30	35	25
Chromium, Cr	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cobalt, Co	0.005	0.004	0.004	0.003	0.002	0.002	0.0005	0.005	0.004	0.001	0.001	0.001	0.0005
Copper, Cu	0.001	0.001	0.001	0.005	0.0005	0.001	0.0005	0.001	0.001	0.003	0.0005	0.0005	0.0005

**Column Leach Test Tailings (M754 JR024 CN de-tox filter cake)**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Iron, Fe	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Lead, Pb	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Magnesium, Mg	12	8	5	6	7	6	4	12	8	11	10	12	8
Manganese, Mn	0.112	0.072	0.026	0.023	0.018	0.013	0.006	0.112	0.072	0.007	0.005	0.006	0.004
Mercury, Hg	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Molybdenum, Mo	0.017	0.017	0.016	0.018	0.016	0.015	0.007	0.017	0.017	0.016	0.015	0.014	0.01
Nickel, Ni	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Potassium, K	10	8	6	7	7	8	4	10	8	6	6	7	4
Selenium, Se	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Silver, Ag	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Sodium, Na	46	36	17	14	13	10	4	46	36	8	8	8	5
Strontium, Sr	1.23	0.962	0.563	0.572	0.548	0.502	0.408	1.23	0.962	0.668	0.614	0.737	0.488
Thallium, Tl	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Tin, Sn	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Titanium, Ti	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Uranium, U	0.006	0.005	0.004	0.004	0.002	0.002	0.002	0.006	0.005	0.002	0.001	0.002	0.002
Vanadium, V	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Zinc, Zn	0.02	0.028	0.013	0.02	0.02	0.019	0.028	0.02	0.028	0.036	0.035	0.039	0.032

All data in mg/L unless otherwise noted. '-' hyphen denotes no data. ½ LOR applied to this data.

**Column Leach Tests CIT T24**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
Laboratory Job	WP24-14466	WP24-14615	WP24-14765	WP24-14766	WP24-14776	WP24-14779	WP25-15090	WP25-15232	WP25-15342	WP25-15570	WP25-15631
pH	6.5	6.6	7.1	6.9	7.3	8.5	6.5	7	7.2	7.1	7.5
Sample Volume ml	330	310	880	50	445	460	510	450	540	510	470
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	1	2	0	1	0	0	4	0	0	0	0
Total Alkalinity as CaCO3	7	17	21	8	5	11	16	13	9	4	6
Dissolved Oxygen	9.7	8.4	9.5	8.2	9.2	8.3	8.3	8.6	8.9	11	8.8
Conductivity @25 °C (µS/cm)	150	280	240	150	78	100	97	100	76	62	78
Fluoride	0.19	0.14	0.15	0.14	0.21	0.16	0.22	0.19	0.2	0.21	0.2
Chloride	1.27	3.04	1.83	2.6	1.03	0.75	0.58	1	0.36	0.24	0.36
Nitrate Nitrogen, NO3-N	12.3	21	20.1	11.7	4.96	7.03	5.24	6.59	4.95	4.21	5.83
Nitrite Nitrogen, NO2-N	<0.01	0.1	0.14	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01
Sulphate, SO4	3.51	17.5	9.68	4.71	2.91	3.36	2.68	2.78	2.25	1.66	2.39
Total N	15	27.2	21	12.4	6.19	7.21	6.39	7.71	5.8	4.69	6.31
Ammonia N	0.55	1.04	0.09	0.08	0.02	0.12	0.01	0.04	0.04	0.03	<0.01
Total phosphorus	1.37	0.212	0.196	0.79	0.825	0.466	0.431	0.502	0.513	0.504	0.391
Aluminium, Al	0.172	0.067	0.041	0.094	3.9	2.4	0.84	2.3	0.44	0.16	1.62
Antimony, Sb	<0.001	<0.001	<0.001	<0.001	0.003	<0.0010	0.003	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, As	0.095	0.091	0.117	0.128	0.24	0.24	0.17	0.14	0.15	0.17	0.17
Barium, Ba	0.01	0.024	0.016	0.009	0.036	0.025	0.031	0.025	0.011	0.015	0.015
Boron, B	0.042	0.059	0.117	0.084	<0.10	<0.10	0.11	<0.10	<0.10	0.31	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00010	<0.00020	<0.00020
Calcium, Ca	18.8	33.3	32.8	16	9.6	12.8	13	14	9	10	9.4
Chromium, Cr	<0.001	<0.001	<0.001	<0.001	0.004	<0.0020	0.003	0.003	<0.0020	<0.0020	<0.0020
Cobalt, Co	0.002	0.005	0.002	<0.0005	0.001	0.00106	<0.001	<0.001	0.001	0.0002	0.0006
Copper, Cu	0.007	0.011	0.005	0.007	0.008	0.0046	0.005	<0.0020	0.003	0.0036	0.0029
Iron, Fe	0.171	0.074	0.025	0.06	2.2	1.3	1.5	1.2	0.21	<0.050	0.83
Lead, Pb	<0.001	<0.0005	<0.0005	<0.0005	0.004	0.0024	0.002	0.003	0.003	0.0025	0.0016

**Column Leach Tests CIT T24**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
Magnesium, Mg	2.1	4.61	4.03	1.85	1.4	1.6	1.7	1.8	1	1.01	1.3
Manganese, Mn	0.253	0.471	0.193	0.028	0.078	0.051	0.054	0.048	0.043	0.012	0.029
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.004	<0.001	0.005	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nickel, Ni	0.002	0.004	0.002	0.002	0.004	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	9	11.2	11.4	7.3	7.8	5.2	4.5	6.8	3.1	3.4	4.4
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-
Sodium, Na	2.6	4.8	3.6	2.4	2.7	1.18	1.2	3.6	0.7	1.1	0.73
Strontium, Sr	0.066	0.117	0.125	0.069	0.063	0.051	0.083	0.056	0.034	0.032	0.036
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	0.002	<0.001	<0.001	0.001	-	-	-	-	-	-	-
Uranium, U	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Vanadium, V	<0.001	0.001	<0.0005	<0.0005	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	<0.002	<0.002	<0.002	<0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

Column Leach Tests RAS Mullock											
Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
Laboratory Job	WP24-14466	WP24-14615	WP24-14765	WP24-14766	WP24-14776	WP24-14779	WP25-15090	WP25-15232	WP25-15342	WP25-15570	WP25-15631
pH	7.5	7.3	7.5	7.8	7.4	8.3	7.4	7.6	8	7.3	7.5
Sample Volume ml	398	425	410	50	470	460	475	530	500	495	475
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	27	34	35	46	49	53	57	56	62	68	67
Dissolved Oxygen	10	8.6	10.2	8.2	9.4	8.7	8.6	8.9	8.8	10.9	8.8
Conductivity @25 °C (µS/cm)	170	280	210	180	180	230	300	230	230	210	220
Fluoride	0.06	0.07	0.06	0.1	0.06	0.05	0.09	0.1	0.08	0.09	0.08
Chloride	3.27	4.38	1.79	1.14	0.59	0.67	0.62	0.25	0.31	0.23	0.28
Nitrate Nitrogen, NO3-N	2.5	3.72	1.63	0.53	<0.01	0.1	0.4	0.27	0.27	0.3	0.45
Nitrite Nitrogen, NO2-N	0.02	0.04	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.03
Sulphate, SO4	35.9	72.6	53.6	41.2	38.1	59.5	77.9	51	48.2	38.2	40
Total N	2.88	4.2	1.94	0.64	0.23	0.29	0.63	0.44	0.45	0.47	0.59
Ammonia N	0.18	<0.01	0.05	0.01	0.06	0.07	<0.01	0.02	<0.01	0.01	<0.01
Total phosphorus	0.075	0.025	0.011	0.032	0.124	0.015	0.016	0.021	0.024	0.01	0.017
Aluminium, Al	0.053	0.05	0.054	0.054	0.042	0.045	<0.030	<0.030	<0.030	<0.030	0.04
Antimony, Sb	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016
Arsenic, As	0.352	0.476	0.471	0.693	0.59	0.51	0.49	0.54	0.5	0.53	0.56
Barium, Ba	0.003	0.004	0.003	0.003	0.004	0.0046	0.0057	0.0042	0.0037	0.0037	0.0037
Boron, B	0.012	0.017	0.075	0.033	<0.10	<0.10	<0.10	<0.10	<0.10	0.23	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00010	<0.00020	<0.00020
Calcium, Ca	12.3	20.1	13.4	12.4	13	16.1	22	17	16	17	16
Chromium, Cr	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0002	<0.001	<0.001	<0.00010	<0.00010	0.0001
Copper, Cu	0.002	0.003	0.001	<0.001	<0.0020	0.0024	0.003	<0.0020	0.003	0.0026	<0.0020
Iron, Fe	0.123	<0.005	0.007	0.011	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Lead, Pb	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium, Mg	8.12	15.7	10.7	9.77	11	13	18	14	14	14.9	16

Column Leach Tests RAS Mullock											
Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
Manganese, Mn	0.01	0.004	0.001	<0.0005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.005	0.009	0.013	0.005	0.004	0.007	0.008	0.006	<0.0020	0.0033	0.0039
Nickel, Ni	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	10.3	15.7	10.3	11.1	9.2	8.6	10	8	6.8	6.8	6.3
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-
Sodium, Na	5.1	9.5	4.5	3.8	3	3.3	4.2	2.4	1.9	2	1.7
Strontium, Sr	0.123	0.186	0.157	0.133	0.17	0.21	0.27	0.21	0.2	0.19	0.31
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	<0.001	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-
Uranium, U	<0.001	0.001	0.001	0.002	0.001	0.0016	0.002	0.002	0.002	0.0026	0.0021
Vanadium, V	<0.0005	<0.0005	<0.0005	<0.001	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

**Column Leach Tests CIT RSSZ**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
Laboratory Job	WP24-14466	WP24-14615	WP24-14765	WP24-14766	WP24-14776	WP24-14779	WP25-15090	WP25-15232	WP25-15342	WP25-15570	WP25-15631
pH	7.7	7.4	7.6	7.7	7.7	9.4	7.8	7.9	8.1	7.8	7.1
Sample Volume ml	420	470	490	50	580	545	545	680	570	550	530
Acidity pH 4.0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 5.0	0	0	0	0	0	0	0	0	0	0	0
Acidity pH 7.0	0	0	0	0	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	29	34	41	56	66	60	62	59	61	58	57
Dissolved Oxygen	10.5	8.6	10.1	7.4	9.7	8.7	8.6	8.9	8.9	10.7	8.8
Conductivity @25 °C (µS/cm)	190	190	180	170	160	160	140	140	130	120	130
Fluoride	0.07	0.05	0.06	0.08	0.07	0.05	0.09	0.08	0.07	0.08	0.08
Chloride	1.03	1.09	1.07	0.9	0.44	0.43	0.37	0.2	0.27	0.19	0.23
Nitrate Nitrogen, NO3-N	11.3	11.9	9.55	5.61	1.61	1.17	0.98	0.47	0.49	0.55	0.98
Nitrite Nitrogen, NO2-N	0.45	0.1	0.02	0.02	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02
Sulphate, SO4	4.15	4.38	5.72	3.55	2.23	5.8	2.35	1.35	1.16	1.05	1.3
Total N	11.1	12.8	9.96	5.36	1.96	1.42	1.3	0.73	0.63	0.69	1.08
Ammonia N	0.12	<0.01	0.02	0.02	0.07	<0.01	<0.01	0.04	0.01	0.01	<0.01
Total phosphorus	0.222	0.154	0.095	0.205	0.409	0.15	0.156	0.167	0.263	0.13	0.129
Aluminium, Al	0.022	0.014	0.013	0.007	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Antimony, Sb	0.001	0.001	0.001	0.001	0.001	0.0012	0.001	0.001	0.001	<0.0010	0.0016
Arsenic, As	3	3.05	3.87	4.54	4.9	4.5	5.3	5.1	4.8	5.1	5.1
Barium, Ba	<0.002	<0.002	<0.002	<0.002	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, B	0.015	0.012	0.055	0.025	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	<0.10
Cadmium, Cd	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00010	<0.00020	<0.00020
Calcium, Ca	24.6	27	26.9	24.5	25	23.9	23	22	21	21	19
Chromium, Cr	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cobalt, Co	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.00028	<0.00010	<0.001	<0.00010	<0.00010	0.0001
Copper, Cu	0.003	0.002	0.001	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Iron, Fe	0.035	<0.005	0.01	<0.005	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Lead, Pb	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium, Mg	1.01	1.2	1.06	1.03	1.2	2.7	1.2	1.2	0.8	0.95	0.89

**Column Leach Tests CIT RSSZ**

Analyte Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
Manganese, Mn	0.005	<0.001	0.002	<0.0005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Mercury, Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Molybdenum, Mo	0.003	0.001	0.005	0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nickel, Ni	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium, K	13	9.8	9.1	9.1	9.2	7.9	7.6	6.6	5.8	5.7	5.7
Selenium, Se	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silver, Ag	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-
Sodium, Na	2.3	2.4	1.9	1.8	1.8	2.09	1.2	1	0.8	1.2	0.71
Strontium, Sr	0.052	0.062	0.051	0.053	0.059	0.091	0.061	0.055	0.043	0.041	0.042
Thallium, Tl	<0.0005	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, Sn	<0.0005	<0.0005	<0.0005	<0.0005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium, Ti	0.001	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-
Uranium, U	<0.0002	<0.0002	<0.0002	<0.0002	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Vanadium, V	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, Zn	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

All data in mg/L unless otherwise noted. '-' hyphen denotes no data.

## **APPENDIX C   LABORATORY CERTIFICATES OF ANALYSIS**

# ANALYSIS REPORT

## Preliminary WP24-13610.001

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19838 (week 4)

**Received:** 10/04/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13610

**Report Number:** 0000028471

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	457	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	200	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	510	µS/cm
Fluoride	APHA 4110 B	1.2	g/m <sup>3</sup>
Chloride	APHA 4110 B	18	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.090	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	38	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.27	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.248	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	1.65	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.049	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.024	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.090	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	23.0	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.880	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.80	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.026	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	6.2	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	78.1	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.102	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.023	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.015	g/m <sup>3</sup>

Date Start/End Analysis (12/4/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

Signed and dated on 06-Jun-2024



**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

## Preliminary WP24-13611.001

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19838 (week 8)

**Received:** 15/03/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13611

**Report Number:** 0000028472

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.4	pH unit
Sample Volume	APHA 2310	467	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	130	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	240	µS/cm
Fluoride	APHA 4110 B	0.65	g/m <sup>3</sup>
Chloride	APHA 4110 B	2.0	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	14	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.46	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.101	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.110	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.089	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.080	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.62	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.019	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.2	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	42.9	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>

Date Start/End Analysis (12/4/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

Signed and dated on 06-Jun-2024



**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

## Preliminary WP24-13647.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19838 (week 12)

**Received:** 17/04/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13647

**Report Number:** 0000028477

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	481	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	80	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	170	µS/cm
Fluoride	APHA 4110 B	0.37	g/m <sup>3</sup>
Chloride	APHA 4110 B	1.9	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.010	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	9.0	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.27	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.09	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.096	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.132	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.068	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.070	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.86	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.015	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	27.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.051	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>

Date Start/End Analysis (26/4/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13647.002

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG46045 (week 4)

**Received:** 17/04/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13647

**Report Number:** 0000028477

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	402	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	16	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	120	µS/cm
Fluoride	APHA 4110 B	0.10	g/m <sup>3</sup>
Chloride	APHA 4110 B	2.6	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	0.11	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.020	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	42	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.43	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.29	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.017	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.078	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.188	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	3.3	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.08	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.024	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	12.3	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.729	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>

Date Start/End Analysis (26/4/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13647.003

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG40061 (week 4)

**Received:** 17/04/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13647

**Report Number:** 0000028477

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	430	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	40	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Fluoride	APHA 4110 B	0.14	g/m <sup>3</sup>
Chloride	APHA 4110 B	1.1	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	0.040	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.020	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	42	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.13	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.04	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.016	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.302	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.090	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	6.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.62	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.024	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.017	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	14.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	11.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.505	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>

Date Start/End Analysis (26/4/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13647.004

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG37922 (week 4)

**Received:** 17/04/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13647

**Report Number:** 0000028477

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	433	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	30	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	97	µS/cm
Fluoride	APHA 4110 B	0.09	g/m <sup>3</sup>
Chloride	APHA 4110 B	0.94	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	0.040	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	30	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.26	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.12	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	<0.005	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.101	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.042	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.29	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.034	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	7.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	8.0	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.699	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>

Date Start/End Analysis (26/4/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

Signed and dated on 06-Jun-2024



**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

## Preliminary WP24-13772.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19838 (week 16)

**Received:** 10/05/2024

**Completed:**
**Job Number:** WP24-13772

**Report Number:** 0000028489

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	478	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	70	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.11	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.11	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.038	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.057	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	14.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.69	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	19.2	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.072	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.26	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.22	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	4.11	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
 Report # AR-24-NW-032511-01



**Analysis Report:**  
WP24-13772.001

## Preliminary

Date Start/End Analysis (17/5/2024 - )

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13772.002

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG46045 (week 8)

**Received:** 10/05/2024

**Completed:**
**Job Number:** WP24-13772

**Report Number:** 0000028489

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	427	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	30	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.68	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.007	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.066	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.297	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.017	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.1	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.01	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.036	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	16.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.806	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	2.79	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.17	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.40	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	49.9	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
 Report # AR-24-NW-032511-01



**Analysis Report:**  
WP24-13772.002

## Preliminary

Date Start/End Analysis (17/5/2024 - )

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13772.003

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG40061 (week 8)

**Received:** 10/05/2024

**Completed:**
**Job Number:** WP24-13772

**Report Number:** 0000028489

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	442	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	40	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	220	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.010	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.132	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.144	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	7.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	3.70	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.026	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.026	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	22.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	18.3	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.593	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.12	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	55.8	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
 Report # AR-24-NW-032511-01



**Analysis Report:**  
WP24-13772.003

## Preliminary

Date Start/End Analysis (17/5/2024 - )

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13772.004

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG37922 (week 8)

**Received:** 10/05/2024

**Completed:**
**Job Number:** WP24-13772

**Report Number:** 0000028489

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	456	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	30	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.18	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.24	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.007	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.055	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.081	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	3.75	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.023	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.021	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	7.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	9.1	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.907	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.93	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	30.5	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
 Report # AR-24-NW-032511-01

## Preliminary

Date Start/End Analysis (17/5/2024 - )

Reported: 6/06/2024 12:00:00AM

Analysis Report:  
WP24-13772.004



**Nick LEES**  
Operations Manager

Signed and dated on 06-Jun-2024

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# ANALYSIS REPORT

WP24-13902.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19838 (week 20)

**Received:** 13/06/2024

**Completed:** 09/08/2024

**Job Number:** WP24-13902

**Report Number:** 0000029186

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.7	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	2	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	67	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.11	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.04	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.028	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.061	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.041	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	14.5	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.74	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	5.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	9.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.079	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.48	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.16	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	3.35	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-037889-01

Date Start/End Analysis (14/6/2024 - 9/8/2024)

**Reported:** 20/08/2024 8:58:50AM

# ANALYSIS REPORT

WP24-13902.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG46045 (week 12)

**Received:** 13/06/2024

**Completed:** 09/08/2024

**Job Number:** WP24-13902

**Report Number:** 0000029186

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.1	pH unit
Sample Volume	APHA 2310	420	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	23	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	180	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.00	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.14	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.007	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.092	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.465	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	6.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.75	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	15.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	10.6	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.966	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.49	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.87	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	75.5	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-037889-01

Date Start/End Analysis (14/6/2024 - 9/8/2024)

**Reported:** 20/08/2024 8:58:50AM

# ANALYSIS REPORT

WP24-13902.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG40061 (week 12)

**Received:** 13/06/2024

**Completed:** 09/08/2024

**Job Number:** WP24-13902

**Report Number:** 0000029186

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	40	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	240	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.20	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.03	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.015	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.093	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.106	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.8	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.94	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.032	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.035	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	26.5	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	13.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.696	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.94	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.09	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	63.9	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-037889-01

Date Start/End Analysis (14/6/2024 - 9/8/2024)

**Reported:** 20/08/2024 8:58:50AM

# ANALYSIS REPORT

WP24-13902.004

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG37922 (week 12)

**Received:** 13/06/2024

**Completed:** 09/08/2024

**Job Number:** WP24-13902

**Report Number:** 0000029186

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	460	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	22	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	180	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.08	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.005	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.046	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.235	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.014	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	7.6	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	5.66	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.029	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	10.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	7.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.63	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.83	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	53.3	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-037889-01

Date Start/End Analysis (14/6/2024 - 9/8/2024)

Reported: 20/08/2024 8:58:50AM

Signed and dated on 20-Aug-2024



**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

WP24-14043.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19838 (week 24)

**Received:** 10/07/2024

**Completed:** 26/09/2024

**Job Number:** WP24-14043

**Report Number:** 0000029561

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	485	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	70	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.10	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.027	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.110	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.035	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	12.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.80	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.4	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	5.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.089	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.27	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	4.14	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus & anions (1x) subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-045066.

Flouride analysis- for sample 003 & 004 not reported due to technical difficulties.

Anions not reported for sample 002- sample was mistakenly discarded by subcontracted before completion of analysis.

Date Start/End Analysis (11/7/2024 - 26/9/2024)

**Reported:** 26/09/2024 1:51:19PM

# ANALYSIS REPORT

WP24-14043.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG46045 (week 16)

**Received:** 10/07/2024

**Completed:** 26/09/2024

**Job Number:** WP24-14043

**Report Number:** 0000029561

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.1	pH unit
Sample Volume	APHA 2310	405	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	30	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	200	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.80	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.10	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.012	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.046	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.598	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.017	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	11.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	8.17	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.028	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	15.6	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	8.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.29	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus & anions (1x) subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-045066.

Flouride analysis- for sample 003 & 004 not reported due to technical difficulties.

Anions not reported for sample 002- sample was mistakenly discarded by subcontracted before completion of analysis.

Date Start/End Analysis (11/7/2024 - 26/9/2024)

Reported: 26/09/2024 1:51:19PM

# ANALYSIS REPORT

WP24-14043.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG40061 (week 16)

**Received:** 10/07/2024

**Completed:** 26/09/2024

**Job Number:** WP24-14043

**Report Number:** 0000029561

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	445	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	35	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	270	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.19	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.015	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.091	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.362	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.014	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	10.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	9.45	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.033	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.043	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	18.9	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	8.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.08	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B	0.82	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	0.11	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	<0.010	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	90	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus & anions (1x) subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-045066.

Flouride analysis- for sample 003 & 004 not reported due to technical difficulties.

Anions not reported for sample 002- sample was mistakenly discarded by subcontracted before completion of analysis.

Date Start/End Analysis (11/7/2024 - 26/9/2024)

**Reported:** 26/09/2024 1:51:19PM

# ANALYSIS REPORT

## WP24-14043.004

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG37922 (week 16)

**Received:** 10/07/2024

**Completed:** 26/09/2024

**Job Number:** WP24-14043

**Report Number:** 0000029561

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	25	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.14	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.007	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.035	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.323	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.015	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	4.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.51	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.031	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	6.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.9	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.46	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B	0.71	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	0.065	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.014	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	57	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus & anions (1x) subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-045066.

Flouride analysis- for sample 003 & 004 not reported due to technical difficulties.

Anions not reported for sample 002- sample was mistakenly discarded by subcontracted before completion of analysis.

Date Start/End Analysis (11/7/2024 - 26/9/2024)

Reported: 26/09/2024 1:51:19PM



Signed and dated on 26-Sep-2024

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

WP24-14183.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19838 (week 28)

**Received:** 8/08/2024

**Completed:** 29/08/2024

**Job Number:** WP24-14183

**Report Number:** 0000029247

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.3	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	60	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.10	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.021	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.073	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.039	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	17.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.12	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.9	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.3	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.096	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.19	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.40	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-049610-01



**Analysis Report:**  
WP24-14183.001

Date Start/End Analysis (10/8/2024 - 29/8/2024)

**Reported:** 29/08/2024 3:16:50PM

# ANALYSIS REPORT

WP24-14183.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG46045 (week 20)

**Received:** 8/08/2024

**Completed:** 29/08/2024

**Job Number:** WP24-14183

**Report Number:** 0000029247

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	410	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	20	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	290	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.73	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.020	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.065	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.26	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.027	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	15.8	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	13.3	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.043	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	15.4	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	6.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.87	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.00	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.62	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	100	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-049610-01



**Analysis Report:**  
WP24-14183.002

Date Start/End Analysis (10/8/2024 - 29/8/2024)

**Reported:** 29/08/2024 3:16:50PM

# ANALYSIS REPORT

WP24-14183.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG40061 (week 20)

**Received:** 8/08/2024

**Completed:** 29/08/2024

**Job Number:** WP24-14183

**Report Number:** 0000029247

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	30	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	290	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.19	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.009	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.054	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.335	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	14.3	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	12.4	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.039	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.033	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	20.0	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	7.1	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.01	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.58	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	95.7	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-049610-01



**Analysis Report:**  
WP24-14183.003

Date Start/End Analysis (10/8/2024 - 29/8/2024)

**Reported:** 29/08/2024 3:16:50PM

# ANALYSIS REPORT

WP24-14183.004

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG37922 (week 20)

**Received:** 8/08/2024

**Completed:** 29/08/2024

**Job Number:** WP24-14183

**Report Number:** 0000029247

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	20	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	220	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.008	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.073	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.481	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	11.0	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	10.5	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.6	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	5.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.60	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.68	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.11	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	69.5	g/m <sup>3</sup>

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-24-NW-049610-01

Date Start/End Analysis (10/8/2024 - 29/8/2024)

Reported: 29/08/2024 3:16:50PM



**Nick LEES**  
Operations Manager

Signed and dated on 29-Aug-2024

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# ANALYSIS REPORT

## Preliminary WP24-14298.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19838 (week 32)

**Received:** 5/09/2024

**Completed:** 25/09/2024

**Job Number:** WP24-14298

**Report Number:** 0000029556

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	64	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.12	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.026	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.083	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.042	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	17.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.11	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	5.5	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.1	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.094	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.76	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.15	g/m <sup>3</sup>

## Preliminary

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-056088-01.

For alkalinity analysis- 25ml of total volume was used.

Date Start/End Analysis ( 5/9/2024 - 25/9/2024)

Reported: 25/09/2024 8:32:25AM

# ANALYSIS REPORT

## Preliminary WP24-14298.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG46045 (week 24)

**Received:** 5/09/2024

**Completed:** 25/09/2024

**Job Number:** WP24-14298

**Report Number:** 0000029556

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	405	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	14	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	330	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.39	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.016	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.051	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.57	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.029	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	20.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	16.2	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.049	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	14.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	5.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	2.42	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.57	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.36	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	124	g/m <sup>3</sup>

## Preliminary

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-056088-01.

For alkalinity analysis- 25ml of total volume was used.

Date Start/End Analysis ( 5/9/2024 - 25/9/2024)

**Reported:** 25/09/2024 8:32:25AM

# ANALYSIS REPORT

## Preliminary WP24-14298.003

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG40061 (week 24)

**Received:** 5/09/2024

**Completed:** 25/09/2024

**Job Number:** WP24-14298

**Report Number:** 0000029556

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	460	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	24	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	250	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.13	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.005	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.048	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.329	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	13.5	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	11.7	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.039	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.029	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	16.9	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	5.3	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.954	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.30	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	88.6	g/m <sup>3</sup>

## Preliminary

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-056088-01.

For alkalinity analysis- 25ml of total volume was used.

Date Start/End Analysis ( 5/9/2024 - 25/9/2024)

Reported: 25/09/2024 8:32:25AM

# ANALYSIS REPORT

## Preliminary WP24-14298.004

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG37922 (week 24)

**Received:** 5/09/2024

**Completed:** 25/09/2024

**Job Number:** WP24-14298

**Report Number:** 0000029556

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	460	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	16	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	180	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.15	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	<0.005	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.256	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.5	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	9.18	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.021	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.26	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.39	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.12	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	59.5	g/m <sup>3</sup>

## Preliminary

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-056088-01.

For alkalinity analysis- 25ml of total volume was used.

Date Start/End Analysis ( 5/9/2024 - 25/9/2024)

Reported: 25/09/2024 8:32:25AM



Signed and dated on 25-Sep-2024

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

## WP24-14453.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19838 (week 36)

**Received:** 4/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14453

**Report Number:** 0000029993

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	66	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.18	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.038	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.081	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.045	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.057	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	19.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.062	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.01	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.5	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.1	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.103	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.30	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.46	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.046	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.058	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	21	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.3	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.11	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-061984-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-30919.

Date Start/End Analysis ( 4/10/2024 - 13/11/2024)

**Reported:** 13/11/2024 10:36:18AM

# ANALYSIS REPORT

WP24-14453.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG46045 (week 28)

**Received:** 4/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14453

**Report Number:** 0000029993

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	390	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	15	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	300	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.28	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.020	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.072	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.74	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.025	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.036	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	20.5	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.032	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	15.6	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.045	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	12.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.6	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.70	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.62	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.22	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	117	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.9	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.033	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.026	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	26	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	11	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	15	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.040	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-061984-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-30919.

Date Start/End Analysis ( 4/10/2024 - 13/11/2024)

**Reported:** 13/11/2024 10:36:18AM

# ANALYSIS REPORT

## WP24-14453.003

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG40061 (week 28)

**Received:** 4/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14453

**Report Number:** 0000029993

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	23	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	240	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.15	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.158	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.043	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.350	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.032	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	14.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	11.7	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.049	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.027	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.0	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.2	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.771	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.40	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.09	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	79.7	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.51	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.23	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.026	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.00	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	20	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	13	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	12	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.12	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.9	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.92	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0008	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.018	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-061984-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-30919.

Date Start/End Analysis ( 4/10/2024 - 13/11/2024)

**Reported:** 13/11/2024 10:36:18AM

# ANALYSIS REPORT

WP24-14453.004

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG37922 (week 28)

**Received:** 4/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14453

**Report Number:** 0000029993

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	21	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	200	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.18	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.006	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.077	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.481	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.037	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	10.3	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	9.91	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.022	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.0	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.29	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.46	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.14	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	64.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.51	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.082	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.014	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	15	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.9	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.012	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	9.8	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.6	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.4	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-061984-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-30919.

Date Start/End Analysis ( 4/10/2024 - 13/11/2024)

Reported: 13/11/2024 10:36:18AM



**Zahida ZIA**  
Environmental Laboratory Technician

Signed and dated on 13-Nov-2024

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# ANALYSIS REPORT

WP24-14566.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19838 (week 40)

**Received:** 30/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14566

**Report Number:** 0000029989

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	74	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.1	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.13	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.038	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.048	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.054	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.080	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	22.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.02	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	5.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.0	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.109	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.77	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.16	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.048	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.062	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0078	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	19	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.6	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.10	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-068479-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (30/10/2024 - 13/11/2024)

**Reported:** 13/11/2024 6:24:21AM

# ANALYSIS REPORT

WP24-14566.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG46045 (week 32)

**Received:** 30/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14566

**Report Number:** 0000029989

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	410	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	22	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	270	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.24	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.018	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.077	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.89	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	20.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.026	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	16.0	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.034	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	12.2	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.9	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.43	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.51	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.16	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	98.8	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.9	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.021	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.00	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	22	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	13	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.030	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.1	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.5	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-068479-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (30/10/2024 - 13/11/2024)

**Reported:** 13/11/2024 6:24:21AM

# ANALYSIS REPORT

WP24-14566.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG40061 (week 32)

**Received:** 30/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14566

**Report Number:** 0000029989

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	27	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	220	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.10	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.127	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.054	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.710	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.045	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	15.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	12.1	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.035	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.023	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.771	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.40	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.12	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	77.4	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.73	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.055	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0094	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	16	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0006	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	12	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.031	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.030	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.79	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-068479-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (30/10/2024 - 13/11/2024)

**Reported:** 13/11/2024 6:24:21AM

# ANALYSIS REPORT

## WP24-14566.004

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG37922 (week 32)

**Received:** 30/10/2024

**Completed:** 13/11/2024

**Job Number:** WP24-14566

**Report Number:** 0000029989

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	37	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	160	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.19	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.03	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.007	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.107	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.488	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.045	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.6	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	9.04	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.015	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	7.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.938	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.35	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.13	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	48.3	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.42	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.074	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0092	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	11	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	6.9	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.6	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.3	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.97	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-068479-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (30/10/2024 - 13/11/2024)

Reported: 13/11/2024 6:24:21AM



**Zahida ZIA**  
Environmental Laboratory Technician

Signed and dated on 13-Nov-2024

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# ANALYSIS REPORT

## WP24-14780.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 20-12-24

**Sample ID:** MG19838 (week 48)

**Received:** 10/12/2024

**Completed:**
**Job Number:** WP24-14780

**Report Number:** 0000030681

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	56	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	110	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.12	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.043	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.27	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.15	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.043	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.065	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0071	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	19	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0013	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.2	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.007	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.4	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.093	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.050	g/m3
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.003	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.044	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.006	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.123	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	20.6	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.57	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.010	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.003	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	3.5	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.9	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.095	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.003	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.002	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001

Amended report: This report replaces 0000030404, sample volumes have been amended.

Date Start/End Analysis (31/12/2024 - )

Reported: 19/02/2025 1:18:47PM

# ANALYSIS REPORT

## WP24-14780.002

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 20-12-24

**Sample ID:** MG46045 (week 40)

**Received:** 10/12/2024

**Completed:**
**Job Number:** WP24-14780

**Report Number:** 0000030681

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	415	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	15	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	250	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.20	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.060	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.38	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.12	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	115	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.1	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.018	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	23	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0008	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.8	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.006	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	13	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.3	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.025	g/m3
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.003	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	2.32	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.015	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.073	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	19.9	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	14.4	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.019	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.3	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.5	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.18	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001

Amended report: This report replaces 0000030404, sample volumes have been amended.

Date Start/End Analysis (31/12/2024 - )

Reported: 19/02/2025 1:18:47PM

# ANALYSIS REPORT

## WP24-14780.003

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 20-12-24

**Sample ID:** MG40061 (week 40)

**Received:** 10/12/2024

**Completed:**
**Job Number:** WP24-14780

**Report Number:** 0000030681

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	420	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	27	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.21	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.03	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.311	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.33	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.20	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	76.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.94	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.032	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0081	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	16	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0021	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.5	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.3	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.042	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.1	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.67	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.026	g/m3
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.003	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.07	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.008	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.058	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	14.4	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.031	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	10.4	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.037	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.015	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.1	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.3	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.655	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001

Amended report: This report replaces 0000030404, sample volumes have been amended.

Date Start/End Analysis (31/12/2024 - )

Reported: 19/02/2025 1:18:47PM

# ANALYSIS REPORT

## WP24-14780.004

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 20-12-24

**Sample ID:** MG37922 (week 40)

**Received:** 10/12/2024

**Completed:**
**Job Number:** WP24-14780

**Report Number:** 0000030681

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	475	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	23	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	11.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	160	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.23	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.10	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.014	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.33	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.19	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	52.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.43	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.064	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.010	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	12	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.0	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.007	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.1	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.90	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.060	g/m3
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.004	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.459	g/m3
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.009	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.068	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.7	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	11.0	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.011	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	8.3	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.2	g/m3
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.926	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m3
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001

Amended report: This report replaces 0000030404, sample volumes have been amended.

Date Start/End Analysis (31/12/2024 - )

Reported: 19/02/2025 1:18:47PM



Signed and dated on 19-Feb-2025

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

## WP24-14781.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 17-01-25

**Sample ID:** MG19838 (week 52)

**Received:** 20/01/2025

**Completed:** 01/02/2025

**Job Number:** WP24-14781

**Report Number:** 0000030564

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.2	pH unit
Sample Volume	APHA 2310	462	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	25	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	110	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.20	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.068	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.42	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	1.86	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.049	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.10	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0065	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.3	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.009	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.4	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.088	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of anions, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report#:AR-25-NW-007032-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-01742

Date Start/End Analysis (21/1/2025 - 1/2/2025)

Reported: 1/02/2025 12:56:47PM

# ANALYSIS REPORT

WP24-14781.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:** Flush 17-01-25

**Sample ID:** MG46045 (week 44)

**Received:** 20/01/2025

**Completed:** 01/02/2025

**Job Number:** WP24-14781

**Report Number:** 0000030564

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	400	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	7	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	270	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.18	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.201	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.30	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	110	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.3	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.049	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.017	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	22	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.5	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.008	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	15	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.8	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.1	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of anions, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report#:AR-25-NW-007032-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-01742

Date Start/End Analysis (21/1/2025 - 1/2/2025)

Reported: 1/02/2025 12:56:47PM

# ANALYSIS REPORT

WP24-14781.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:** Flush 17-01-25

**Sample ID:** MG40061 (week 44)

**Received:** 20/01/2025

**Completed:** 01/02/2025

**Job Number:** WP24-14781

**Report Number:** 0000030564

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	435	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	6	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	210	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.23	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.348	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.23	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.17	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	74.9	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.0	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.051	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0099	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	16	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.002	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	11	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.006	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	11	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.024	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.1	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.71	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of anions, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report#:AR-25-NW-007032-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-01742

Date Start/End Analysis (21/1/2025 - 1/2/2025)

Reported: 1/02/2025 12:56:47PM

# ANALYSIS REPORT

## WP24-14781.004

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 17-01-25

**Sample ID:** MG37922 (week 44)

**Received:** 20/01/2025

**Completed:** 01/02/2025

**Job Number:** WP24-14781

**Report Number:** 0000030564

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	465	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	9	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.12	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.009	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.18	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.09	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	38.9	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.43	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.14	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0071	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.9	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.8	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.006	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.0	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.67	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0001	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of anions, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report#:AR-25-NW-007032-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-01742

Date Start/End Analysis (21/1/2025 - 1/2/2025)

Reported: 1/02/2025 12:56:47PM



**Zahida ZIA**  
Environmental Laboratory Technician

Signed and dated on 01-Feb-2025

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# ANALYSIS REPORT

WP24-14782.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 14-02-25

**Sample ID:** MG19838 (week 56)

**Received:** 10/12/2024

**Completed:** 04/03/2025

**Job Number:** WP24-14782

**Report Number:** 0000030829

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.8	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	7	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	55	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.1	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	110	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.16	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.043	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.41	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.08	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.049	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.10	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0072	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.11	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.10	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.2	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.008	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.4	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.8	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.086	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-076133-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (18/2/2025 - 4/3/2025)

Reported: 5/03/2025 9:26:32AM

# ANALYSIS REPORT

## WP24-14782.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 14-02-25

**Sample ID:** MG46045 (week 48)

**Received:** 10/12/2024

**Completed:** 04/03/2025

**Job Number:** WP24-14782

**Report Number:** 0000030829

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	395	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	15	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	200	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.12	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.063	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.35	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	72.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.3	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.011	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.9	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.6	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.6	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.85	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-076133-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (18/2/2025 - 4/3/2025)

Reported: 5/03/2025 9:26:32AM

# ANALYSIS REPORT

WP24-14782.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 14-02-25

**Sample ID:** MG40061 (week 48)

**Received:** 10/12/2024

**Completed:** 04/03/2025

**Job Number:** WP24-14782

**Report Number:** 0000030829

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	435	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO3	APHA 2320B	23	mg/l CaCO3
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	170	µS/cm
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.22	g/m3
Ammonia nitrogen by CFA/FIA	APHA 4500 NH3 H online edition subcontracted ELS	0.01	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.097	g/m3
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m3
Chloride	APHA 4110 B subcontracted ELS	0.30	g/m3
Nitrate Nitrogen, NO3-N	APHA 4110 B subcontracted ELS	0.21	g/m3
Nitrite Nitrogen, NO2-N	APHA 4110 B subcontracted ELS	<0.01	g/m3
Sulphate as SO4	APHA 4110 B subcontracted ELS	54.9	g/m3
Arsenic (As) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.92	g/m3
Aluminium (Al) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.055	g/m3
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0071	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	16	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.0	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.005	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.5	g/m3

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.040	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.55	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-076133-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (18/2/2025 - 4/3/2025)

Reported: 5/03/2025 9:26:32AM

# ANALYSIS REPORT

## WP24-14782.004

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 14-02-25

**Sample ID:** MG37922 (week 48)

**Received:** 10/12/2024

**Completed:** 04/03/2025

**Job Number:** WP24-14782

**Report Number:** 0000030829

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	25	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.18	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.019	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.31	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.15	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	38.6	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.39	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.068	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0074	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.1	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.5	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.006	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.2	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.4	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.66	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-076133-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33721

Date Start/End Analysis (18/2/2025 - 4/3/2025)

Reported: 5/03/2025 9:26:32AM



**Alesha BENNETTS**  
Laboratory Technician

Signed and dated on 05-Mar-2025

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# ANALYSIS REPORT

WP25-15079.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 14-03-25

**Sample ID:** MG46045 (week 52)

**Received:** 18/03/2025

**Completed:** 12/04/2025

**Job Number:** WP25-15079

**Report Number:** 0000031160

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	390	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	15	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	160	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.09	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.170	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.22	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	53.6	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.0	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0097	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	15	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.2	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.1	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.4	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.69	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-25-NW-022709-01/AR-25-NW-026036-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-08290  
Date Start/End Analysis (18/3/2025 - 12/4/2025)

**Reported:** 12/04/2025 8:32:30AM

# ANALYSIS REPORT

## WP25-15079.003

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 14-03-25

**Sample ID:** MG40061 (week 52)

**Received:** 18/03/2025

**Completed:** 12/04/2025

**Job Number:** WP25-15079

**Report Number:** 0000031160

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	430	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	15	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.315	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.26	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.17	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	40.9	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.96	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.036	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0059	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	11	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.4	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	6.9	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.022	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.4	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.46	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-  
Report # AR-25-NW-022709-01/AR-25-NW-026036-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-08290  
Date Start/End Analysis (18/3/2025 - 12/4/2025)

**Reported:** 12/04/2025 8:32:30AM

# ANALYSIS REPORT

## WP25-15079.004

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 14-03-25

**Sample ID:** MG37922 (week 52)

**Received:** 18/03/2025

**Completed:** 12/04/2025

**Job Number:** WP25-15079

**Report Number:** 0000031160

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	25	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.029	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.32	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.15	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	34.4	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.35	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.076	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0061	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.2	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.9	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.006	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.1	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.3	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.4	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.60	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-022709-01/AR-25-NW-026036-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-08290

Date Start/End Analysis (18/3/2025 - 12/4/2025)

Reported: 12/04/2025 8:32:30AM



Signed and dated on 12-Apr-2025

**Zahida ZIA**  
Environmental Supervisor

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# ANALYSIS REPORT

WP25-15234.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 11-04-25

**Sample ID:** MG46045 (week 56)

**Received:** 14/04/2025

**Completed:** 06/05/2025

**Job Number:** WP25-15234

**Report Number:** 0000031325

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.0	pH unit
Sample Volume	APHA 2310	395	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	17	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	200	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.16	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.05	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.012	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.31	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	73.4	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.0	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.032	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.010	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.0	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	10	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.6	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.82	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-033108-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-11717

Date Start/End Analysis (14/4/2025 - 6/5/2025)

Reported: 6/05/2025 2:50:47PM

# ANALYSIS REPORT

WP25-15234.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 11-04-25

**Sample ID:** MG40061 (week 56)

**Received:** 14/04/2025

**Completed:** 06/05/2025

**Job Number:** WP25-15234

**Report Number:** 0000031325

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.2	pH unit
Sample Volume	APHA 2310	460	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	16	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.1	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.13	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.05	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.177	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.23	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.11	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	43.5	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.82	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.045	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0055	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	12	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.002	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.4	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	6.8	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.034	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.1	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.45	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-033108-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-11717

Date Start/End Analysis (14/4/2025 - 6/5/2025)

Reported: 6/05/2025 2:50:47PM

# ANALYSIS REPORT

## WP25-15234.003

**Client:**

 Matakauui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 11-04-25

**Sample ID:** MG37922 (week 56)

**Received:** 14/04/2025

**Completed:** 06/05/2025

**Job Number:** WP25-15234

**Report Number:** 0000031325

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	27	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.21	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.06	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	<0.02	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.25	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.17	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	39.2	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.33	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.10	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0063	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.5	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.4	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.2	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.57	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-033108-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-11717

Date Start/End Analysis (14/4/2025 - 6/5/2025)

Reported: 6/05/2025 2:50:47PM



Signed and dated on 06-May-2025

**Zahida ZIA**  
Environmental Supervisor

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# ANALYSIS REPORT

## Preliminary WP24-13694.001

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19875 / 76 (week 4)

**Received:** 1/05/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13694

**Report Number:** 0000028482

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	430	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	120	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	600	µS/cm
Fluoride	APHA 4110 B	0.59	g/m <sup>3</sup>
Chloride	APHA 4110 B	17	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	0.030	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.13	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	150	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	2.07	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.22	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.252	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.203	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.034	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.256	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.042	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.110	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	19.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.090	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.49	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.045	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.2	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	98.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	2.31	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-028418-01



**Analysis Report:**  
WP24-13694.001

## Preliminary

Date Start/End Analysis ( 1/5/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

# ANALYSIS REPORT

## Preliminary WP24-13694.002

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG43524 / 25 (week 4)

**Received:** 1/05/2024

**Completed:** 06/06/2024

**Job Number:** WP24-13694

**Report Number:** 0000028482

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	320	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	870	µS/cm
Fluoride	APHA 4110 B	1.0	g/m <sup>3</sup>
Chloride	APHA 4110 B	28	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B	0.22	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B	170	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.77	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.11	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	1.350	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.060	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.124	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.276	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.070	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.160	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	38.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.120	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.19	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.031	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.078	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	14.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.019	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	154	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.60	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.023	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-028418-01

## Preliminary

Date Start/End Analysis ( 1/5/2024 - 6/6/2024)

Reported: 6/06/2024 12:00:00AM

Analysis Report:  
WP24-13694.002



**Nick LEES**  
Operations Manager

Signed and dated on 06-Jun-2024

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# ANALYSIS REPORT

WP24-13825.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19875 / 76 (week 8)

**Received:** 29/05/2024

**Completed:** 09/08/2024

**Job Number:** WP24-13825

**Report Number:** 0000029183

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.3	pH unit
Sample Volume	APHA 2310	522	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	110	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	380	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.38	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.491	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.094	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.113	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.412	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.110	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	13.1	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.070	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.57	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	0.0007	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.033	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	12.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	83.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.572	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.022	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	1.2	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	3.51	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.18	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	75.5	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-033996-01

Date Start/End Analysis (29/5/2024 - 9/8/2024)

**Reported:** 20/08/2024 8:57:25AM

# ANALYSIS REPORT

WP24-13825.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG43524 / 25 (week 8)

**Received:** 29/05/2024

**Completed:** 09/08/2024

**Job Number:** WP24-13825

**Report Number:** 0000029183

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.4	pH unit
Sample Volume	APHA 2310	465	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	160	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	470	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.67	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.114	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.074	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.041	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.308	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.026	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.100	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	12.7	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.020	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.18	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.019	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.5	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	59.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.77	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.022	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.51	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	4.41	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	66.0	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-033996-01

Date Start/End Analysis (29/5/2024 - 9/8/2024)

Reported: 20/08/2024 8:57:25AM

Signed and dated on 20-Aug-2024



**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

WP24-13962.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19875 / 76 (week 12)

**Received:** 27/06/2024

**Completed:** 20/08/2024

**Job Number:** WP24-13962

**Report Number:** 0000029187

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.1	pH unit
Sample Volume	APHA 2310	523	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	96	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	12.1	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	250	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.27	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.071	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.063	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.042	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.373	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.018	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.060	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	8.8	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.78	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.9	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	40.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.16	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.38	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.07	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	32.8	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-041106-01

Date Start/End Analysis ( 5/7/2024 - 20/8/2024 )

**Reported:** 20/08/2024 9:35:49AM

# ANALYSIS REPORT

WP24-13962.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG43524 / 25 (week 12)

**Received:** 27/06/2024

**Completed:** 20/08/2024

**Job Number:** WP24-13962

**Report Number:** 0000029187

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.4	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	120	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	12.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	300	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.05	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.224	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.539	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.101	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.462	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.015	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.080	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	11.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.290	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.37	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.021	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.021	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	10.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	54.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.393	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.014	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.66	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.02	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	38.6	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-041106-01

Date Start/End Analysis ( 5/7/2024 - 20/8/2024)

Reported: 20/08/2024 9:35:49AM

Signed and dated on 20-Aug-2024



**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

WP24-14103.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19875 / 76 (week 16)

**Received:** 24/07/2024

**Completed:** 29/08/2024

**Job Number:** WP24-14103

**Report Number:** 0000029246

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	555	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	80	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.1	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	230	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.22	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.034	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.037	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.304	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	6.5	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.239	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.46	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.2	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	23.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.957	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.12	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.44	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	37.6	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-046435-01



**Analysis Report:**  
WP24-14103.001

Date Start/End Analysis ( 2/8/2024 - 29/8/2024)

Reported: 29/08/2024 3:16:17PM

# ANALYSIS REPORT

WP24-14103.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG43524 / 25 (week 16)

**Received:** 24/07/2024

**Completed:** 29/08/2024

**Job Number:** WP24-14103

**Report Number:** 0000029246

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.2	pH unit
Sample Volume	APHA 2310	445	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	100	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	290	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.19	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.080	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.063	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.150	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.351	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.3	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.250	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.30	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.018	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.019	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	39.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.368	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.40	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	67.3	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-046435-01

Date Start/End Analysis ( 2/8/2024 - 29/8/2024)

Reported: 29/08/2024 3:16:17PM



Signed and dated on 29-Aug-2024

**Nick LEES**  
Operations Manager

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# ANALYSIS REPORT

## WP24-14245.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG19875 / 76 (week 20)

**Received:** 23/08/2024

**Completed:**
**Job Number:** WP24-14245

**Report Number:** 0000030261

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	10.1	pH unit
Sample Volume	APHA 2310	518	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	72	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.29	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.026	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.072	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.038	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.333	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.023	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.040	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.0	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.18	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.5	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	22.2	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.45	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.16	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.71	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	22.2	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-052399-01

Date Start/End Analysis (26/8/2024 - )

**Reported:** 17/12/2024 9:14:13AM

# ANALYSIS REPORT

WP24-14245.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG43524 / 25 (week 20)

**Received:** 23/08/2024

**Completed:**

**Job Number:** WP24-14245

**Report Number:** 0000030261

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.5	pH unit
Sample Volume	APHA 2310	445	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	94	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	240	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.20	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.045	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.063	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.157	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.468	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.014	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.060	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	11.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.67	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.027	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	10.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	33.9	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.552	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.41	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.41	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	30.2	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>

Analysis of Total Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-052399-01

Date Start/End Analysis (26/8/2024 - )

Reported: 17/12/2024 9:14:13AM



**Nick LEES**  
Operations Manager

Signed and dated on 17-Dec-2024

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# ANALYSIS REPORT

## WP24-14387.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19875 / 76 (week 24)

**Received:** 20/09/2024

**Completed:** 12/10/2024

**Job Number:** WP24-14387

**Report Number:** 0000029677

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	560	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	70	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	170	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.16	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.05	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.042	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.058	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.034	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.324	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.031	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	15.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.53	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.019	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	12.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	11.2	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.26	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.11	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.31	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	17.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.32	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.10	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.029	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.00	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	19	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0005	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0008	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	12	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.035	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.5	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	13	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.4	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.031	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.6	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0004	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.018	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-059001-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-30030  
Date Start/End Analysis (20/9/2024 - 12/10/2024)  
**Reported:** 12/10/2024 12:04:51PM

# ANALYSIS REPORT

## WP24-14387.002

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG43524 / 25 (week 24)

**Received:** 20/09/2024

**Completed:** 12/10/2024

**Job Number:** WP24-14387

**Report Number:** 0000029677

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	90	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	220	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.31	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.021	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.062	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.160	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.482	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.080	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	16.8	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.80	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.032	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	24.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.458	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.31	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.37	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	23.3	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.50	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.11	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.015	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0001	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	15	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.078	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0005	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0025	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	11	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.8	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.025	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	26	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.4	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.15	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.55	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-059001-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-30030  
Date Start/End Analysis (20/9/2024 - 12/10/2024)  
Reported: 12/10/2024 12:04:51PM



Zahida ZIA  
Environmental Laboratory Technician

Signed and dated on 12-Oct-2024

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# ANALYSIS REPORT

WP24-14499.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19875 / 76 (week 28)

**Received:** 15/10/2024

**Completed:** 06/11/2024

**Job Number:** WP24-14499

**Report Number:** 0000029936

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	62	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	170	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.25	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.12	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.017	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.029	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.314	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.030	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.036	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	15.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	3.13	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	9.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.77	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.32	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	19.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.37	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.095	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.036	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<.0002	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	18	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.067	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	12	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.034	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.8	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	9.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.030	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.6	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.013	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-064851-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33094.  
Date Start/End Analysis (15/10/2024 - 6/11/2024)

**Reported:** 6/11/2024 1:58:20PM

# ANALYSIS REPORT

WP24-14499.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG43524 / 25 (week 28)

**Received:** 15/10/2024

**Completed:** 06/11/2024

**Job Number:** WP24-14499

**Report Number:** 0000029936

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.1	pH unit
Sample Volume	APHA 2310	425	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	72	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	200	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.07	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.03	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.034	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.059	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.128	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.508	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.054	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	18.2	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.23	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.023	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	12.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	21.7	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.621	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.27	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.34	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	21.4	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.51	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.11	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.018	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<.0002	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	16	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.083	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	9.7	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	19	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.13	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.58	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-064851-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33094.  
Date Start/End Analysis (15/10/2024 - 6/11/2024)  
Reported: 6/11/2024 1:58:20PM



**Zahida ZIA**  
Environmental Laboratory Technician

Signed and dated on 06-Nov-2024

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# ANALYSIS REPORT

WP24-14643.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG19875 / 76 (week 32)

**Received:** 12/11/2024

**Completed:** 05/12/2024

**Job Number:** WP24-14643

**Report Number:** 0000030178

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	90	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.11	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.29	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.025	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.072	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.123	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.487	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.018	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	16.3	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.019	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.89	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	0.0026	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.017	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.6	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	19.0	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.607	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.20	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.34	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	9.19	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.47	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.064	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.028	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.17	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	19	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0015	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.014	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.2	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	15	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.11	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.65	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.011	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.075	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-074434-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-35883.

Date Start/End Analysis (12/11/2024 - 5/12/2024)

**Reported:** 5/12/2024 4:21:26PM

# ANALYSIS REPORT

WP24-14643.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG43524 / 25 (week 32)

**Received:** 12/11/2024

**Completed:** 05/12/2024

**Job Number:** WP24-14643

**Report Number:** 0000030178

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	545	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	70	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.24	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.38	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.015	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.042	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.026	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.324	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.033	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.032	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	12.5	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	3.35	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.008	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	12.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	6.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	1.57	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.006	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.30	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	16.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.32	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.063	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.039	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.14	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	19	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	13	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.038	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.0	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.7	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.028	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.8	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-NW-074434-01  
Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-35883.  
Date Start/End Analysis (12/11/2024 - 5/12/2024)  
Reported: 5/12/2024 4:21:26PM



Zahida ZIA  
Environmental Laboratory Technician

Signed and dated on 05-Dec-2024

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# ANALYSIS REPORT

WP24-14768.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 03/01/25

**Sample ID:** MG19875 / 76 (week 40)

**Received:** 6/01/2025

**Completed:** 29/01/2025

**Job Number:** WP24-14768

**Report Number:** 0000030532

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	475	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO3	APHA 2320B	56	mg/l CaCO3
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.22	g/m3
Ammonia nitrogen by CFA/FIA	APHA 4500 NH3 H online edition subcontracted ELS	0.07	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.021	g/m3
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m3
Chloride	APHA 4110 B subcontracted ELS	0.19	g/m3
Nitrite Nitrogen, NO2-N	APHA 4110 B subcontracted ELS	0.01	g/m3
Nitrate Nitrogen, NO3-N	APHA 4110 B subcontracted ELS	0.04	g/m3
Sulphate as SO4	APHA 4110 B subcontracted ELS	14.4	g/m3
Arsenic (As) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.36	g/m3
Aluminium (Al) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.088	g/m3
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.034	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	19	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	9.8	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.031	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.9	g/m3

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.021	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0004	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-25-NW-003973-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-01724

Date Start/End Analysis ( 6/1/2025 - 29/1/2025)

Reported: 29/01/2025 1:47:57PM

# ANALYSIS REPORT

WP24-14768.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 03/01/25

**Sample ID:** MG43524 / 25 (week 40)

**Received:** 6/01/2025

**Completed:** 29/01/2025

**Job Number:** WP24-14768

**Report Number:** 0000030532

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	460	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	58	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.12	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.05	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.030	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.13	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.25	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	13.3	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.42	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.13	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.015	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	17	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.071	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.4	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.010	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.7	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.9	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.065	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.56	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-25-NW-003973-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-01724  
Date Start/End Analysis ( 6/1/2025 - 29/1/2025)

Reported: 29/01/2025 1:47:57PM



Signed and dated on 29-Jan-2025

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

## WP24-14775.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 31/01/25

**Sample ID:** MG19875 / 76 (week 44)

**Received:** 5/02/2025

**Completed:** 20/02/2025

**Job Number:** WP24-14775

**Report Number:** 0000030697

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	520	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	55	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.030	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.25	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	14.4	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.33	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.076	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.037	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.8	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.031	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.3	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.4	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.016	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0004	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report:AR-25-NW-012315-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-03408

Date Start/End Analysis ( 4/2/2025 - 20/2/2025)

Reported: 20/02/2025 2:47:38PM

# ANALYSIS REPORT

## WP24-14775.002

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 31/01/25

**Sample ID:** MG43524 / 25 (week 44)

**Received:** 5/02/2025

**Completed:** 20/02/2025

**Job Number:** WP24-14775

**Report Number:** 0000030697

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	430	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	64	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.036	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.34	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	12.9	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.41	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.075	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	17	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.5	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.013	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.1	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.3	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.063	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.73	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report:AR-25-NW-012315-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-03408  
Date Start/End Analysis ( 4/2/2025 - 20/2/2025)

Reported: 20/02/2025 2:47:38PM



Signed and dated on 20-Feb-2025

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

WP24-14778.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 28/02/25

**Sample ID:** MG19875 / 76 (week 48)

**Received:** 3/03/2025

**Completed:** 27/03/2025

**Job Number:** WP24-14778

**Report Number:** 0000031033

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	480	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO3	APHA 2320B	52	mg/l CaCO3
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO3 I Subcontracted ELS	0.16	g/m3
Ammonia nitrogen by CFA/FIA	APHA 4500 NH3 H online edition subcontracted ELS	0.02	g/m3
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.022	g/m3
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m3
Chloride	APHA 4110 B subcontracted ELS	0.36	g/m3
Nitrite Nitrogen, NO2-N	APHA 4110 B subcontracted ELS	0.01	g/m3
Nitrate Nitrogen, NO3-N	APHA 4110 B subcontracted ELS	0.05	g/m3
Sulphate as SO4	APHA 4110 B subcontracted ELS	12.3	g/m3
Arsenic (As) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.37	g/m3
Aluminium (Al) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.17	g/m3
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.035	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	17	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.079	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.3	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.030	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.8	g/m3

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.018	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.6	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0006	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-25-NW-019184-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-06840

Date Start/End Analysis ( 6/3/2025 - 27/3/2025)

**Reported:** 27/03/2025 4:29:27PM

# ANALYSIS REPORT

## WP24-14778.002

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 28/02/25

**Sample ID:** MG43524 / 25 (week 48)

**Received:** 3/03/2025

**Completed:** 27/03/2025

**Job Number:** WP24-14778

**Report Number:** 0000031033

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	440	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	56	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.23	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.053	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.14	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.42	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	10.3	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.54	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.094	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.016	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	16	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.8	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.012	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.7	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.059	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.69	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-25-NW-019184-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-06840

Date Start/End Analysis ( 6/3/2025 - 27/3/2025)

Reported: 27/03/2025 4:29:27PM



Signed and dated on 27-Mar-2025

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

## WP25-15151.001

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 28/03/25

**Sample ID:** MG19875 / 76 (week 52)

**Received:** 1/04/2025

**Completed:** 10/04/2025

**Job Number:** WP25-15151

**Report Number:** 0000031153

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	530	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	49	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	15.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.17	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.018	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.31	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	11.3	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.34	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.050	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.034	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.6	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.026	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.9	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.6	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.015	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.5	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-25-NW-025618-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-09700

Date Start/End Analysis (31/3/2025 - 10/4/2025)

**Reported:** 10/04/2025 11:34:13AM

# ANALYSIS REPORT

## WP25-15151.002

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Description:** Flush 28/03/25

**Sample ID:** MG43524 / 25 (week 52)

**Received:** 1/04/2025

**Completed:** 10/04/2025

**Job Number:** WP25-15151

**Report Number:** 0000031153

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	55	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	15.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.13	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.023	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.12	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.36	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	5.00	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.51	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.056	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.017	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.12	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	17	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.3	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.012	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.8	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	5.8	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.052	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.68	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.010	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0003	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved Metals, Anions, Ammonia Nitrogen, Total Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-25-NW-025618-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-09700

Date Start/End Analysis (31/3/2025 - 10/4/2025)

Reported: 10/04/2025 11:34:13AM



Signed and dated on 10-Apr-2025

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

WP24-14466.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** CIT T24 Road (Week 4)

**Received:** 7/10/2024

**Completed:**

**Job Number:** WP24-14466

**Report Number:** 0000030680

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.5	pH unit
Sample Volume	APHA 2310	330	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	1	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	7	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	15.00	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.55	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	1.370	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.172	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.095	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.042	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	18.8	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.171	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.10	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.253	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.0	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.6	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.066	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.19	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.27	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	12.3	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	3.51	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.12	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.48	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.013	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	16	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<.0002	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.42	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.8	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.005	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.27	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.065	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0004	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-064507-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33094.

Amended report: This report replaces 0000029938, sample volumes have been amended.

Date Start/End Analysis ( 7/10/2024 - )

**Reported:** 19/02/2025 1:18:02PM

# ANALYSIS REPORT

## WP24-14466.002

**Client:**  
 Matakanaui Gold Limited  
 PO Box 11  
 7842 Hokitika NEW ZEALAND  
 Attention: KIM .

**Received:** 7/10/2024  
**Completed:**  
**Job Number:** WP24-14466  
**Report Number:** 0000030680  
**Order Reference:** AMIRA columns

**Description:**  
**Sample ID:** RAS Mullock (Week 4)

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	398	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	27	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	170	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	2.88	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.18	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.075	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.053	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.352	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	12.3	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.123	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	8.12	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	10.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	5.1	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.123	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	3.27	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	2.50	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	35.9	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.35	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.031	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0035	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	11	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<.0002	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.6	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.0	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.12	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-064507-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33094.

Amended report: This report replaces 0000029938, sample volumes have been amended.

Date Start/End Analysis ( 7/10/2024 - )

**Reported:** 19/02/2025 1:18:02PM

# ANALYSIS REPORT

## WP24-14466.003

**Client:**

 Matakanui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** CIT RSSZ.003 (Week 4)

**Received:** 7/10/2024

**Completed:**
**Job Number:** WP24-14466

**Report Number:** 0000030680

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	420	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	29	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	11.10	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.12	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.222	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.022	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	3.00	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.015	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	24.6	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.035	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.01	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	13.0	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.3	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.052	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.03	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	11.3	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.45	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	4.15	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.0	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.043	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	24	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<.0002	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	11	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.0	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.9	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.086	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-064507-01.

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-33094.

Amended report: This report replaces 0000029938, sample volumes have been amended.

Date Start/End Analysis ( 7/10/2024 - )

Reported: 19/02/2025 1:18:02PM



Signed and dated on 19-Feb-2025

Zahida ZIA  
Environmental Laboratory Technician

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# ANALYSIS REPORT

## WP24-14615.001

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:**
**Sample ID:** MG41751 (Week 8)

**Received:** 5/11/2024

**Completed:** 28/11/2024

**Job Number:** WP24-14615

**Report Number:** 0000030121

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.6	pH unit
Sample Volume	APHA 2310	310	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	2	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	17	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	280	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	27.20	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	1.04	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.212	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.067	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.091	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.024	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.059	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	33.3	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.074	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.61	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.471	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.2	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.117	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.14	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	3.04	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	21.0	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	17.5	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.067	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.020	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	29	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.8	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.005	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.3	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.36	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.1	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.11	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0002	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-070541-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-34280

Date Start/End Analysis ( 5/11/2024 - 28/11/2024)

**Reported:** 28/11/2024 2:21:21PM

# ANALYSIS REPORT

WP24-14615.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG41752 (Week 8)

**Received:** 5/11/2024

**Completed:** 28/11/2024

**Job Number:** WP24-14615

**Report Number:** 0000030121

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	425	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	34	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	280	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	4.20	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.025	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.050	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.476	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.017	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	20.1	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	15.7	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.004	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	15.7	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	9.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.186	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	4.38	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	3.72	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.04	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	72.6	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.17	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	6.8	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	6.2	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	5.6	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.081	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-070541-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-34280

Date Start/End Analysis ( 5/11/2024 - 28/11/2024)

**Reported:** 28/11/2024 2:21:21PM

# ANALYSIS REPORT

WP24-14615.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:**

**Sample ID:** MG41753 (Week 8)

**Received:** 5/11/2024

**Completed:** 28/11/2024

**Job Number:** WP24-14615

**Report Number:** 0000030121

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	34	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	190	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	12.80	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.154	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.014	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	3.05	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.012	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	27.0	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.20	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.8	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.062	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.05	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.09	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	11.9	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	4.38	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.94	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	9.0	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.9	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.005	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.3	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.5	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.016	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-070541-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-34280

Date Start/End Analysis ( 5/11/2024 - 28/11/2024)

Reported: 28/11/2024 2:21:21PM



Signed and dated on 28-Nov-2024

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

WP24-14765.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND

Attention: KIM

**Description:** Flush 29/11/2024

**Sample ID:** MG41751 (Week 12)

**Received:** 10/12/2024

**Completed:** 31/12/2024

**Job Number:** WP24-14765

**Report Number:** 0000030311

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.1	pH unit
Sample Volume	APHA 2310	880	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	21	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.5	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	240	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	21.00	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.09	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.196	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.041	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.117	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.016	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.117	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	32.8	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.025	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.03	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.193	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.4	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.6	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.125	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.15	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.83	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	20.1	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.14	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	9.68	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.10	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.038	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.016	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	30	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.059	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.005	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.5	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.17	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.3	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.12	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0001	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-080690-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-38157

Date Start/End Analysis (10/12/2024 - 31/12/2024)

**Reported:** 31/12/2024 3:00:19PM

# ANALYSIS REPORT

WP24-14765.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND

Attention: KIM

**Description:** Flush 29/11/2024

**Sample ID:** MG41752 (Week 12)

**Received:** 10/12/2024

**Completed:** 31/12/2024

**Job Number:** WP24-14765

**Report Number:** 0000030311

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	410	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	35	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	210	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.94	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.05	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.011	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.054	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.471	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.075	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	13.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	10.7	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	10.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	4.5	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.157	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.79	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	1.63	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	53.6	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.42	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.058	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0042	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	14	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.014	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.8	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.16	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-080690-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-38157

Date Start/End Analysis (10/12/2024 - 31/12/2024)

**Reported:** 31/12/2024 3:00:19PM

# ANALYSIS REPORT

WP24-14765.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND

Attention: KIM

**Description:** Flush 29/11/2024

**Sample ID:** MG41753 (Week 12)

**Received:** 10/12/2024

**Completed:** 31/12/2024

**Job Number:** WP24-14765

**Report Number:** 0000030311

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	490	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	41	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.1	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	180	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	9.96	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.095	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.013	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	3.87	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.055	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	26.9	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.010	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.06	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.9	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.051	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.07	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	9.55	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	5.72	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.7	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	27	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	9.0	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.0	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.055	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-24-NW-080690-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#24-38157

Date Start/End Analysis (10/12/2024 - 31/12/2024)

Reported: 31/12/2024 3:00:19PM



Signed and dated on 31-Dec-2024

Zahida ZIA  
Environmental Laboratory Technician

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# ANALYSIS REPORT

WP24-14766.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:** Flush 27/12/24

**Sample ID:** MG41751 (Week 16)

**Received:** 10/12/2024

**Completed:** 14/01/2025

**Job Number:** WP24-14766

**Report Number:** 0000030405

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.9	pH unit
Sample Volume	APHA 2310	50	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	1	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	8	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	150	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	12.40	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.08	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.790	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.094	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.128	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.009	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.084	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	16.0	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.060	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.85	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.028	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	7.3	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.4	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.069	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.14	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	2.60	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	11.7	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	4.71	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.14	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.71	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.014	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	16	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.48	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0006	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	7.5	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.005	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.059	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.3	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.074	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0004	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001.  
Date Start/End Analysis (11/12/2024 - 14/1/2025)

**Reported:** 14/01/2025 8:07:19AM

# ANALYSIS REPORT

WP24-14766.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM

**Description:** Flush 27/12/24

**Sample ID:** MG41752 (Week 16)

**Received:** 10/12/2024

**Completed:** 14/01/2025

**Job Number:** WP24-14766

**Report Number:** 0000030405

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	50	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	46	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	180	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.64	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.032	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.054	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.693	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	0.003	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.033	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	12.4	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.011	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	9.77	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.005	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	11.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.133	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	0.002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.14	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.53	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	41.2	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.64	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.051	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0038	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	12	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0006	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	10	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.013	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.5	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.6	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.14	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3



**Analysis Report:**  
WP24-14766.002

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001.  
Date Start/End Analysis (11/12/2024 - 14/1/2025)

**Reported:** 14/01/2025 8:07:19AM

# ANALYSIS REPORT

WP24-14766.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND

Attention: KIM

**Description:** Flush 27/12/24

**Sample ID:** MG41753 (Week 16)

**Received:** 10/12/2024

**Completed:** 14/01/2025

**Job Number:** WP24-14766

**Report Number:** 0000030405

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	50	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	56	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	7.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	170	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	5.36	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.205	g/m <sup>3</sup>
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.007	g/m <sup>3</sup>
Antimony (Sb) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	4.54	g/m <sup>3</sup>
Barium (Ba) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.025	g/m <sup>3</sup>
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	24.5	g/m <sup>3</sup>
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m <sup>3</sup>
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.03	g/m <sup>3</sup>
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Molybdenum (Mo) dissolved	APHA 3125 subcontracted ELS	0.001	g/m <sup>3</sup>
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Potassium (K) dissolved	APHA 3125 subcontracted ELS	9.1	g/m <sup>3</sup>
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m <sup>3</sup>
Silver (Ag) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.8	g/m <sup>3</sup>
Strontium (Sr) dissolved	APHA 3125 subcontracted ELS	0.053	g/m <sup>3</sup>
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Tin (Sn) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Uranium (U) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m <sup>3</sup>
Vanadium (V) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m <sup>3</sup>
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.90	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	5.61	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	3.55	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.1	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Barium (Ba) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Beryllium (Be) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Bismuth (Bi) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Boron (B) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.10	g/m3
Calcium (Ca) dissolved g/m3	USEPA 200.8 subcontracted Analytica	27	g/m3
Cadmium (Cd) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00020	g/m3
Cobalt (Co) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Chromium (Cr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Caesium (Cs) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Copper (Cu) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Iron (Fe) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.050	g/m3
Germanium (Ge) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0012	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	8.4	g/m3
Lanthanum (La) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Lithium (Li) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Magnesium (Mg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.0	g/m3
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.055	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-001495-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-00001.

Date Start/End Analysis (11/12/2024 - 14/1/2025)

Reported: 14/01/2025 8:07:19AM



Signed and dated on 14-Jan-2025

Zahida ZIA  
Environmental Laboratory Technician

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# ANALYSIS REPORT

## WP24-14776.001

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 24/01/25

**Sample ID:** MG41751 (Week 20)

**Received:** 27/12/2024

**Completed:** 17/02/2025

**Job Number:** WP24-14776

**Report Number:** 0000030645

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	445	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	5	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.2	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	78	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	6.19	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.825	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.21	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.03	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	4.96	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.91	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.24	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	3.9	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.036	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.6	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.004	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.008	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.2	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.8	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.4	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.078	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.7	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.9	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.009	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.063	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0009	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-008642-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-03408

Date Start/End Analysis (27/1/2025 - 17/2/2025)

Reported: 17/02/2025 10:22:55AM

# ANALYSIS REPORT

## WP24-14776.002

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 24/01/25

**Sample ID:** MG41752 (Week 20)

**Received:** 27/12/2024

**Completed:** 17/02/2025

**Job Number:** WP24-14776

**Report Number:** 0000030645

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	49	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.4	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	180	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.23	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.06	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.124	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.06	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.59	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	38.1	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.59	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.042	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0040	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	13	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.2	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.015	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	11	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.17	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-008642-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-03408

Date Start/End Analysis (27/1/2025 - 17/2/2025)

Reported: 17/02/2025 10:22:55AM

# ANALYSIS REPORT

## WP24-14776.003

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: KIM

**Description:** Flush 24/01/25

**Sample ID:** MG41753 (Week 20)

**Received:** 27/12/2024

**Completed:** 17/02/2025

**Job Number:** WP24-14776

**Report Number:** 0000030645

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.7	pH unit
Sample Volume	APHA 2310	580	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	66	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	9.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	160	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.96	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.07	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.409	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.44	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	1.61	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.23	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.9	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	25	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.2	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.007	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.2	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.8	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.059	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-008642-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-03408

Date Start/End Analysis (27/1/2025 - 17/2/2025)

Reported: 17/02/2025 10:22:55AM



**Zahida ZIA**  
Environmental Laboratory Technician

Signed and dated on 17-Feb-2025

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# ANALYSIS REPORT

## WP25-15090.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 21/03/25

**Sample ID:** MG41751 (Week 28)

**Received:** 25/03/2025

**Completed:** 10/04/2025

**Job Number:** WP25-15090

**Report Number:** 0000031154

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.5	pH unit
Sample Volume	APHA 2310	510	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	4	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	16	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.3	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	97	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	6.39	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.431	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.22	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.58	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	5.24	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.68	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.17	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.84	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.031	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.11	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	13	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.005	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.5	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.5	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.7	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.054	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.007	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.083	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0006	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-025617-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-09700

Date Start/End Analysis (27/3/2025 - 10/4/2025)

Reported: 10/04/2025 11:49:53AM

# ANALYSIS REPORT

WP25-15090.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 21/03/25

**Sample ID:** MG41752 (Week 28)

**Received:** 25/03/2025

**Completed:** 10/04/2025

**Job Number:** WP25-15090

**Report Number:** 0000031154

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.4	pH unit
Sample Volume	APHA 2310	475	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	57	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	300	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.63	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.016	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.09	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.62	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.40	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	77.9	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.49	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0057	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	22	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	10	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.018	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	18	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.008	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.005	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.27	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-025617-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-09700

Date Start/End Analysis (27/3/2025 - 10/4/2025)

Reported: 10/04/2025 11:49:53AM

# ANALYSIS REPORT

WP25-15090.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 21/03/25

**Sample ID:** MG41753 (Week 28)

**Received:** 25/03/2025

**Completed:** 10/04/2025

**Job Number:** WP25-15090

**Report Number:** 0000031154

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	545	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	62	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.30	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.156	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.09	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.37	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.98	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.35	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.3	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	23	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	7.6	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.006	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.2	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.2	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.061	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-025617-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-09700

Date Start/End Analysis (27/3/2025 - 10/4/2025)

Reported: 10/04/2025 11:49:53AM



Signed and dated on 10-Apr-2025

**Zahida ZIA**  
Environmental Laboratory Technician

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# ANALYSIS REPORT

WP25-15232.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 18/04/25

**Sample ID:** MG41751 (Week 32)

**Received:** 23/04/2025

**Completed:** 06/05/2025

**Job Number:** WP25-15232

**Report Number:** 0000031324

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.0	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	13	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.6	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	100	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	7.71	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.04	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.502	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.19	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	1.00	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	6.59	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.78	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.14	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	2.3	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.025	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	14	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.2	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	6.8	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.8	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.048	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.6	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.003	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.014	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.056	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0007	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-032412-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-12197

This amended report replaces report #31314 issued on 06/05/2025.

Temperature values were mistakenly entered into EC columns. The values are corrected now.

Date Start/End Analysis (23/4/2025 - 6/5/2025)

**Reported:** 6/05/2025 10:33:43AM

# ANALYSIS REPORT

WP25-15232.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 18/04/25

**Sample ID:** MG41752 (Week 32)

**Received:** 23/04/2025

**Completed:** 06/05/2025

**Job Number:** WP25-15232

**Report Number:** 0000031324

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	530	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	56	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	230	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.44	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.02	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.021	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.10	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.25	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.27	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	51.0	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.54	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0042	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	17	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	8.0	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.015	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	14	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.006	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.4	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0010	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.21	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-032412-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-12197

This amended report replaces report #31314 issued on 06/05/2025.

Temperature values were mistakenly entered into EC columns. The values are corrected now.

Date Start/End Analysis (23/4/2025 - 6/5/2025)

Reported: 6/05/2025 10:33:43AM

# ANALYSIS REPORT

WP25-15232.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: KIM .

**Description:** Flush 18/04/25

**Sample ID:** MG41753 (Week 32)

**Received:** 23/04/2025

**Completed:** 06/05/2025

**Job Number:** WP25-15232

**Report Number:** 0000031324

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	680	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	59	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	140	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.73	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.04	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.167	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.20	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.47	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	1.35	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.1	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	22	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.001	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Mercury (Hg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00080	g/m <sup>3</sup>
Potassium (K) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	6.6	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.005	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.2	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.0	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Lead (Pb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00050	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.003	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Antimony (Sb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.055	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report: AR-24-Report # AR-25-NW-032412-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#25-12197

This amended report replaces report #31314 issued on 06/05/2025.

Temperature values were mistakenly entered into EC columns. The values are corrected now.

Date Start/End Analysis (23/4/2025 - 6/5/2025)

Reported: 6/05/2025 10:33:43AM



Signed and dated on 06-May-2025

**Zahida ZIA**  
Environmental Supervisor

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# ANALYSIS REPORT

## WP25-15342.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:** Flush 16/05/25

**Sample ID:** MG41751 (Week 36)

**Received:** 27/05/2025

**Completed:** 18/06/2025

**Job Number:** WP25-15342

**Report Number:** 0000031627

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.2	pH unit
Sample Volume	APHA 2310	540	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	9	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	76	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	5.80	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.04	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.513	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.20	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.36	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	4.95	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.25	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.44	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.15	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.011	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.0	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.21	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.000	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.000	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.0	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.043	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.1	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.001	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.7	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.034	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0006	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report # AR-25-NW-042241-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#NH2500152.

Date Start/End Analysis (27/5/2025 - 18/6/2025)

Reported: 19/06/2025 3:29:57PM

# ANALYSIS REPORT

WP25-15342.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:** Flush 16/05/25

**Sample ID:** MG41752 (Week 36)

**Received:** 27/05/2025

**Completed:** 18/06/2025

**Job Number:** WP25-15342

**Report Number:** 0000031627

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	500	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	62	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	230	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.45	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.024	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.31	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.27	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	48.2	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.50	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0037	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	16	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.003	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.013	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	14	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	6.8	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.004	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.9	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.20	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report # AR-25-NW-042241-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#NH2500152.

Date Start/End Analysis (27/5/2025 - 18/6/2025)

Reported: 19/06/2025 3:29:57PM

# ANALYSIS REPORT

WP25-15342.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:** Flush 16/05/25

**Sample ID:** MG41753 (Week 36)

**Received:** 27/05/2025

**Completed:** 18/06/2025

**Job Number:** WP25-15342

**Report Number:** 0000031627

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.1	pH unit
Sample Volume	APHA 2310	570	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	61	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.63	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.263	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.07	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.27	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.49	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	1.16	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.001	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	4.8	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	21	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.004	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.8	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	5.8	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.002	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.8	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.043	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report # AR-25-NW-042241-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#NH2500152.

Date Start/End Analysis (27/5/2025 - 18/6/2025)

Reported: 19/06/2025 3:29:57PM



Signed and dated on 19-Jun-2025

**Zahida ZIA**  
Environmental Supervisor

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# ANALYSIS REPORT

## WP25-15570.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:**

**Sample ID:** MG41751 (Week 40)

**Received:** 24/06/2025

**Completed:** 08/07/2025

**Job Number:** WP25-15570

**Report Number:** 0000031741

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.1	pH unit
Sample Volume	APHA 2310	510	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	<5	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	11.0	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	62	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	4.69	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.03	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.504	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.21	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.24	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	4.21	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.01	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	1.66	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.16	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.17	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.015	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.31	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	10	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0002	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0036	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0009	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0025	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0004	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.01	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.012	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	3.4	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0011	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.1	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.032	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0011	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report # AR-25-NW-053824-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#: NH2500497.

Date Start/End Analysis (19/6/2025 - 8/7/2025)

Reported: 10/07/2025 5:22:57PM

# ANALYSIS REPORT

WP25-15570.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:**

**Sample ID:** MG41752 (Week 40)

**Received:** 24/06/2025

**Completed:** 08/07/2025

**Job Number:** WP25-15570

**Report Number:** 0000031741

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	495	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	68	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.9	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	210	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.47	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.010	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.09	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.23	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.30	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	38.2	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.53	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0037	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.23	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	17	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0026	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.013	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	14.9	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0033	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	6.8	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0030	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	2.0	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.19	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0026	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report # AR-25-NW-053824-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#: NH2500497.

Date Start/End Analysis (19/6/2025 - 8/7/2025)

Reported: 10/07/2025 5:22:57PM

# ANALYSIS REPORT

## WP25-15570.003

**Client:**

 Matakanaui Gold Limited  
 PO Box 11

 7842 Hokitika NEW ZEALAND  
 Attention: Alex Nichol

**Description:**
**Sample ID:** MG41753 (Week 40)

**Received:** 24/06/2025

**Completed:** 08/07/2025

**Job Number:** WP25-15570

**Report Number:** 0000031741

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.8	pH unit
Sample Volume	APHA 2310	550	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	58	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	10.7	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	120	µS/cm
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.69	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	0.01	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.130	g/m <sup>3</sup>
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.19	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.55	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	1.05	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.1	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.17	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	21	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0041	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.95	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	5.7	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0015	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.2	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.041	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Dissolved metals, Ammonia Nitrogen, Total Nitrogen, Phosphorus subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND. Report # AR-25-NW-053824-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited Ruakura Research Centre, 10 Bisley Road, Hamilton Report#: NH2500497.

Date Start/End Analysis (19/6/2025 - 8/7/2025)

Reported: 10/07/2025 5:22:57PM



**Nick LEES**  
Operations Manager

Signed and dated on 10-Jul-2025

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# ANALYSIS REPORT

WP25-15631.001

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:**

**Sample ID:** MG41751 (Week 44)

**Received:** 16/07/2025

**Completed:** 30/08/2025

**Job Number:** WP25-15631

**Report Number:** 0000032046

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	6	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	78	µS/cm
Fluoride	APHA 4110 B subcontracted ELS	0.20	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.36	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	<0.01	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	5.83	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	2.39	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	6.31	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.391	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.62	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.17	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.015	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0002	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	9.4	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0006	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0029	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.83	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0002	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0016	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0010	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	1.3	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.029	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	4.4	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0033	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.73	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.036	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0009	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Ammonia Nitrogen, Total Nitrogen, Phosphorus and anions subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND.

Report # AR-25-NW-061917-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
10 Bisley Road, Hamilton Report#: NH2500793/NH2500793-1

This amended report supersedes all the previous reports in this reference.

Amendments:

Dissolved metal results reported maximum to four decimal places to resolve zero-value issues in earlier report # 31888 dated 12/08/25 (otherwise reported <LOR)

Include corrected and revised dissolved metal results for Sample# 2 per the amended report of Analytica (NH2500793-1 dated 20/08/25).

Corrected Dissolved Cobalt and Caesium values for sample#1-incorrectly reported in supplementray and CSV files on 28/08/25.

Leave Sample # 1 and Sample # 3 Dissolved metals data unchanged as reported in Analytica Report NH2500793.

Date Start/End Analysis (16/7/2025 - 30/8/2025)

Reported: 30/08/2025 10:57:09AM

# ANALYSIS REPORT

WP25-15631.002

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:**

**Sample ID:** MG41752 (Week 44)

**Received:** 16/07/2025

**Completed:** 30/08/2025

**Job Number:** WP25-15631

**Report Number:** 0000032046

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.5	pH unit
Sample Volume	APHA 2310	475	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	67	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	220	µS/cm
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.28	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.03	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.45	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	40.0	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	0.59	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.017	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.040	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0016	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.56	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0037	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0003	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	16	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.019	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	16	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0039	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	6.3	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0055	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	1.7	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.31	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0021	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Ammonia Nitrogen, Total Nitrogen, Phosphorus and anions subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND.

Report # AR-25-NW-061917-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited

10 Bisley Road, Hamilton Report#: NH2500793/NH2500793-1

This amended report supersedes all the previous reports in this reference.

Amendments:

Dissolved metal results reported maximum to four decimal places to resolve zero-value issues in earlier report # 31888 dated 12/08/25 (otherwise reported <LOR)

Include corrected and revised dissolved metal results for Sample# 2 per the amended report of Analytica (NH2500793-1 dated 20/08/25).

Corrected Dissolved Cobalt and Caesium values for sample#1-incorrectly reported in supplementray and CSV files on 28/08/25.

Leave Sample # 1 and Sample # 3 Dissolved metals data unchanged as reported in Analytica Report NH2500793.

Date Start/End Analysis (16/7/2025 - 30/8/2025)

Reported: 30/08/2025 10:57:09AM

# ANALYSIS REPORT

WP25-15631.003

**Client:**

Matakanui Gold Limited  
PO Box 11

7842 Hokitika NEW ZEALAND  
Attention: Alex Nichol

**Description:**

**Sample ID:** MG41753 (Week 44)

**Received:** 16/07/2025

**Completed:** 30/08/2025

**Job Number:** WP25-15631

**Report Number:** 0000032046

**Order Reference:** AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.1	pH unit
Sample Volume	APHA 2310	530	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO <sub>3</sub>	APHA 2320B	57	mg/l CaCO <sub>3</sub>
Dissolved Oxygen	HACH method 10360 USEPA 40 CFR Part 136 approved	8.8	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	130	µS/cm
Fluoride	APHA 4110 B subcontracted ELS	0.08	g/m <sup>3</sup>
Chloride	APHA 4110 B subcontracted ELS	0.23	g/m <sup>3</sup>
Nitrite Nitrogen, NO <sub>2</sub> -N	APHA 4110 B subcontracted ELS	0.02	g/m <sup>3</sup>
Nitrate Nitrogen, NO <sub>3</sub> -N	APHA 4110 B subcontracted ELS	0.98	g/m <sup>3</sup>
Sulphate as SO <sub>4</sub>	APHA 4110 B subcontracted ELS	1.30	g/m <sup>3</sup>
Total nitrogen in water	APHA 4500-NO <sub>3</sub> I Subcontracted ELS	1.08	g/m <sup>3</sup>
Total phosphorus in water	APHA 4500-P G subcontracted ELS	0.129	g/m <sup>3</sup>
Ammonia nitrogen by CFA/FIA	APHA 4500 NH <sub>3</sub> H online edition subcontracted ELS	<0.01	g/m <sup>3</sup>
Aluminium (Al) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.030	g/m <sup>3</sup>
Antimony (Sb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0016	g/m <sup>3</sup>
Arsenic (As) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	5.1	g/m <sup>3</sup>
Barium (Ba) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Beryllium (Be) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Bismuth (Bi) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0010	g/m <sup>3</sup>
Boron (B) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.10	g/m <sup>3</sup>
Cadmium (Cd) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00020	g/m <sup>3</sup>
Caesium (Cs) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Calcium (Ca) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	19	g/m <sup>3</sup>
Chromium (Cr) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Cobalt (Co) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0001	g/m <sup>3</sup>
Copper (Cu) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.0020	g/m <sup>3</sup>
Germanium (Ge) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Iron (Fe) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.050	g/m <sup>3</sup>
Lanthanum (La) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00010	g/m <sup>3</sup>
Lead (Pb) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	<0.00050	g/m <sup>3</sup>
Lithium (Li) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.0039	g/m <sup>3</sup>
Magnesium (Mg) dissolved g/m <sup>3</sup>	USEPA 200.8 subcontracted Analytica	0.89	g/m <sup>3</sup>

Analysis	Method	Result	Unit
Manganese (Mn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Mercury (Hg) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00080	g/m3
Molybdenum (Mo) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Nickel (Ni) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Phosphorus (P) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.40	g/m3
Potassium (K) dissolved g/m3	USEPA 200.8 subcontracted Analytica	5.7	g/m3
Rubidium (Rb) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.0016	g/m3
Selenium (Se) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Sodium (Na) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.71	g/m3
Strontium (Sr) dissolved g/m3	USEPA 200.8 subcontracted Analytica	0.042	g/m3
Sulfur (S) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<100	g/m3
Thallium (Tl) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Tin (Sn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0020	g/m3
Uranium (U) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00030	g/m3
Vanadium (V) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.0050	g/m3
Yttrium (Y) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.00010	g/m3
Zinc (Zn) dissolved g/m3	USEPA 200.8 subcontracted Analytica	<0.010	g/m3

Analysis of Ammonia Nitrogen, Total Nitrogen, Phosphorus and anions subcontracted to Eurofins Els, 85 Port Road, Seaview, Lower Hutt, Wellington NZ-5010 NEW ZEALAND.

Report # AR-25-NW-061917-01

Analysis of Dissolved metals, subcontracted to Analytica Laboratories Limited  
10 Bisley Road, Hamilton Report#: NH2500793/NH2500793-1

This amended report supersedes all the previous reports in this reference.

Amendments:

Dissolved metal results reported maximum to four decimal places to resolve zero-value issues in earlier report # 31888 dated 12/08/25 (otherwise reported <LOR)

Include corrected and revised dissolved metal results for Sample# 2 per the amended report of Analytica (NH2500793-1 dated 20/08/25).

Corrected Dissolved Cobalt and Caesium values for sample#1-incorrectly reported in supplementray and CSV files on 28/08/25.

Leave Sample # 1 and Sample # 3 Dissolved metals data unchanged as reported in Analytica Report NH2500793.

Date Start/End Analysis (16/7/2025 - 30/8/2025)

Reported: 30/08/2025 10:57:09AM



Signed and dated on 30-Aug-2025

**Zahida ZIA**  
Environmental Supervisor

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## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2426510</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 1	Date Samples Received	: 05-Aug-2024 06:42
Order number	: ----	Date Analysis Commenced	: 07-Aug-2024
C-O-C number	: ----	Issue Date	: 12-Aug-2024 10:38
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825  
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

∅ = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Unless otherwise stated, analytical work for this work order will be conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	05-Aug-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2426510-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	480	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	8.17	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	485	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		05-Aug-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2426510-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	7.63	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	484	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	62	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	62	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	2	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	103	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	33	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	25	----	----	----	----
Magnesium	7439-95-4	1	mg/L	12	----	----	----	----
Sodium	7440-23-5	1	mg/L	46	----	----	----	----
Potassium	7440-09-7	1	mg/L	10	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	0.02	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	0.019	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	1.90	----	----	----	----
Barium	7440-39-3	0.001	mg/L	0.168	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	0.001	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				05-Aug-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2426510-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.005	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	0.002	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.020	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.112	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.017	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	1.23	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.006	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	0.46	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.080	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.3	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.85	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.06	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)				Sample ID				
				M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				05-Aug-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2426510-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.01	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.07	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.1	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.2	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	0.79	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2430026</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 2	Date Samples Received	: 02-Sep-2024 06:20
Order number	: ----	Date Analysis Commenced	: 04-Sep-2024
C-O-C number	: ----	Issue Date	: 09-Sep-2024 10:46
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

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When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

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^ = This result is computed from individual analyte detections at or above the level of reporting

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~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	02-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2430026-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	<b>2000</b>	----	----	----	----
∅ Leachate collected	----	0.01	mL	<b>550</b>	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	<b>8.21</b>	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	<b>334</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		02-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2430026-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	7.93	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	322	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	61	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	61	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	2	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	64	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	16	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	359	----	----	----	----
Magnesium	7439-95-4	1	mg/L	8	----	----	----	----
Sodium	7440-23-5	1	mg/L	36	----	----	----	----
Potassium	7440-09-7	1	mg/L	8	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	0.02	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	0.014	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	3.10	----	----	----	----
Barium	7440-39-3	0.001	mg/L	0.165	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	0.001	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				02-Sep-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2430026-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.004	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	0.002	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.028	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.072	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.017	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.962	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.005	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	0.57	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.071	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.3	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.04	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.09	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID				
				M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				02-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2430026-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.11	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.20	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.2	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.4	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	1.25	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2433478</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 3	Date Samples Received	: 30-Sep-2024 06:20
Order number	: ----	Date Analysis Commenced	: 02-Oct-2024
C-O-C number	: ----	Issue Date	: 08-Oct-2024 16:12
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



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ISO/IEC 17025 - Testing

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Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



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### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		30-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2433478-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	<b>2000</b>	----	----	----	----
∅ Leachate collected	----	0.01	mL	<b>350</b>	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	<b>7.93</b>	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	<b>228</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				30-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2433478-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.25</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>208</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>53</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>53</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>1</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>39</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<b>4</b>	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>14</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>5</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>17</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>6</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<b>0.02</b>	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.012</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>2.87</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.240</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<b>0.001</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				30-Sep-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2433478-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.004	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.013	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.026	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.016	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.563	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.004	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	0.70	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.089	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.02	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.10	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID				
				M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				30-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2433478-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.34	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.44	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.7	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	1.25	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2437027</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 4	Date Samples Received	: 28-Oct-2024 06:30
Order number	: ----	Date Analysis Commenced	: 30-Oct-2024
C-O-C number	: ----	Issue Date	: 04-Nov-2024 20:23
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

∅ = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	28-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2437027-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	350	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	7.98	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	185	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				28-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2437027-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	7.53	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	180	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	48	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	48	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	3	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	33	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	1	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	14	----	----	----	----
Magnesium	7439-95-4	1	mg/L	6	----	----	----	----
Sodium	7440-23-5	1	mg/L	14	----	----	----	----
Potassium	7440-09-7	1	mg/L	7	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	0.02	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	0.012	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	3.52	----	----	----	----
Barium	7440-39-3	0.001	mg/L	0.262	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	0.005	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				28-Oct-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2437027-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.003	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.020	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.023	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.018	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.572	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.004	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.05	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.029	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.06	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.07	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				28-Oct-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2437027-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>									
Nitrate as N	14797-55-8	0.01	mg/L	0.31	----	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>									
Nitrite + Nitrate as N	----	0.01	mg/L	0.38	----	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.2	----	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>									
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.6	----	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>									
Total Phosphorus as P	----	0.01	mg/L	1.48	----	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2440831</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 5	Date Samples Received	: 25-Nov-2024 07:17
Order number	: ----	Date Analysis Commenced	: 27-Nov-2024
C-O-C number	: ----	Issue Date	: 04-Dec-2024 11:32
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
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^ = This result is computed from individual analyte detections at or above the level of reporting  
ø = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		25-Nov-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2440831-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	<b>2000</b>	----	----	----	----
∅ Leachate collected	----	0.01	mL	<b>410</b>	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	<b>8.03</b>	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	<b>225</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		25-Nov-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2440831-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.69</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>218</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>51</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>51</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>3</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>45</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<b>1</b>	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>18</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>7</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>13</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>7</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.012</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>4.01</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.278</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				25-Nov-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2440831-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.002	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.020	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.018	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.016	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.548	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.002	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.26	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.021	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.04	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.10	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID				
				M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				25-Nov-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2440831-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.20	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.30	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.6	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	1.59	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2444923</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 6	Date Samples Received	: 23-Dec-2024 08:13
Order number	: ----	Date Analysis Commenced	: 24-Dec-2024
C-O-C number	: ----	Issue Date	: 10-Jan-2025 16:43
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
ø = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	23-Dec-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2444923-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	400	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	7.82	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	206	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		23-Dec-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2444923-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	7.57	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	213	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	53	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	53	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	2	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	38	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	1	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	18	----	----	----	----
Magnesium	7439-95-4	1	mg/L	6	----	----	----	----
Sodium	7440-23-5	1	mg/L	10	----	----	----	----
Potassium	7440-09-7	1	mg/L	8	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	0.01	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	0.008	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	2.96	----	----	----	----
Barium	7440-39-3	0.001	mg/L	0.282	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	0.001	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				23-Dec-2024 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2444923-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.002	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.019	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.013	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.015	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.502	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.002	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.02	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.022	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.09	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID				
				M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				23-Dec-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2444923-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.17	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.26	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	1.21	----	----	----	----



## CERTIFICATE OF ANALYSIS

**Work Order** : **EB2502047**  
**Client** : **MINE WASTE MANAGEMENT**  
**Contact** : LEO NAVARRO  
**Address** : Level 1, 8A/232 Churchill Ave  
Subiaco 6008  
**Telephone** : ----  
**Project** : Santana Kinetic Column - Leach 7  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : ----  
**Quote number** : EB24MINWAS0001  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 6  
**Laboratory** : Environmental Division Brisbane  
**Contact** : Carsten Emrich  
**Address** : 2 Byth Street Stafford QLD Australia 4053  
**Telephone** : +61 7 3552 8616  
**Date Samples Received** : 21-Jan-2025 06:23  
**Date Analysis Commenced** : 22-Jan-2025  
**Issue Date** : 30-Jan-2025 11:42



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This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

∅ = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	21-Jan-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2502047-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	<b>2000</b>	----	----	----	----
∅ Leachate collected	----	0.01	mL	<b>400</b>	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	<b>8.02</b>	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	<b>139</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				21-Jan-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2502047-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.61</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>148</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>48</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>48</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>2</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>16</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<1	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>13</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>4</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>4</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>4</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<b>0.01</b>	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.007</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>4.04</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.227</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				21-Jan-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2502047-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<b>0.028</b>	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	<b>0.006</b>	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	<b>0.007</b>	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	<b>0.408</b>	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	<b>0.002</b>	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	<b>0.53</b>	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	<b>0.008</b>	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	<b>0.1</b>	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID				
				M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				21-Jan-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2502047-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.08	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.08	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.1	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.2	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	1.73	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2505362</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 8	Date Samples Received	: 17-Feb-2025 07:15
Order number	: ----	Date Analysis Commenced	: 19-Feb-2025
C-O-C number	: ----	Issue Date	: 25-Feb-2025 16:44
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD



Page : 2 of 6  
Work Order : EB2505362  
Client : MINE WASTE MANAGEMENT  
Project : Santana Kinetic Column - Leach 8

## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	17-Feb-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2505362-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	370	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	7.74	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	373	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		17-Feb-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2505362-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.20</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>354</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>44</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>44</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>5</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>130</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<b>2</b>	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>37</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>12</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>12</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>7</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.007</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>5.98</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.202</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				17-Feb-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2505362-001	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.002	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.046	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.016	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.022	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.916	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.001	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.63	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.009	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.03	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.06	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									

Page : 6 of 6  
 Work Order : EB2505362  
 Client : MINE WASTE MANAGEMENT  
 Project : Santana Kinetic Column - Leach 8



**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				17-Feb-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2505362-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.26	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.32	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.2	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>								
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.5	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>								
Total Phosphorus as P	----	0.01	mg/L	2.13	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2508698</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 9	Date Samples Received	: 17-Mar-2025 06:40
Order number	: ----	Date Analysis Commenced	: 19-Mar-2025
C-O-C number	: ----	Issue Date	: 25-Mar-2025 12:59
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



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- Analytical Results

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<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



Page : 2 of 6  
Work Order : EB2508698  
Client : MINE WASTE MANAGEMENT  
Project : Santana Kinetic Column - Leach 9

## General Comments

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LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	17-Mar-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2508698-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	380	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	7.72	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	387	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		17-Mar-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2508698-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.84</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>366</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>50</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>50</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>4</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>128</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<b>2</b>	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>40</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>14</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>11</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>7</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<b>0.01</b>	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.008</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>7.42</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.174</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<b>0.004</b>	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				17-Mar-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2508698-001	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
<b>Cobalt</b>	7440-48-4	0.001	mg/L	<b>0.002</b>	----	----	----	----	----
<b>Nickel</b>	7440-02-0	0.001	mg/L	<b>0.001</b>	----	----	----	----	----
<b>Lead</b>	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
<b>Selenium</b>	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
<b>Zinc</b>	7440-66-6	0.005	mg/L	<b>0.061</b>	----	----	----	----	----
<b>Manganese</b>	7439-96-5	0.001	mg/L	<b>0.010</b>	----	----	----	----	----
<b>Molybdenum</b>	7439-98-7	0.001	mg/L	<b>0.024</b>	----	----	----	----	----
<b>Silver</b>	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
<b>Strontium</b>	7440-24-6	0.001	mg/L	<b>0.926</b>	----	----	----	----	----
<b>Thallium</b>	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
<b>Tin</b>	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
<b>Titanium</b>	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
<b>Uranium</b>	7440-61-1	0.001	mg/L	<b>0.001</b>	----	----	----	----	----
<b>Vanadium</b>	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
<b>Boron</b>	7440-42-8	0.05	mg/L	<b>1.68</b>	----	----	----	----	----
<b>Iron</b>	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
<b>Mercury</b>	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
<b>Total Cyanide</b>	57-12-5	0.004	mg/L	<b>0.008</b>	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
<b>Fluoride</b>	16984-48-8	0.1	mg/L	<b>0.2</b>	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
<b>Ammonia as N</b>	7664-41-7	0.01	mg/L	<0.01	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
<b>Nitrite as N</b>	14797-65-0	0.01	mg/L	<b>0.04</b>	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									

Page : 6 of 6  
 Work Order : EB2508698  
 Client : MINE WASTE MANAGEMENT  
 Project : Santana Kinetic Column - Leach 9



**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time		17-Mar-2025 00:00		----	----	----	----
Compound	CAS Number	LOR	Unit	EB2508698-001	-----	-----	-----
				Result	---	---	---
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>							
Nitrate as N	14797-55-8	0.01	mg/L	<b>0.17</b>	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>							
Nitrite + Nitrate as N	----	0.01	mg/L	<b>0.21</b>	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>							
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<b>0.1</b>	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>							
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	<b>0.3</b>	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>							
Total Phosphorus as P	----	0.01	mg/L	<b>2.70</b>	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2512648</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 10	Date Samples Received	: 14-Apr-2025 07:00
Order number	: ----	Date Analysis Commenced	: 15-Apr-2025
C-O-C number	: ----	Issue Date	: 24-Apr-2025 13:55
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: **Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD
Layla Hafner	Acid Sulphate Soils - Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD



Page : 2 of 6  
Work Order : EB2512648  
Client : MINE WASTE MANAGEMENT  
Project : Santana Kinetic Column - Leach 10

## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	14-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2512648-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	<b>2000</b>	----	----	----	----
∅ Leachate collected	----	0.01	mL	<b>470</b>	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	<b>7.95</b>	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	<b>308</b>	----	----	----	----

Page : 4 of 6  
 Work Order : EB2512648  
 Client : MINE WASTE MANAGEMENT  
 Project : Santana Kinetic Column - Leach 10



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		14-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2512648-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.58</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>309</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>49</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>49</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>3</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>93</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<b>1</b>	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>32</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>11</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>8</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>6</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.007</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>4.85</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.173</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<b>0.003</b>	----	----	----	----

Page : 5 of 6  
 Work Order : EB2512648  
 Client : MINE WASTE MANAGEMENT  
 Project : Santana Kinetic Column - Leach 10



**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				14-Apr-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2512648-001	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.001	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.036	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.007	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.016	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.668	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.002	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.17	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	<0.004	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.06	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



Page : 6 of 6  
 Work Order : EB2512648  
 Client : MINE WASTE MANAGEMENT  
 Project : Santana Kinetic Column - Leach 10

### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time		14-Apr-2025 00:00		----	----	----	----
Compound	CAS Number	LOR	Unit	EB2512648-001	-----	-----	-----
				Result	---	---	---
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>							
Nitrate as N	14797-55-8	0.01	mg/L	<b>0.08</b>	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>							
Nitrite + Nitrate as N	----	0.01	mg/L	<b>0.14</b>	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>							
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<b>0.1</b>	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>							
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	<b>0.2</b>	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>							
Total Phosphorus as P	----	0.01	mg/L	<b>1.96</b>	----	----	----

### Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).  
 (WATER) EK026SF: Total CN by Segmented Flow Analyser



## CERTIFICATE OF ANALYSIS

Work Order	: <b>EB2515911</b>	Page	: 1 of 6
Client	: <b>MINE WASTE MANAGEMENT</b>	Laboratory	: Environmental Division Brisbane
Contact	: LEO NAVARRO	Contact	: Carsten Emrich
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8616
Project	: Santana Kinetic Column - Leach 11	Date Samples Received	: 12-May-2025 04:45
Order number	: ----	Date Analysis Commenced	: 13-May-2025
C-O-C number	: ----	Issue Date	: 20-May-2025 12:00
Sampler	: ----		
Site	: ----		
Quote number	: EB24MINWAS0001		
No. of samples received	: 1		
No. of samples analysed	: 1		



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Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



Page : 2 of 6  
Work Order : EB2515911  
Client : MINE WASTE MANAGEMENT  
Project : Santana Kinetic Column - Leach 11

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LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		12-May-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2515911-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	<b>2000</b>	----	----	----	----
∅ Leachate collected	----	0.01	mL	<b>460</b>	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	<b>7.80</b>	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	<b>269</b>	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
		Sampling date / time		12-May-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2515911-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	<b>7.21</b>	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>265</b>	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>47</b>	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	<b>47</b>	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	<b>4</b>	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>78</b>	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<1	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	<b>30</b>	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<b>10</b>	----	----	----	----
Sodium	7440-23-5	1	mg/L	<b>8</b>	----	----	----	----
Potassium	7440-09-7	1	mg/L	<b>6</b>	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<b>0.03</b>	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	<b>0.008</b>	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<b>6.29</b>	----	----	----	----
Barium	7440-39-3	0.001	mg/L	<b>0.180</b>	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				12-May-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2515911-001	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.001	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.035	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.005	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.015	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.614	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.001	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.31	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.009	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.1	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.06	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									

Page : 6 of 6  
 Work Order : EB2515911  
 Client : MINE WASTE MANAGEMENT  
 Project : Santana Kinetic Column - Leach 11



**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time		12-May-2025 00:00		----	----	----	----
Compound	CAS Number	LOR	Unit	EB2515911-001	-----	-----	-----
				Result	---	---	---
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>							
Nitrate as N	14797-55-8	0.01	mg/L	<b>0.20</b>	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>							
Nitrite + Nitrate as N	----	0.01	mg/L	<b>0.26</b>	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>							
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<b>0.1</b>	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>							
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	<b>0.4</b>	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>							
Total Phosphorus as P	----	0.01	mg/L	<b>2.29</b>	----	----	----



## CERTIFICATE OF ANALYSIS

**Work Order** : **EB2518535**  
**Client** : **MINE WASTE MANAGEMENT**  
**Contact** : LEO NAVARRO  
**Address** : Level 1, 8A/232 Churchill Ave  
Subiaco 6008  
**Telephone** : ----  
**Project** : Santana Kinetic Column - Leach 12  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : ----  
**Quote number** : EB24MINWAS0001  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 6  
**Laboratory** : Environmental Division Brisbane  
**Contact** : Carsten Emrich  
**Address** : 2 Byth Street Stafford QLD Australia 4053  
**Telephone** : +61 7 3552 8616  
**Date Samples Received** : 12-Jun-2025 04:00  
**Date Analysis Commenced** : 16-Jun-2025  
**Issue Date** : 19-Jun-2025 17:09



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### *Signatories*

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<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Acid Sulphate Soils, Stafford, QLD
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD



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∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	11-Jun-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2518535-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	310	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	7.91	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	317	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				11-Jun-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2518535-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	7.62	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	300	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	64	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	64	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	3	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	91	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<1	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	35	----	----	----	----
Magnesium	7439-95-4	1	mg/L	12	----	----	----	----
Sodium	7440-23-5	1	mg/L	8	----	----	----	----
Potassium	7440-09-7	1	mg/L	7	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	0.010	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	5.06	----	----	----	----
Barium	7440-39-3	0.001	mg/L	0.217	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				11-Jun-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2518535-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	0.001	----	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	0.039	----	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	0.006	----	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.014	----	----	----	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	----
Strontium	7440-24-6	0.001	mg/L	0.737	----	----	----	----	----
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	----
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	----
Uranium	7440-61-1	0.001	mg/L	0.002	----	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	----
Boron	7440-42-8	0.05	mg/L	1.30	----	----	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	0.007	----	----	----	----	----
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	0.2	----	----	----	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.36	----	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	0.16	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				11-Jun-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2518535-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>									
Nitrate as N	14797-55-8	0.01	mg/L	0.08	----	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>									
Nitrite + Nitrate as N	----	0.01	mg/L	0.24	----	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.7	----	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>									
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.9	----	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>									
Total Phosphorus as P	----	0.01	mg/L	2.00	----	----	----	----	----



## CERTIFICATE OF ANALYSIS

Work Order : **EB2523415**  
Client : **MINE WASTE MANAGEMENT**  
Contact : LEO NAVARRO  
Address : Level 1, 8A/232 Churchill Ave  
Subiaco 6008  
Telephone : ----  
Project : Santana Kinetic Column - Leach 13  
Order number : ----  
C-O-C number : ----  
Sampler : ----  
Site : ----  
Quote number : EB24MINWAS0001  
No. of samples received : 1  
No. of samples analysed : 1

Page : 1 of 6  
Laboratory : Environmental Division Brisbane  
Contact : Carsten Emrich  
Address : 2 Byth Street Stafford QLD Australia 4053  
Telephone : +61 7 3552 8616  
Date Samples Received : 08-Jul-2025 06:37  
Date Analysis Commenced : 08-Jul-2025  
Issue Date : 15-Jul-2025 12:14



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Mark Hallas	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Mark Hallas	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
			Sampling date / time	08-Jul-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2523415-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA047 Free Draining Leach Column</b>								
∅ Initial weight of sample	----	0.001	g	2000	----	----	----	----
∅ Leachate collected	----	0.01	mL	350	----	----	----	----
∅ Initial pH	----	0.01	pH Unit	7.74	----	----	----	----
∅ Initial Electrical Conductivity	----	1	µS/cm	259	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				08-Jul-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2523415-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	7.55	----	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	249	----	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	58	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	58	----	----	----	----
<b>ED038: Acidity</b>								
Acidity as CaCO3	----	1	mg/L	2	----	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	55	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	<1	----	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	25	----	----	----	----
Magnesium	7439-95-4	1	mg/L	8	----	----	----	----
Sodium	7440-23-5	1	mg/L	5	----	----	----	----
Potassium	7440-09-7	1	mg/L	4	----	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----
Antimony	7440-36-0	0.001	mg/L	0.008	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	4.62	----	----	----	----
Barium	7440-39-3	0.001	mg/L	0.181	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----



### Analytical Results

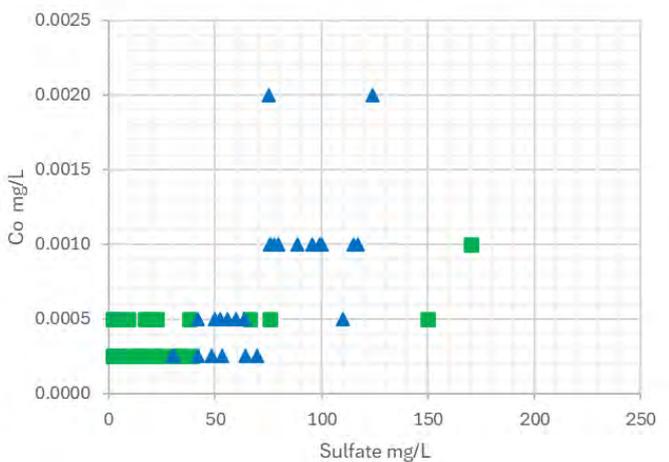
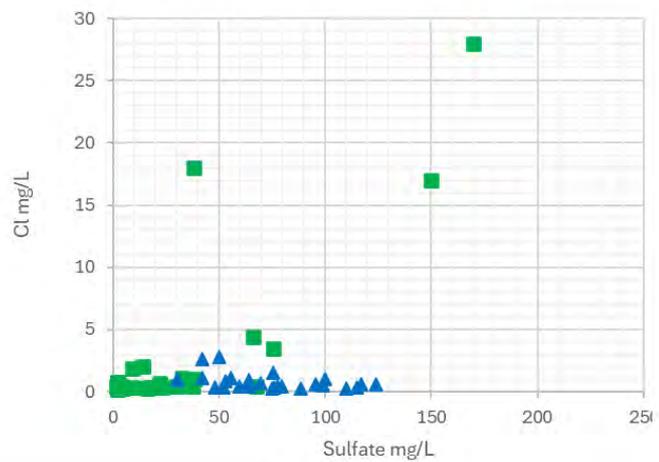
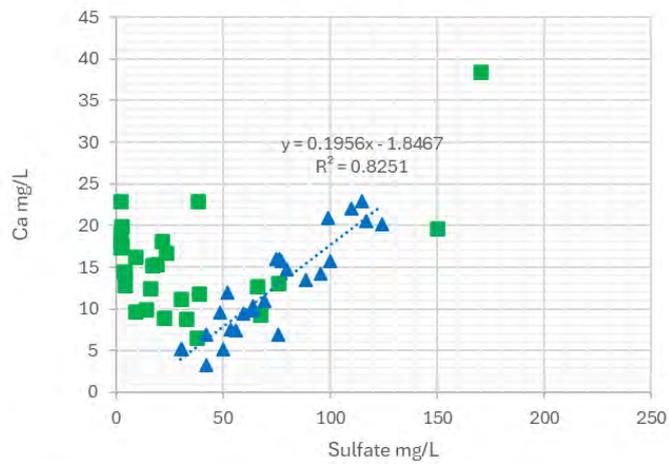
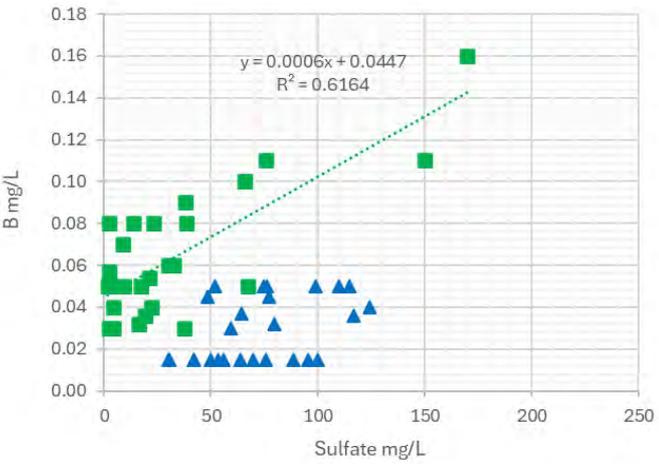
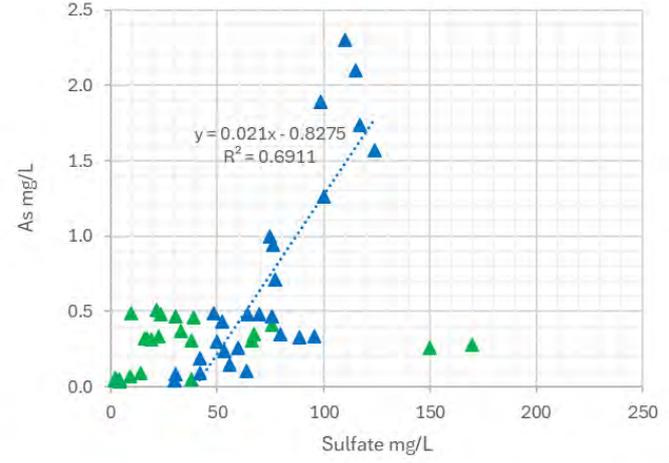
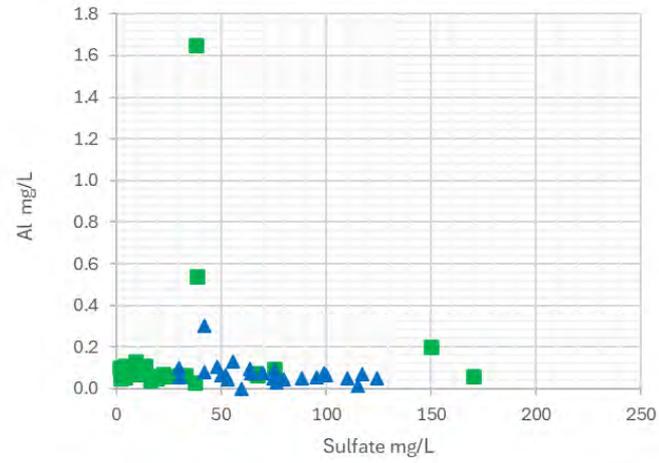
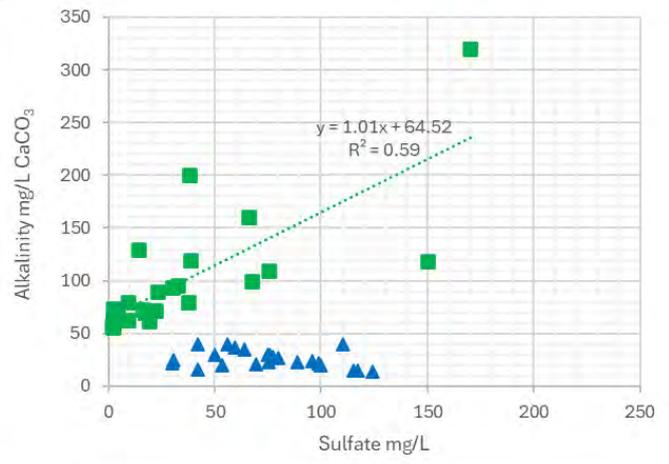
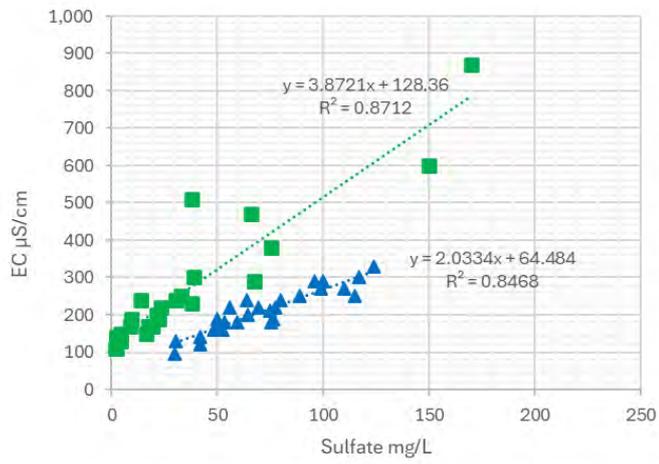
Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				08-Jul-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EB2523415-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	----	----	----	
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	
Zinc	7440-66-6	0.005	mg/L	<b>0.032</b>	----	----	----	----	
Manganese	7439-96-5	0.001	mg/L	<b>0.004</b>	----	----	----	----	
Molybdenum	7439-98-7	0.001	mg/L	<b>0.010</b>	----	----	----	----	
Silver	7440-22-4	0.001	mg/L	<0.001	----	----	----	----	
Strontium	7440-24-6	0.001	mg/L	<b>0.488</b>	----	----	----	----	
Thallium	7440-28-0	0.001	mg/L	<0.001	----	----	----	----	
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----	
Titanium	7440-32-6	0.01	mg/L	<0.01	----	----	----	----	
Uranium	7440-61-1	0.001	mg/L	<b>0.002</b>	----	----	----	----	
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	----	----	----	
Boron	7440-42-8	0.05	mg/L	<b>1.21</b>	----	----	----	----	
Iron	7439-89-6	0.05	mg/L	<0.05	----	----	----	----	
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	0.004	mg/L	<0.004	----	----	----	----	
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	<b>0.2</b>	----	----	----	----	
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	----	----	----	----	
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	<b>0.07</b>	----	----	----	----	
<b>EK058G: Nitrate as N by Discrete Analyser</b>									



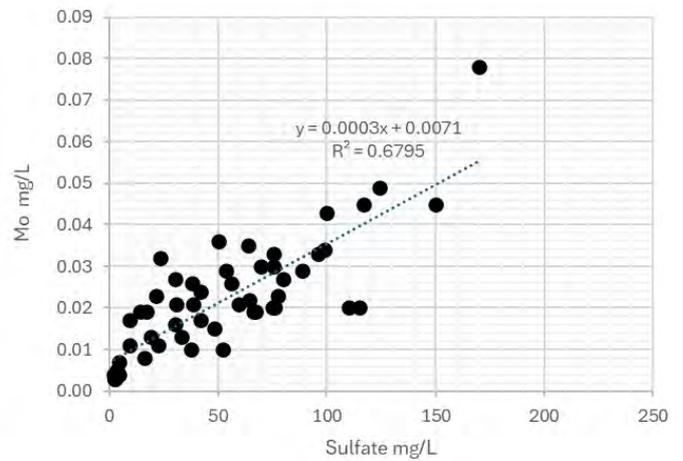
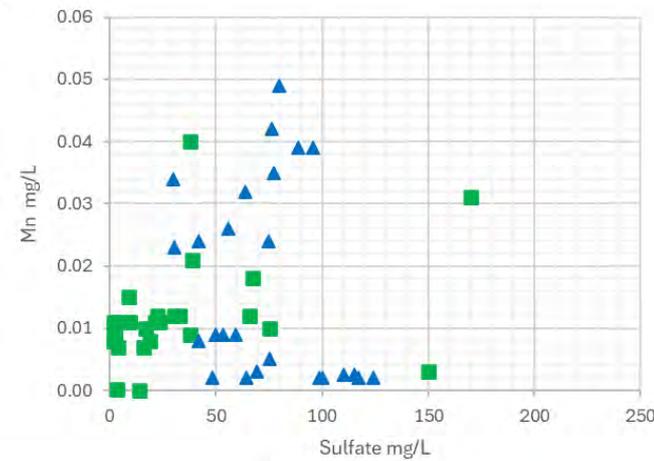
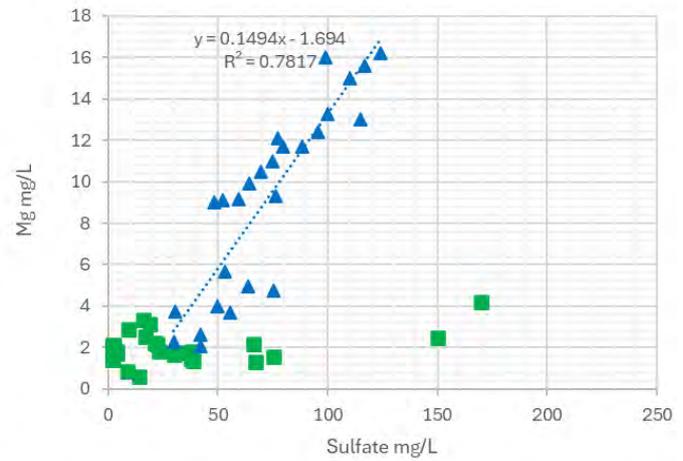
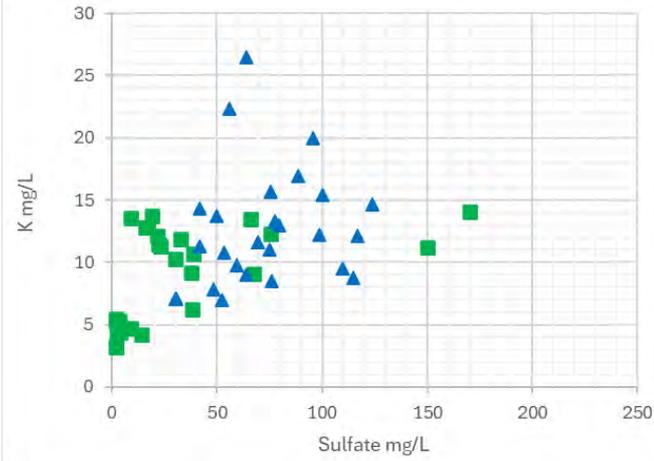
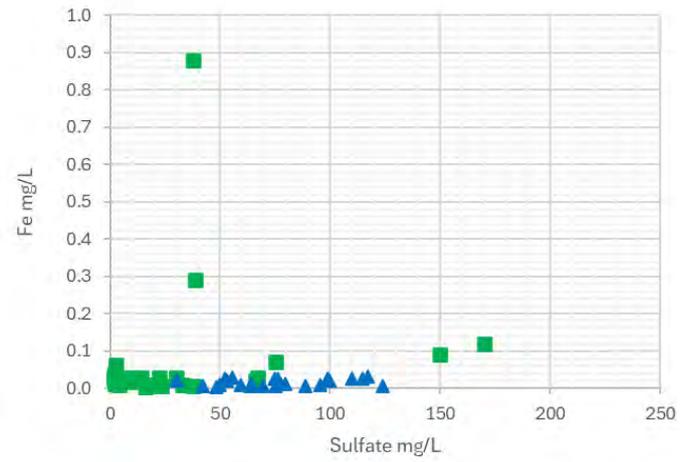
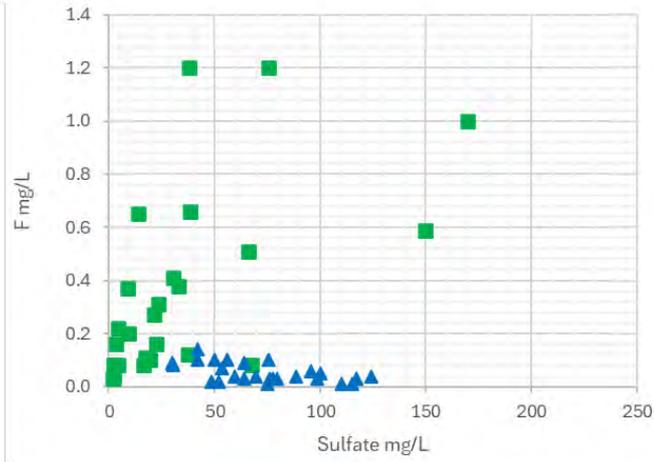
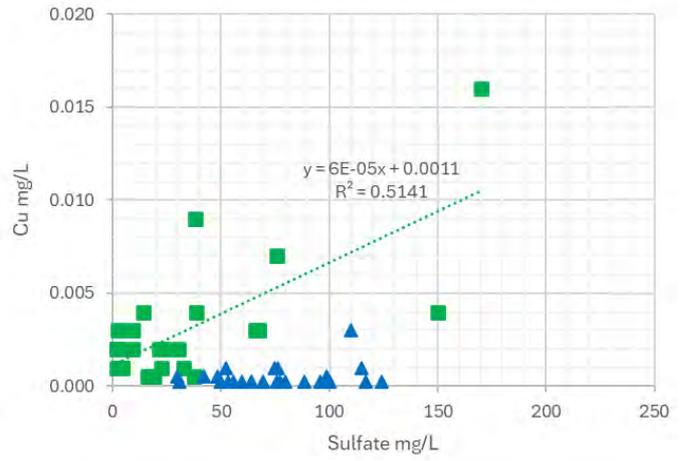
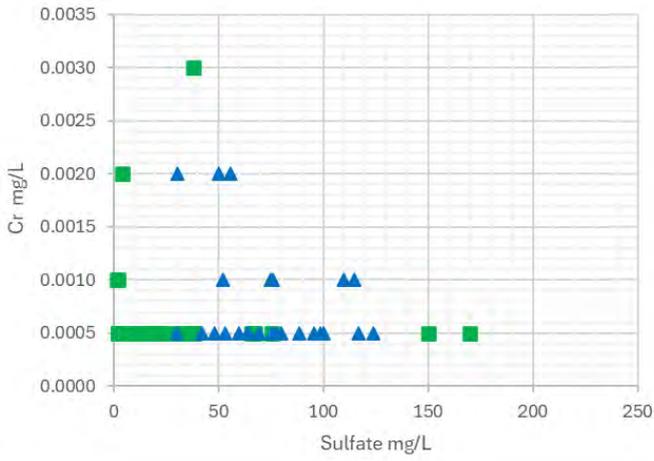
### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	M754 JR024 CN de-tox filter cake	----	----	----	----
Sampling date / time				08-Jul-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2523415-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser - Continued</b>									
Nitrate as N	14797-55-8	0.01	mg/L	0.04	----	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>									
Nitrite + Nitrate as N	----	0.01	mg/L	0.11	----	----	----	----	----
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	----	----	----	----	----
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>									
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.1	----	----	----	----	----
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>									
Total Phosphorus as P	----	0.01	mg/L	2.00	----	----	----	----	----

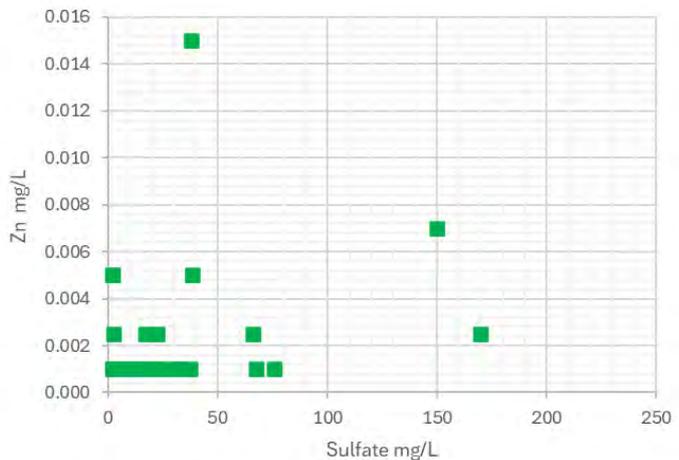
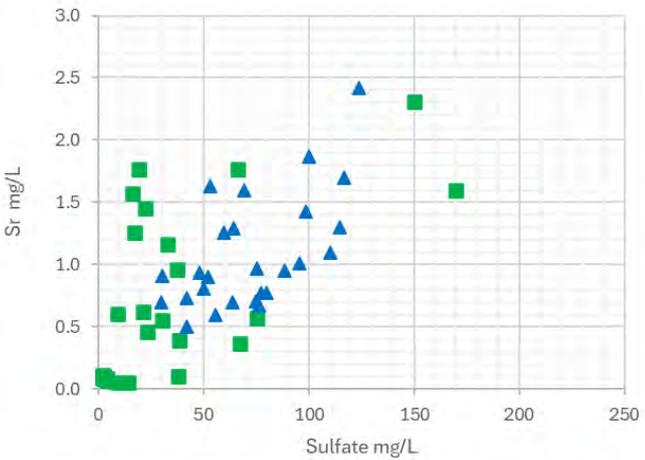
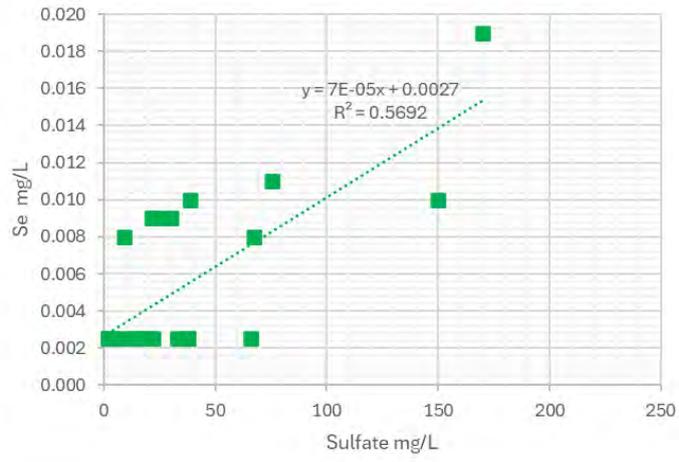
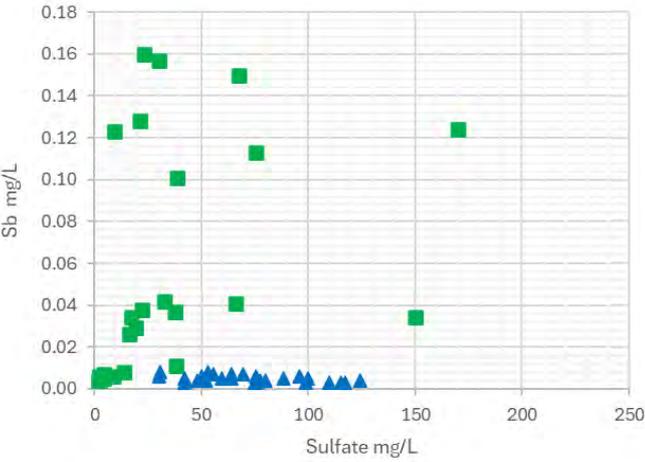
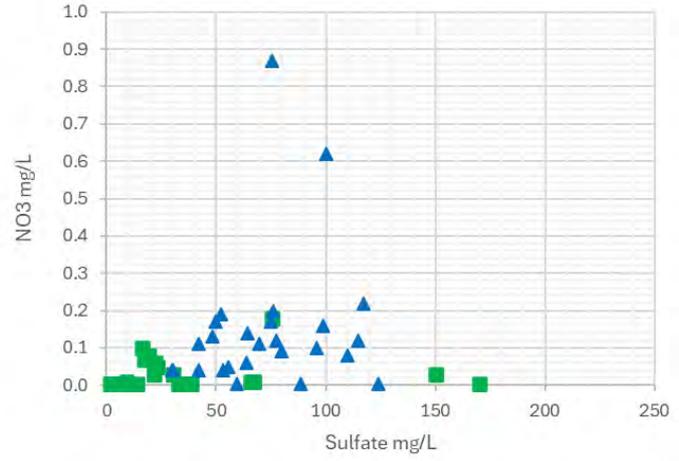
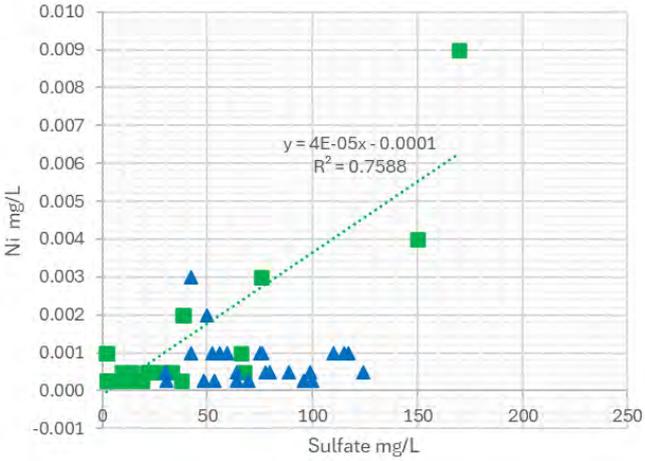
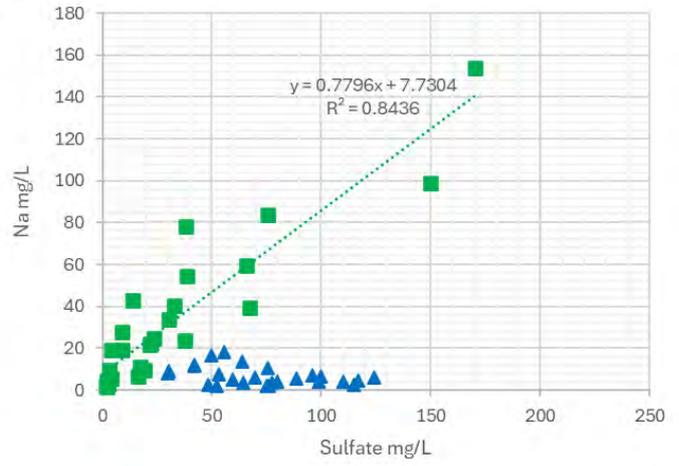
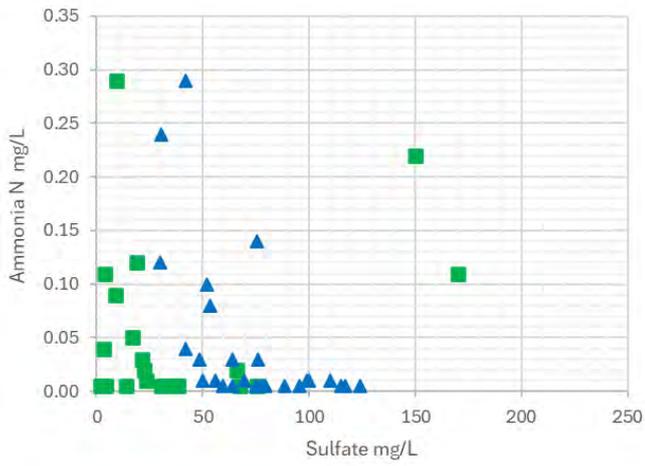
## APPENDIX D SULFATE RELATIONSHIP ANALYSIS



■ TZ3 ▲ TZ4/RSSZ

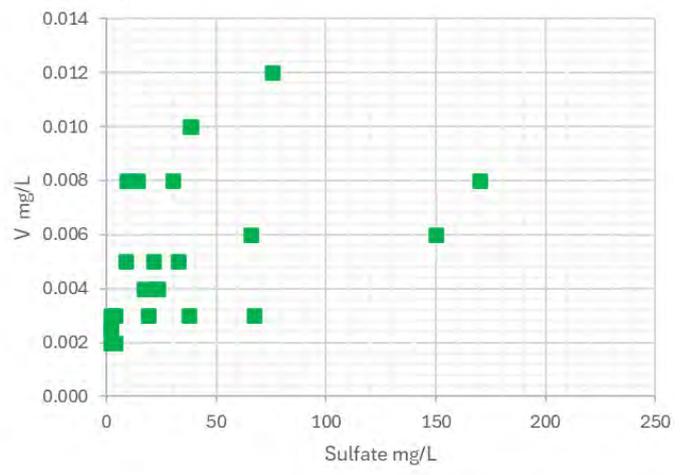
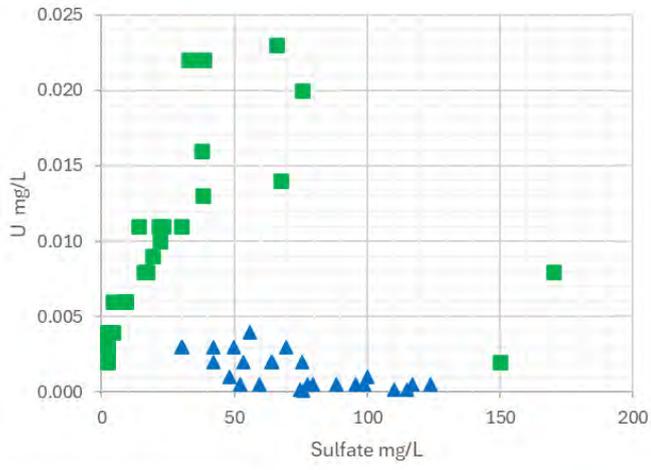


■ TZ3 ▲ TZ4/RSSZ ● All Data



■ TZ3 ▲ TZ4/RSSZ

TZ4/RSSZ is not plotted for Se and ZN as all results <LOR.



■ TZ3 ▲ TZ4/RSSZ

*TZ4/RSSZ is not plotted for V as all results <LOR.*

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**MINE WASTE  
MANAGEMENT**

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