Santonian Resources

Santonian Resources Pty Ltd

Second Annual Report for EL31971

The Aladdin Project

V – Fe – Ti – Al

11/04/2020 to 10/04/2021

Prepared by Holdfast Exploration Pty Ltd

Table of Contents

List of Figures

1 Abstract

Mineral Exploration License (EL) 31971 was granted to Santonian Resources Pty Ltd on 11th April 2019 for a term of 6 years. The Aladdin Project is located 40 km South East of the settlement of Top Springs and 240km South from Katherine. Historically the area has been suspected to have bornite mineralisation due to iridescent stains found within the laterite. Recent field trips conducted by Santonian Resources have found that the erroneous reports are mineralised laterite that comprises of high anomalous Vanadium, Iron, Titanium and Aluminium content. Furthermore, metallurgical studies have also shown that the mineralisation can be economically processed through leaching and magnetic separation processes. Second year operations consisted of exploratory investigations of strata differing to the duricrust which included rock chip sampling and thin section analysis. In addition, wet tabling of the duricrust was also explored to investigate upgrading Vanadium content. Rock chip sampling and thin section analysis showed a typical deeply weathered laterite profile is present where vanadium concentration exists as a solid solution substitution within the iron oxide where the titanium is hosted mostly within disseminated ilmenite and rutile. Wet tabling the duricrust sample was not effective to upgrade vanadium content.

2 Copyright

3 Location

The Aladdin Project is located 40 km South East of the settlement of Top Springs and 240km South from Katherine. The tenement comprises of 249 blocks covering an area of 818 square kilometres within the Montejinni East, Dungowan and Birrimba Pastoral Leases. Tenement EL 31971 is shown in Figure 2

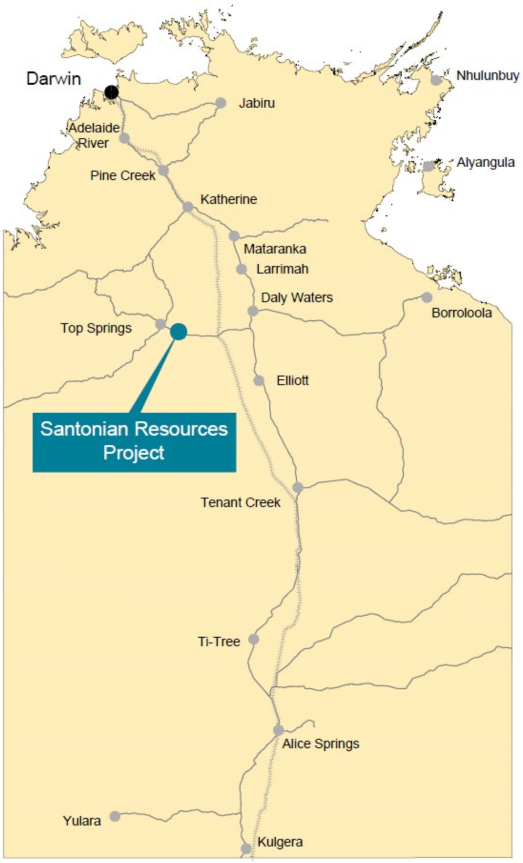


Figure 1: Locality Plan

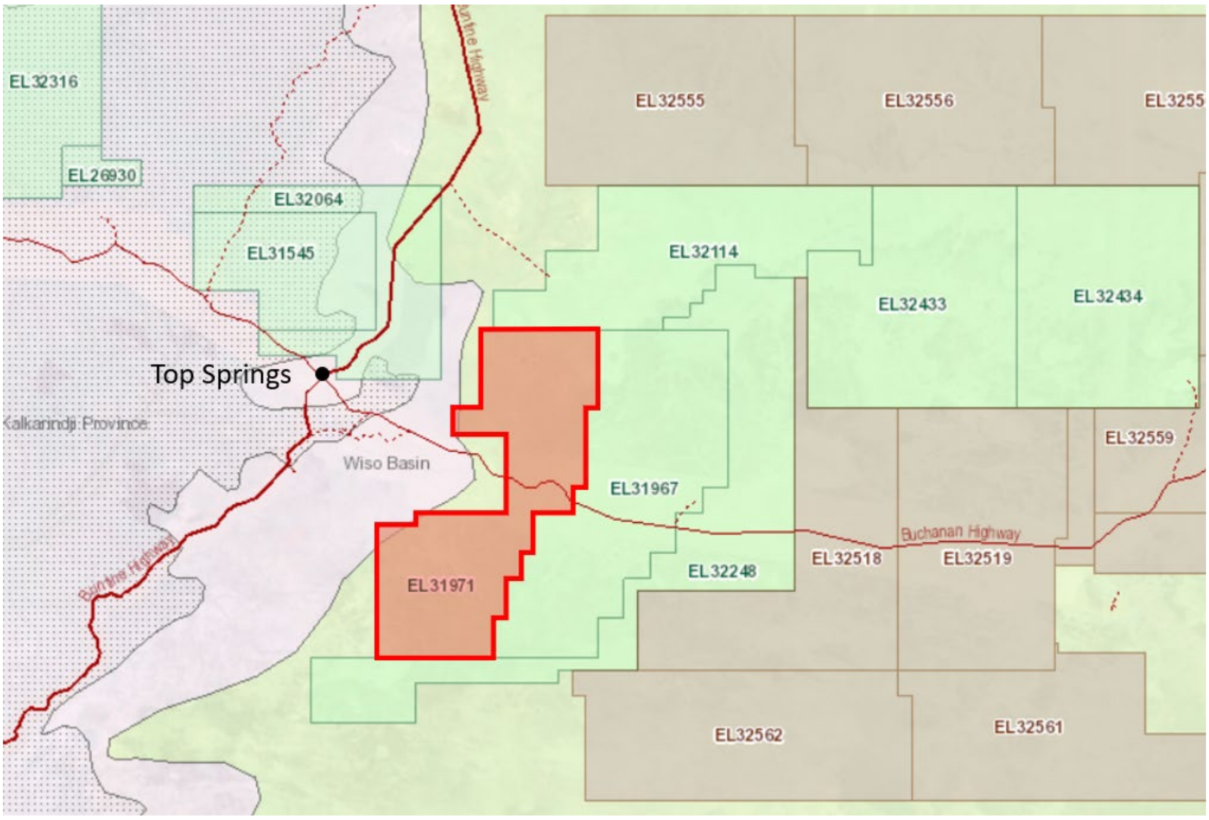


Figure 2: Tenement Location

4 Title History

EL 31971 was granted on to Santonian Resources Pty Ltd, a 100% wholly owned subsidiary of Holdfast Exploration, on 11th April 2019 by the Department of Primary Industries and Resources.

EL 31971 was applied to cover the extremities of the interpreted mineralised laterite containing anomalous Vanadium, Iron, Titanium and Aluminium content.

5 Access

The Aladdin Project is primarily accessed by graded stations tracks via the Buchanan Highway using 4x4 vehicles. Access to the project can become limited during seasonal monsoons and heavy rains between the months of November to April.

6 Geological Setting

The Daly Waters geological sheet (SE 53-1) shows an area that is geomorphically and tectostratigraphically dominated by several distinct and denuded Cretaceous-age lateritic-bauxite palae-land surfaces. Regionally, the topography comprises of isolated (dissected) low-amplitude mesas separated by Tertiary drainages. The mesa tables appear to be capped by a laterally contiguous ferrigunous horizon that may be a potential host to base minerals. Multi-element anomalies comprising chemically inert and immobile elements (e.g. Ni, Al, V, Ti, REE), typically concentrate in laterally extensive ferruginous duricrust horizons lying atop bauxitic plateaux.

The stylised cross section shown in Figure 4 is an interpreted understanding of the stratifications that underly the lateritic occurrences. Isolated mesas form the remnant Cretaceous surface topography where Cambrian-aged Limestones and tholeiitic volcanics underlie the Cretaceous Sediments. The area is technically stable which is an important factor in the development of lateritic regoliths.

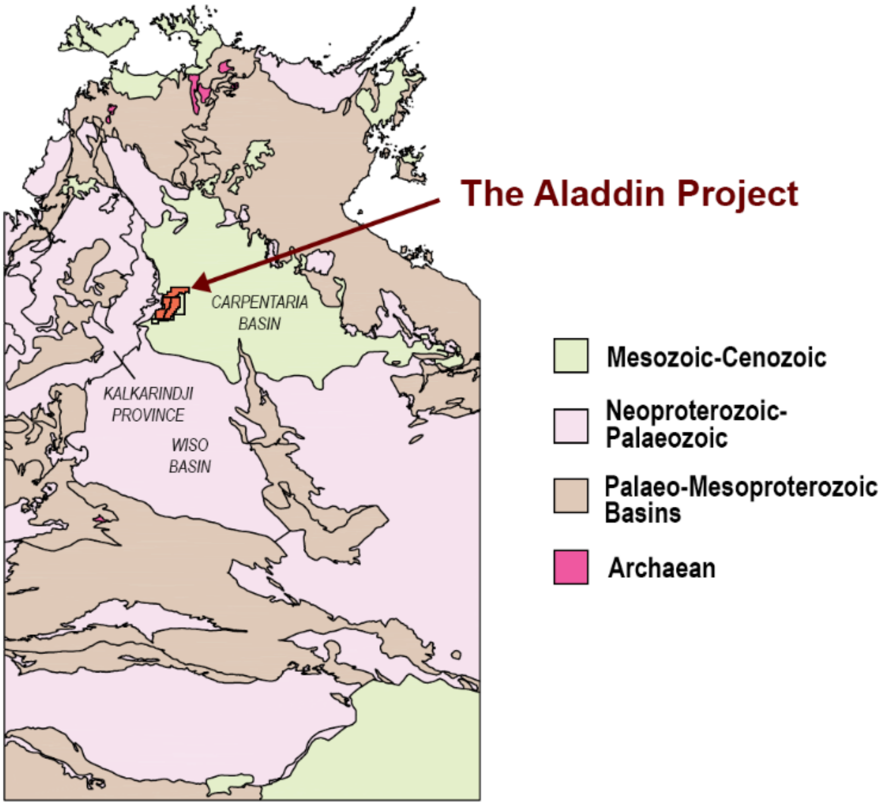


Figure 3: Regional Geology

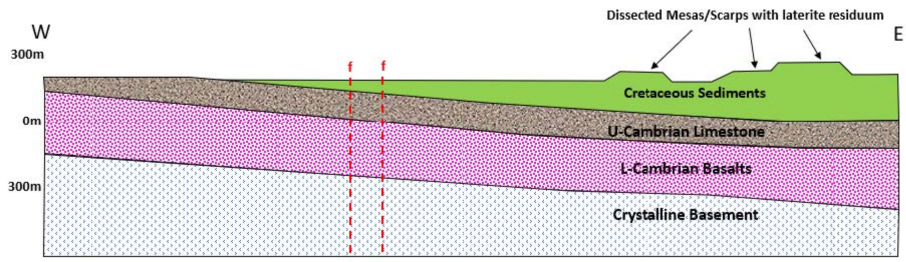


Figure 4: Stylised cross-section

An interpretd regional geological model for such enriched lateritic residua on relict regolith landforms is shown in Figure 5.

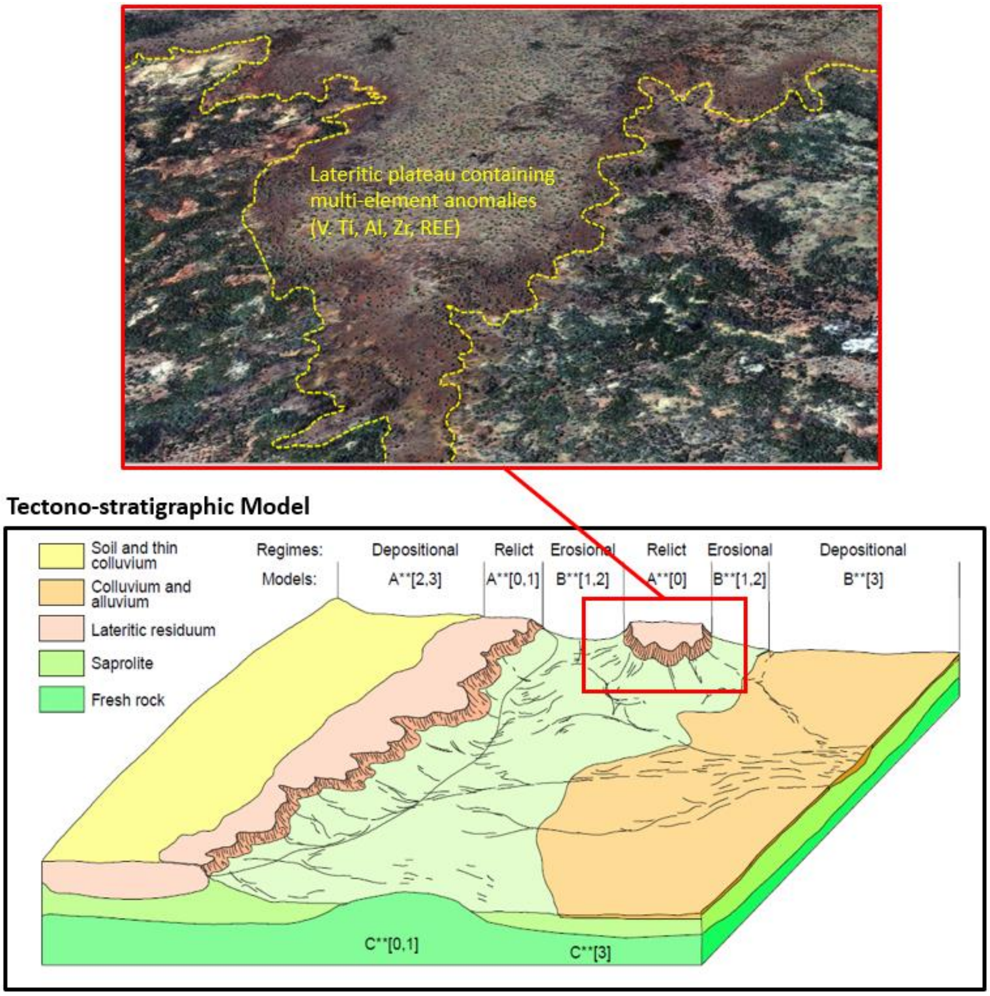


Figure 5 - Interpreted Regolith-landform Model of the Project Area

7 Exploration History

Historically, the Daly Waters geological map, published in 1969, noted iridescent stains in laterite leading to erroneous reports of copper mineralization in the area (Brown, 1969). It was believed that the iridescent stains resembled bornite mineralisation, however, geochemical analysis had shown low copper content throughout the laterite. The laterite has since been used for road construction material where numerous roadside quarries are present.

Other commodities of interest within the vicinity was explore by R W A Crowe in search for coober pedy style opals, Stockdale Prospecting Ltd and Aberfoyle Exploration Pty Ltd in search for diamonds and C.R.A. Pty Ltd in search for gold mineralisation.

8 Geological Activities and Office Studies

In conjunction with the Aladdin Projects drilling program that was being undertaken East of EL 31971, further exploratory investigations were undertaken which included rock chip sampling, thin section analysis and wet tabling. Such investigations were required to determine the Aladdin Projects ore genesis that will guide future exploration targets within the tenure.

8.1 Rock Chip Sampling

Exploration reconnaissance was undertaken throughout EL 31971 to search for rocks and strata that were different to the duricrust, which has dominated the Aladdin Projects exploration. Two strata of interest were found, the first (Rock 1-1 to Rock 1-3) being a Breccia that appears to have a thin coating of iron oxide with iridescent staining, the second (White Kaolin) appears to be kaolin clay that varies in colour from milky white to a milky purple. Both the Breccia and White Kaolin samples are shown in Figure 6. In addition, a layout map and coordinates of the rock chip samples are shown in Figure 7 and Table 1, respectively.

A portable XRF analysis was used on site to determine the mineral composition of the Rock Chip sampling where the results are attached in Appendix 1. Rock Chip 1-1 was rich in titanium content, especially for a lower grade Iron content. The White Kaolin, consisted of high silica and aluminium typical a kaolin clay, however, there was a consistent grade of Titanium at 0.5%. The varying strata below shows a strong indication of a pallid zone similar to a deeply weathered laterite profile as described by (Nahon, 1986).

Figure 6 Rock Chip Sampling Photos

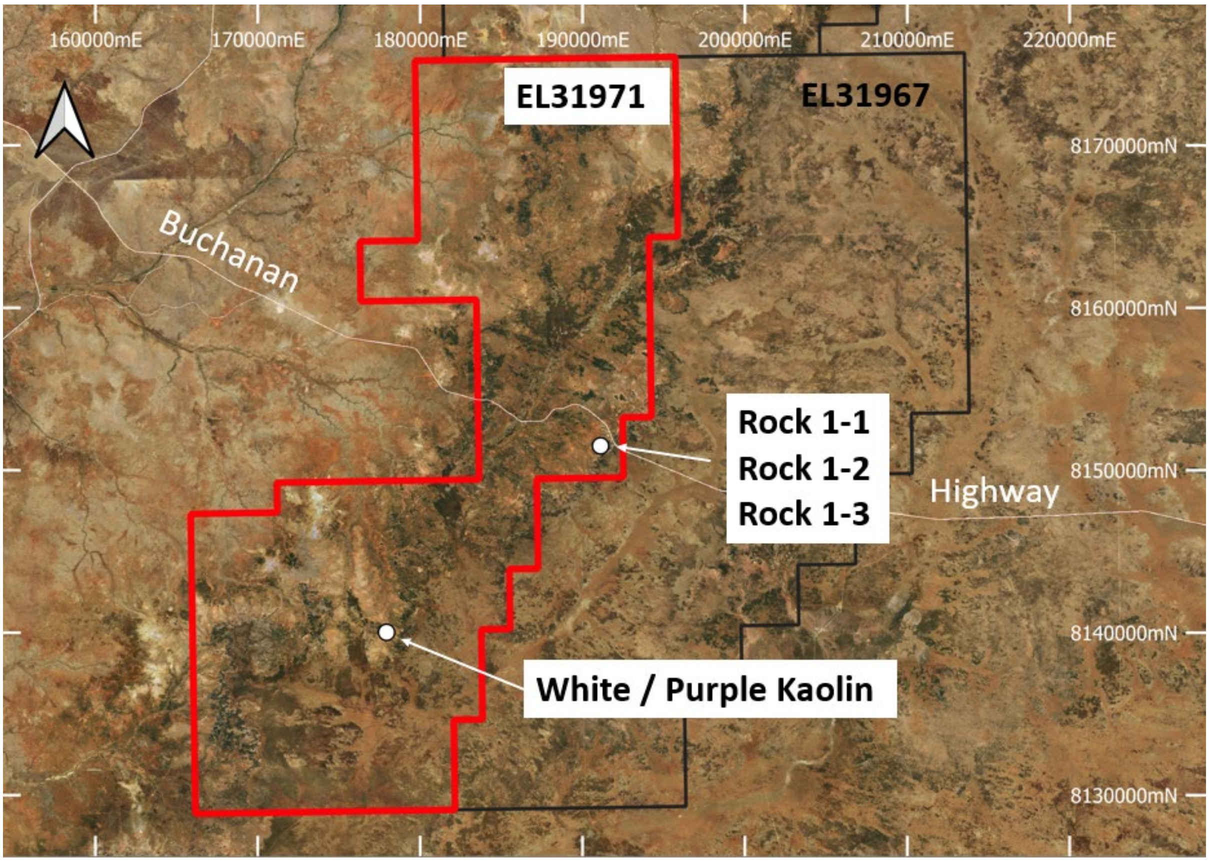


Figure 7 Rock Chip Sampling Location Plan

Table 1 Rock Chip Sampling Coordinates

Sample ID	Coordinates (	
	Latitude	Longitude
White Kaolin	16.80080	131.97862
Purple Kaolin		
Rock 1-1	16.69894	132.10369
Rock 1-2		
Rock 1-3		

8.2 Thin Section Analysis

Both Breccia and Kaolin samples were submitted for thin section analysis to determine the mineralisation and elemental composition. The final thin section report is attached in Appendix 2 for reference. Key findings found that Vanadium ranged from 0.4% to 2.5% within the textual banding of the iron oxides. Furthermore, it was suggested that the Vanadium content of the Iron oxides is mostly as solid solution substitution. The titanium was observed to be within ilmenite, rutile and occasional traces of solid solution within the Iron oxides.

The Kaolin sample contained Iron oxide blebs that contained vanadium grades ranging from 0.5% to 1.9% presented as a solid solution similar to the iron oxide within the Breccia sample. The Titanium content is attributed to fine grains of rutile and ilmenite that are rarely disseminated within the sample.

8.3 Wet Tabling

Previous exploration programs had undertaken magnetic separation metallurgical work to upgrade the grade in vanadium from the duricust. However, simple gravity separation had not yet been explored to separate iron oxide from the duricrust. A representative duricrust sample was taken from rock chip sampling from Year 1 operation year and was crushed down to less than 2mm. The sample was then processed through a weta table classing the sample into 3 groups being, concentrate, tailings and slimes. All three 3 groups were submitted for geochemical analysis and is attached in Appendix 3 for reference. The findings were inconclusive as the grade of vanadium was distributed evenly throughout the sample.

Figure 8 Wet Tabling a crushed Duricrust Sample

9 Summary

The Aladdin Project has shown high anomalous Vanadium, Iron, Titanium and Aluminium content through multiple field trips. Furthermore, preliminary metallurgical test work warrants that the style of mineralisation can allow Vanadium to be extracted from economical mining processes including magnetic separation and leaching. In addition, the thin section analysis reinforces the metallurgical test work demonstrating that the Vanadium content is distributed free throughout the laterite.

The rock chip sampling identified varying strata including a pallid zone similar to a typical weathered laterite profile. Furthermore, thin section analysis suggests that the vanadium enrichment within the iron oxide is mostly as a solid solution substitution ranging from 0.4 to 2.5% in grade. The wet tabling results showed that this process was ineffective to upgrade the vanadium content from the duricrust.

10 References

Brown, M. (1969). *Daly Waters, Northern Territory: explanatory notes.*

Nahon, D. (1986). Evolution of iron crusts in tropical landscapes. *Rates of Chemical Weathering of Rocks and Minerals.*

11 Appendix 1 – Rock Chip Sampling

HOLDFAST EXPLORATION

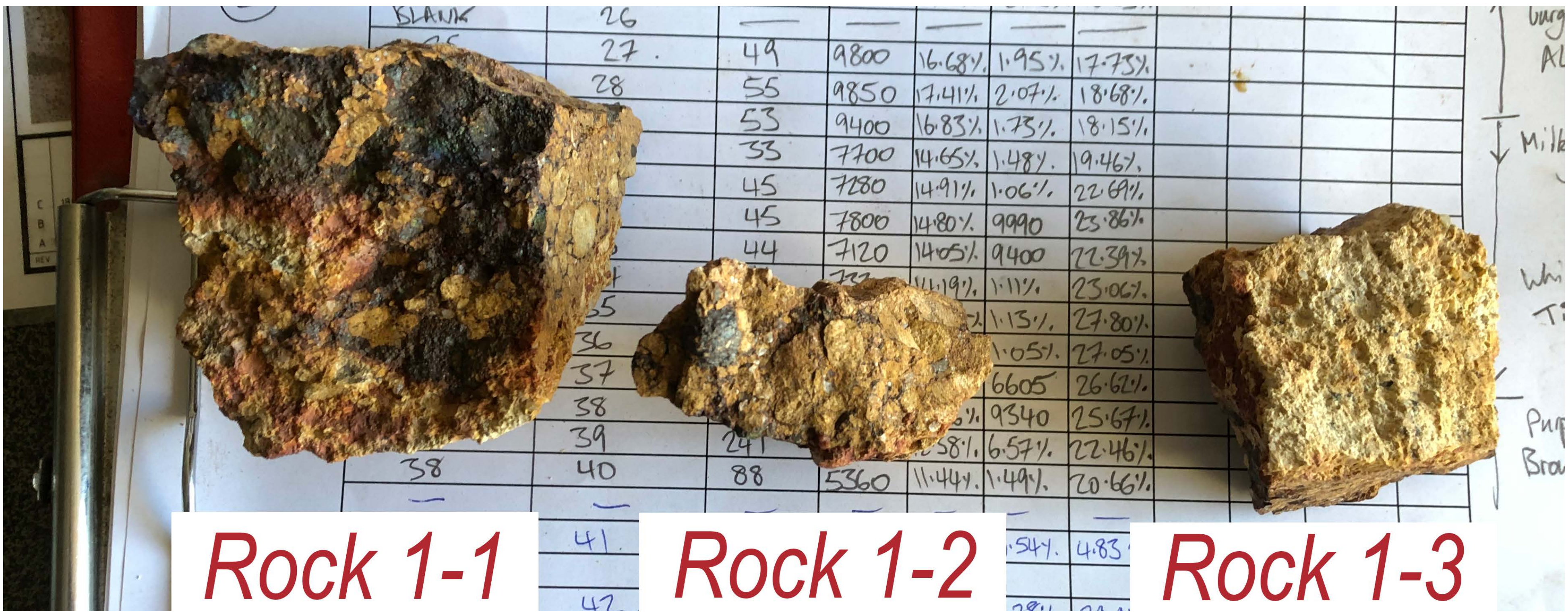
The Aladdin Project

Drilling Program July 2020

Rock Samples Near Cluster

Portable XRF Results
Model: Olympus VANTA VMR (803071)
Date Recorded: 26/07/2020
Mode: Geochem(2)

Hole-ID	Reading #	Mg	Al	Si	P	S	K	Ca	Ti	V	Cr	Mn	Fe	Co
		PPM	%	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	%	PPM
Rock 1-1	41	0	1.8%	4.8%	138	502	0	609	0.6%	533	0	37	10.5%	0
Rock 1-2	42	0	0.8%	29.9%	0	0	0	0	1.7%	140	0	0	3.3%	0
Rock 1-3	43	0	9.6%	20.8%	0	0	0	0	1.5%	73	0	39	0.8%	0



HOLDFAST EXPLORATION

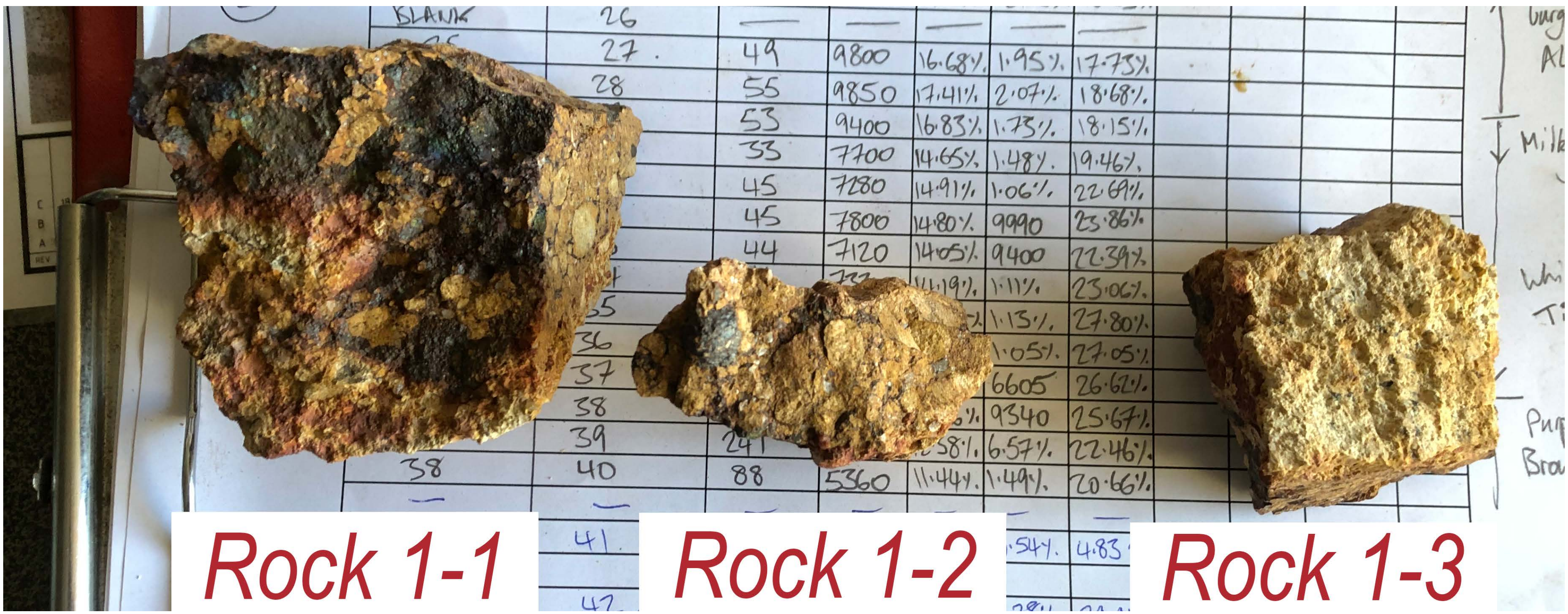
The Aladdin Project

Drilling Program July 2020

Rock Samples Near Cluster

Portable XRF Results
Model: Olympus VANTA VMR (803071)
Date Recorded: 26/07/2020
Mode: Geochem(2)

Hole-ID	Reading #	Ni	Cu	Zn	As	Se	Rb	Sr	Y	Zr	Nb	Mo	Ag	Cd
		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Rock 1-1	41	0	0	12	33	3	0	7	8	339	36	27	0	0
Rock 1-2	42	0	18	7	9	0	0	10	11	443	38	19	0	0
Rock 1-3	43	9	9	7	4	0	5	14	11	313	35	22	0	0



HOLDFAST EXPLORATION

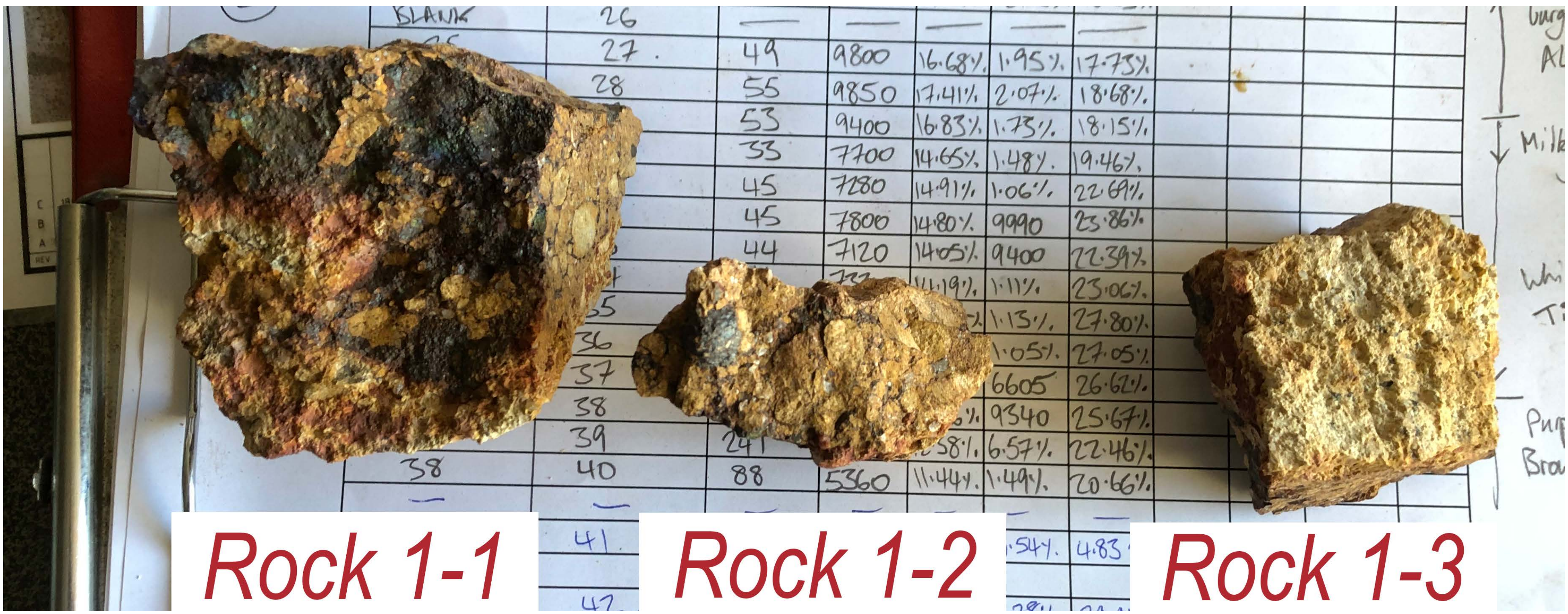
The Aladdin Project

Drilling Program July 2020

Rock Samples Near Cluster

Portable XRF Results
Model: Olympus VANTA VMR (803071)
Date Recorded: 26/07/2020
Mode: Geochem(2)

Hole-ID	Reading #	Sn	Sb	W	Hg	Pb	Bi	Th	U
		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Rock 1-1	41	0	0	0	0	34	0	0	6
Rock 1-2	42	0	0	0	0	14	0	13	5
Rock 1-3	43	0	0	0	0	15	0	21	5



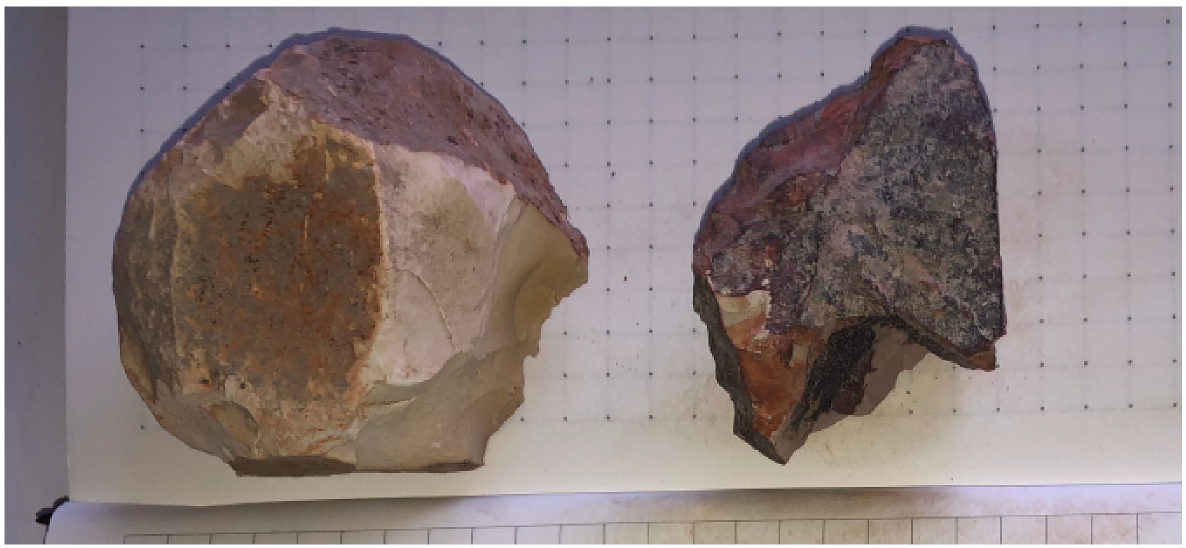
HOLDFAST EXPLORATION

The Aladdin Project

Rock Chip Sampling
Purple/White Kaolin Clay

Portable XRF Results
Model: Olympus VANTA VMR (803071)
Date Recorded: 27/07/2020
Mode: Geochem(2)

Hole-ID	Reading #	Mg	Al	Si	P	S	K	Ca	Ti	V	Cr	Mn	Fe
		PPM	%	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	%
White Strata	1	0	7.5%	27.9%	0	0	1859	0	0.7%	50	82	726	1.6%
White Strata	2	0	7.8%	28.6%	0	0	1236	0	0.6%	111	72	197	2.1%
Purple Strata	3	0	7.2%	29.2%	0	0	225	0	0.4%	170	88	41	2.7%
Purple Strata	4	0	8.0%	31.0%	0	0	334	0	0.4%	186	119	49	3.6%



White Kaolin ***Purple Kaolin***

HOLDFAST EXPLORATION

The Aladdin Project

Rock Chip Sampling

Purple/White Kaolin Clay

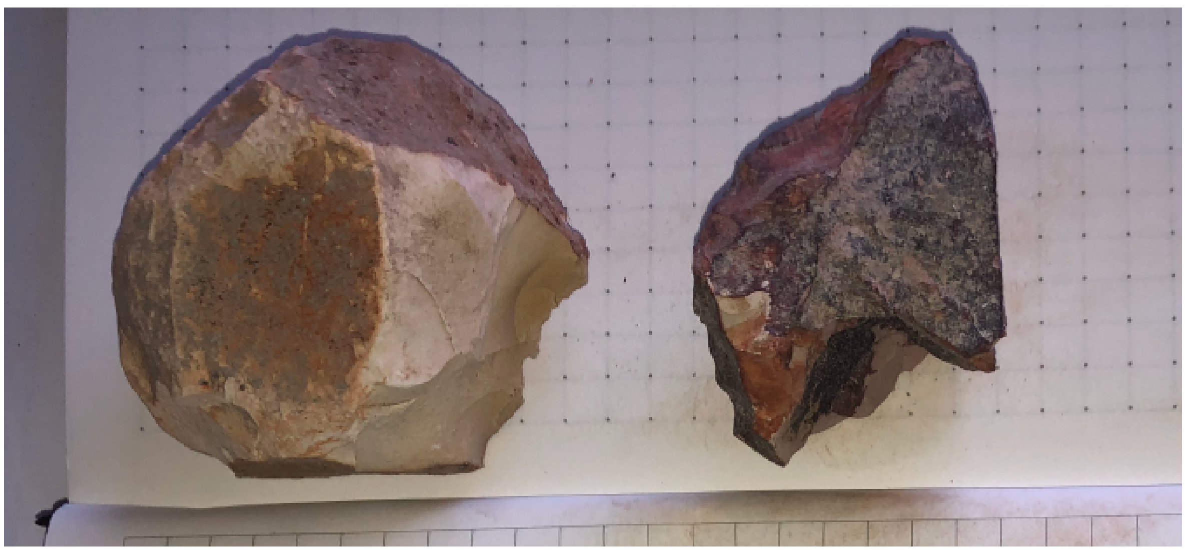
Portable XRF Results

Model: Olympus VANTA VMR (803071)

Date Recorded: 27/07/2020

Mode: Geochem(2)

Hole-ID	Reading #	Co	Ni	Cu	Zn	As	Se	Rb	Sr	Y	Zr	Nb	Mo
		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
White Strata	1	0	10	15	11	6	0	41	34	9	193	14	0
White Strata	2	0	6	14	9	8	0	38	33	9	199	12	0
Purple Strata	3	0	0	10	5	16	1	29	36	6	124	5	0
Purple Strata	4	0	8	13	9	21	3	28	36	6	134	5	0



White Kaolin ***Purple Kaolin***

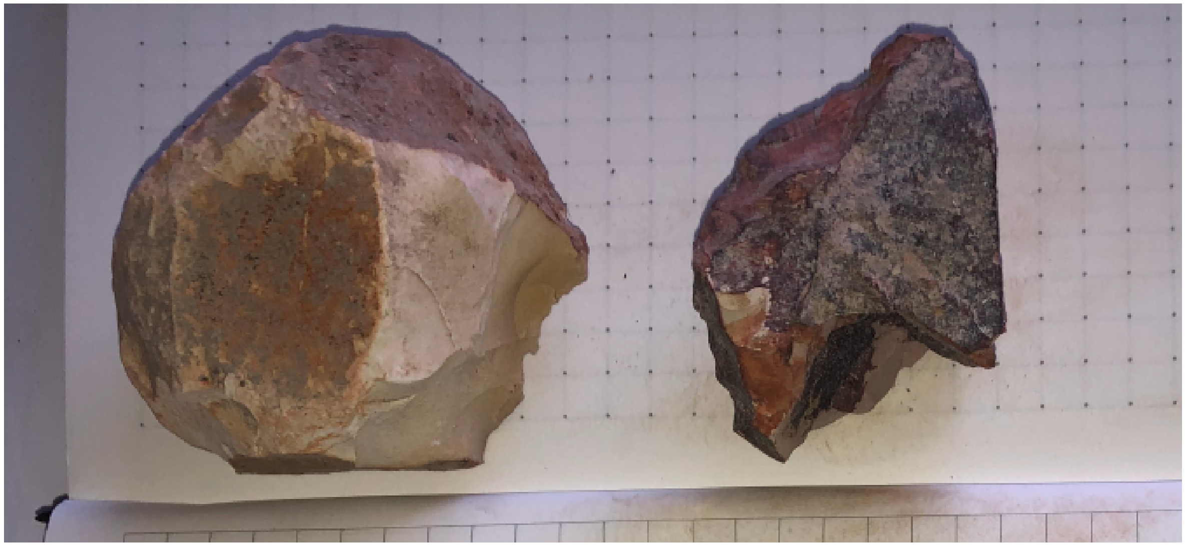
The Aladdin Project

Rock Chip Sampling

Purple/White Kaolin Clay

Portable XRF Results
Model: Olympus VANTA VMR (803071)
Date Recorded: 27/07/2020
Mode: Geochem(2)

Hole-ID	Reading #	Ag	Cd	Sn	Sb	W	Hg	Pb	Bi	Th	U
		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
White Strata	1	0	0	0	0	0	0	8	0	8	0
White Strata	2	0	0	0	0	0	0	8	0	0	0
Purple Strata	3	0	0	0	0	0	0	19	9	0	0
Purple Strata	4	0	0	0	0	0	0	23	18	0	0



White Kaolin ***Purple Kaolin***

12 Appendix 2 – Thin Section Analysis Report

ALS Oil & Gas

Final Report Titanium and Vanadium analysis

Date: 26th November 2020
Reference: GB-20-J261

RIGHT SOLUTIONS | RIGHT PARTNER

www.alsglobal.com

Contents

List of figures

Report key findings

Two samples were supplied for detailed mineralogical investigation, to characterise the likely mineral hosts of V and Ti within the samples.

The samples represents two different types of weathered iron-oxide rich samples. The first sample contains four principal minerals, namely quartz, rutile, ilmenite and Fe oxides, with variable amounts of clays. This has the appearance of a breccia with the Fe oxides, rutile and ilmenite present as a banded stockwork cutting a matrix dominated by disseminated clasts of rounded quartz. The second sample appears to represent a concretion or nodule with a thin Fe-oxide crust and internal disseminated blebs of Fe oxides.

For both samples the highest V grades are observed in the Fe-oxides (whether magnetite, hematite or goethite). Across the two samples the V grades range from 0.4 wt% to 2.5 wt%. Within the second sample V was also observed within chamosite (Fe-rich chlorite) at slightly lower concentrations (0.5 – 1.0 wt%), which may be either adsorbed vanadium or solid solution vanadium. The textural banding of the Fe oxides in sample 1 and of the crust in sample 2 suggest precipitation from solution and it is therefore considered likely that the V content of the Fe oxides is mostly as solid solution substitution. Within sample 2 the internal Fe oxide blebs may represent alteration of a pre-existing phase (e.g. sulfides). The similar V content suggests both the internal blebs and external crust were formed at the same time.

The titanium hosts are slightly different between the two samples. Within the breccia sample the hosts were ilmenite, rutile and as occasional trace solid solution within the Fe oxides. Texturally it appears to form as an interstitial phase, also within the breccia but as an earlier crystallizing phase than the later Fe oxides, which in places appear to mantle the Ti-oxide phases. For the second sample titanium is primarily hosted in clasts of rutile and ilmenite that are rarely disseminated within the sample and the oxide crust. There is also evidence for traces of titanium within the Fe oxide blebs that are widely disseminated within the sample.

It is important to note that V displays a strong overlap with Ti during EDX analysis and therefore the apparent hosts within rutile and ilmenite are not proven. This occurs because the secondary peak of Ti overlaps with the primary peak of V and can produce false positives. These are marked in red and italics within the results tables and further analysis with more sensitive equipment would be required to verify this occurrence. From experience, even if both phases were confirmed to contain V it would not be at those concentrations.

Introduction

Scope

Two samples were supplied for detailed mineralogical investigation, to characterise the likely mineral hosts of V and Ti within the samples.

This report presents the findings of a mineralogical investigation by scanning electron microscopy (SEM) on polished sections prepared from selected field sub-samples, with special reference to potential V and Ti hosts.

Samples / fractions

Sample / fraction	Type	Date received
VAS-01	Rock chip	15/10/2020
VAS-02	Rock chip	15/10/2020

A **Sample VAS-01**

General view of sample as received.

Image A
Nikon D7000 digital camera
Daylight balanced oblique light

B **Sample VAS-02**

General view of sample as received.

Image B
Nikon D7000 digital camera
Daylight balanced oblique light

Methods of investigation

Scanning electron microscopy

One polished block was prepared from each selected sample and coated with 20nm of carbon. The prepared samples were analysed using a ZEISS EVO MA 25 scanning electron microscope (SEM)[1] fitted with two Bruker xFlash 6|60 x-ray detectors for energy-dispersive X-ray spectroscopy (EDX) analysis. Six locations of interest were analysed from the sample focussed on analysing the range of minerals present. A long acquisition time was used to improve the detection levels for elements present at low levels (i.e. V). In addition to this a long acquisition elemental map was undertaken to attempt to display the spatial distribution of the elements of interest.

SEM results

VAS-01

The six fields of interest analysed are shown overpage (Figure 1) along with the named analysis points. The elemental data for each of the analysis points (Figure 2) are shown on the subsequent page, along with an elemental map of a site of interest on the last page (Figure 3).

The highest vanadium grades are observed in the Fe-oxide bands of which the most dominant form is magnetite based on the normalised Fe values (see site of interest 4 in particular). It is likely that some of the spectra reported as magnetite represent hematite or goethite due to the lower BSE response and the reason for the high Fe normalisation is uncertain. The V grades within the Fe-oxides range from 0.4 wt% to 2.5 wt%. The textural banding of the Fe oxides suggest precipitation from solution and it is therefore considered likely that the V content of the Fe oxides is mostly as solid solution substitution.

Titanium was observed within ilmenite, rutile and as occasional trace solid solution within the Fe oxides. Texturally it appears to form as an interstitial phase, also within the breccia but as an earlier crystallizing phase than the later Fe oxides, which in places appear to mantle the Ti-oxide phases.

It is important to note that V displays a strong overlap with Ti during EDX analysis and therefore the apparent hosts within rutile and ilmenite are not proven. This occurs because the secondary peak of Ti overlaps with the primary peak of V and can produce false positives. These are marked in red and italics within Figure 2 and further analysis with more sensitive equipment would be required to verify this occurrence. From experience, even if both phases were confirmed to contain V it would not be at those concentrations.

Figure 1: SEM analysis points for the VAS-01 sample

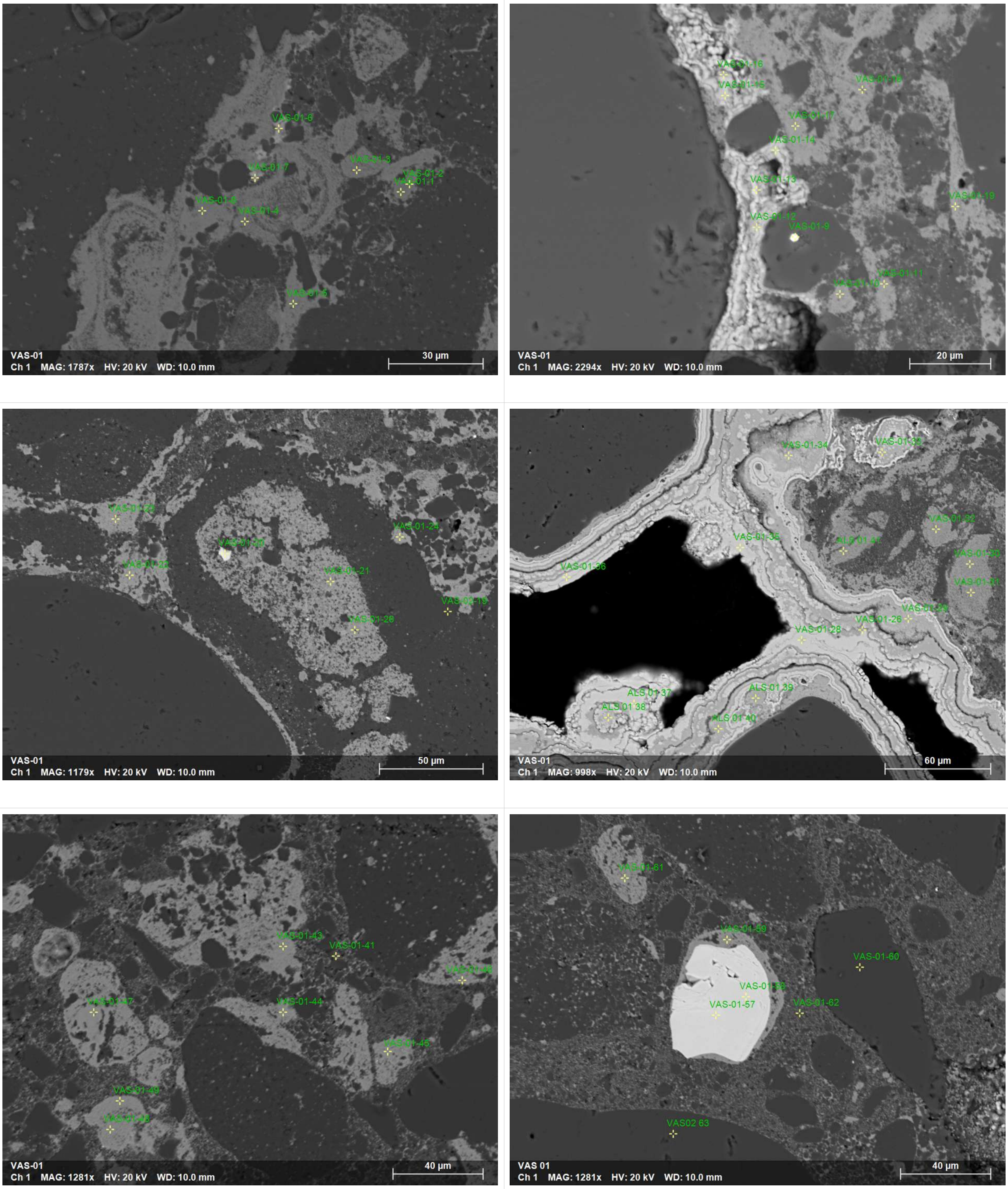
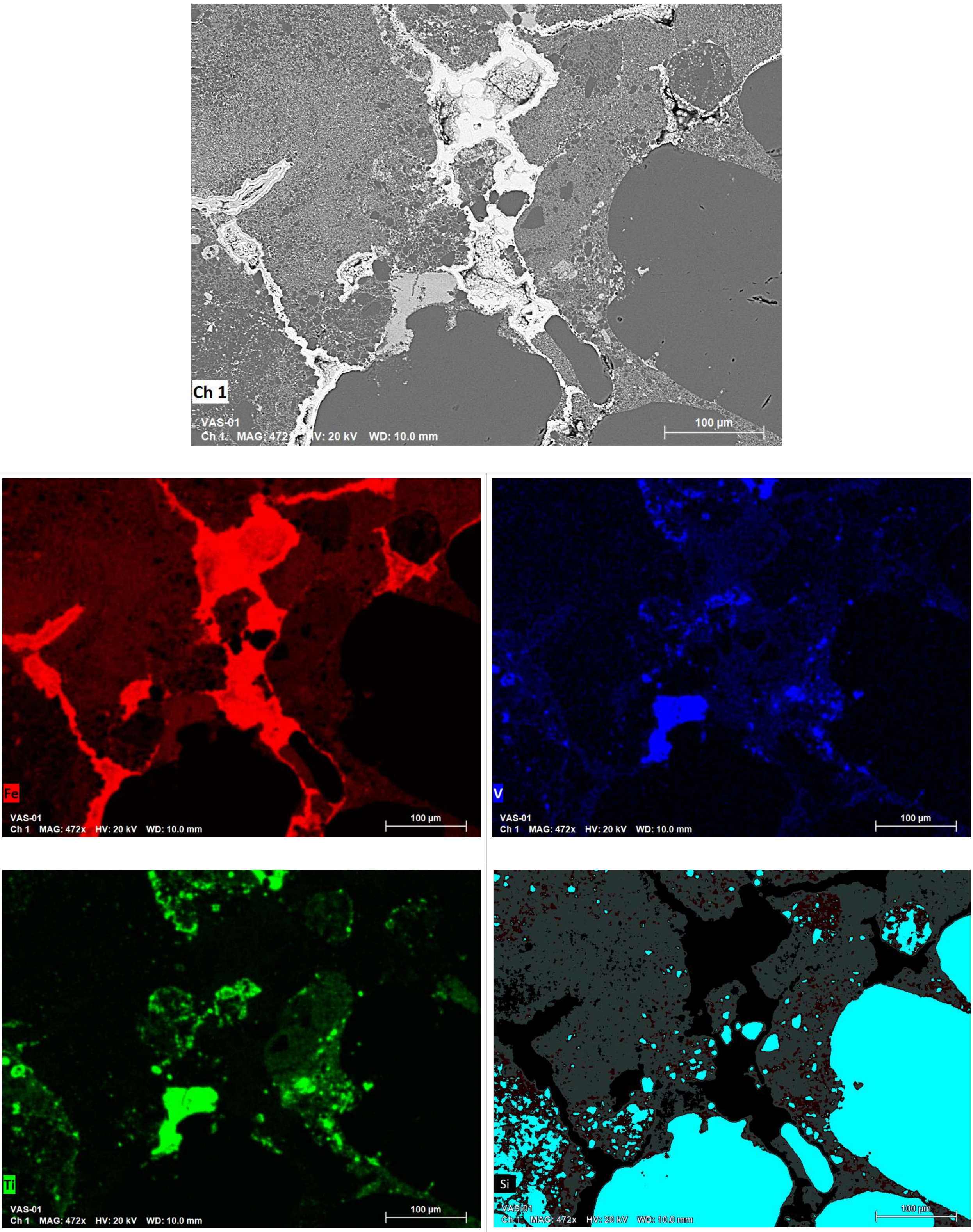


Figure 2: Table of results for the VAS-01 sample

Site of Interest	Spectrum	O	Si	S	Ti	V	Fe	Zr	Ba	Mineral
1	VAS-01-1	24.9			70.9	3.6	0.7			Rutile
	VAS-01-2	25.5			69.3	3.5	1.8			Rutile
	VAS-01-3	24.7			38.4	2.3	34.6			Rutile
	VAS-01-4	26.2			40.5	2.4	30.9			Rutile
	VAS-01-5	23.1			40.2	2.4	34.2			Rutile
	VAS-01-6	19.3			2.3	0.5	77.9			Magnetite
	VAS-01-7	24.8	6.4		10.4	0.8	57.7			Ilmenite
	VAS-01-8	24.0			40.4	2.4	33.2			Ilmenite
2	VAS-01-9	19.9		16.8					63.3	Baryte
	VAS-01-10	24.3			43.0	2.4	30.3			Ilmenite
	VAS-01-11	23.9	15.3		35.6	2.1	23.1			Ilmenite
	VAS-01-12	15.0			0.2	0.4	84.4			Magnetite
	VAS-01-13	26.3			0.6	0.4	72.7			Magnetite
	VAS-01-14	18.2			0.5	0.4	80.9			Magnetite
	VAS-01-15	21.5			0.7	0.4	77.5			Magnetite
	VAS-01-16	21.0			0.4	0.4	78.2			Magnetite
	VAS-01-17	21.5			46.2	2.6	29.6			Ilmenite
	VAS-01-18	21.0	16.1		34.1	2.0	26.9			Ilmenite
	VAS-01-19	25.8			41.4	2.3	30.5			Ilmenite
3	VAS-02-19	38.1	61.9							Quartz
	VAS-01-20	16.0	16.7					67.3		Zircon
	VAS-01-21	25.9			31.2	2.0	40.9			Ilmenite
	VAS-01-22	26.2			41.7	2.4	29.7			Ilmenite
	VAS-01-23	25.3			42.9	2.5	29.3			Ilmenite
	VAS-01-24	23.2			41.8	2.5	32.5			Ilmenite
	VAS-01-26	26.9	30.6		18.3	1.1	23.1			Mixed Spectra
4	VAS-01-26	18.6				1.4	80.0			Magnetite
	VAS-01-28	16.3				1.4	82.3			Magnetite
	VAS-01-29	18.9				2.4	78.6			Magnetite
	VAS-01-30	24.5	9.4		34.6	2.0	29.5			Ilmenite
	VAS-01-31	23.8	10.9		33.5	2.0	29.8			Ilmenite
	VAS-01-32	23.6	6.7		37.1	2.1	30.4			Ilmenite
	VAS-01-33	15.5				2.7	81.8			Magnetite
	VAS-01-34	15.8				2.5	81.7			Magnetite
	VAS-01-35	14.4				1.1	84.5			Magnetite
	VAS-01-36	14.8				1.1	84.1			Magnetite
	ALS 01 37	15.1				1.3	83.6			Magnetite
	ALS 01 38	18.0				1.8	80.2			Magnetite
	ALS 01 39	18.8				0.9	80.3			Magnetite
	ALS 01 40	17.9				1.7	80.3			Magnetite
	ALS 01 41	23.8	10.4		35.3	2.0	28.5			Mixed Spectra
5	VAS-01-41	45.6	54.4							Quartz
	VAS-01-43	23.2			41.8	2.5	32.5			Ilmenite
	VAS-01-44	22.1			42.8	2.5	32.5			Ilmenite
	VAS-01-45	23.0			41.4	2.5	33.1			Ilmenite
	VAS-01-46	24.4			43.7	2.5	29.5			Ilmenite
	VAS-01-47	21.7			43.0	2.6	32.7			Ilmenite
	VAS-01-48	23.1			44.1	2.6	30.3			Ilmenite
	ALS 01 49	22.1			44.5	2.7	30.7			Ilmenite
6	VAS-01-57	13.3	13.1					73.6		Zircon
	VAS-01-58	12.9	13.1					73.9		Zircon
	VAS-01-59	24.1			44.1	2.6	29.2			Ilmenite
	VAS-01-60	36.3	63.7							Quartz
	VAS-01-61	21.0			42.6	2.5	33.9			Ilmenite
	VAS-01-62	41.5	58.5							Quartz
	VAS02 63	36.2	63.8							Quartz

Figure 3: Long acquisition elemental map for VAS-01 site of interest



VAS-02

The four fields of interest analysed are shown overpage (Figure 4) along with the named analysis points. The elemental data for each of the analysis points (Figure 5) are shown on the subsequent page, along with an elemental map of a site of interest on the last page (Figure 6).

The highest vanadium grades are observed in the Fe-oxide blebs which include magnetite, hematite and goethite. The V grades within the Fe-oxides range from 0.5 wt% to 1.9 wt%. V was also observed within chamosite (Fe-rich chlorite) at slightly lower concentrations (0.5 – 1.0 wt%), which may be either adsorbed vanadium or solid solution vanadium. The textural development of the Fe oxides is distinct from the banding observed in the first sample, with more blebs and less pervasive internal fill. The external crust does include the same level of V as the internal blebs suggesting they were formed at a similar time, though possibly with the internal blebs altering a pre-existing phase (e.g. sulfides).

Titanium is hosted within clasts of rutile and ilmenite that are rarely disseminated within the sample and the oxide crust. There is also evidence for traces of titanium within the Fe oxide blebs that are widely disseminated within the sample.

It is important to note that V displays a strong overlap with Ti during EDX analysis and therefore the apparent host within ilmenite is not proven. This occurs because the secondary peak of Ti overlaps with the primary peak of V and can produce false positives. This is marked in red and italics within Figure 5 and further analysis with more sensitive equipment would be required to verify this occurrence. From experience, even if ilmenite was confirmed to contain V it would not be at that concentration.

Figure 4: SEM analysis points for the VAS-02 sample

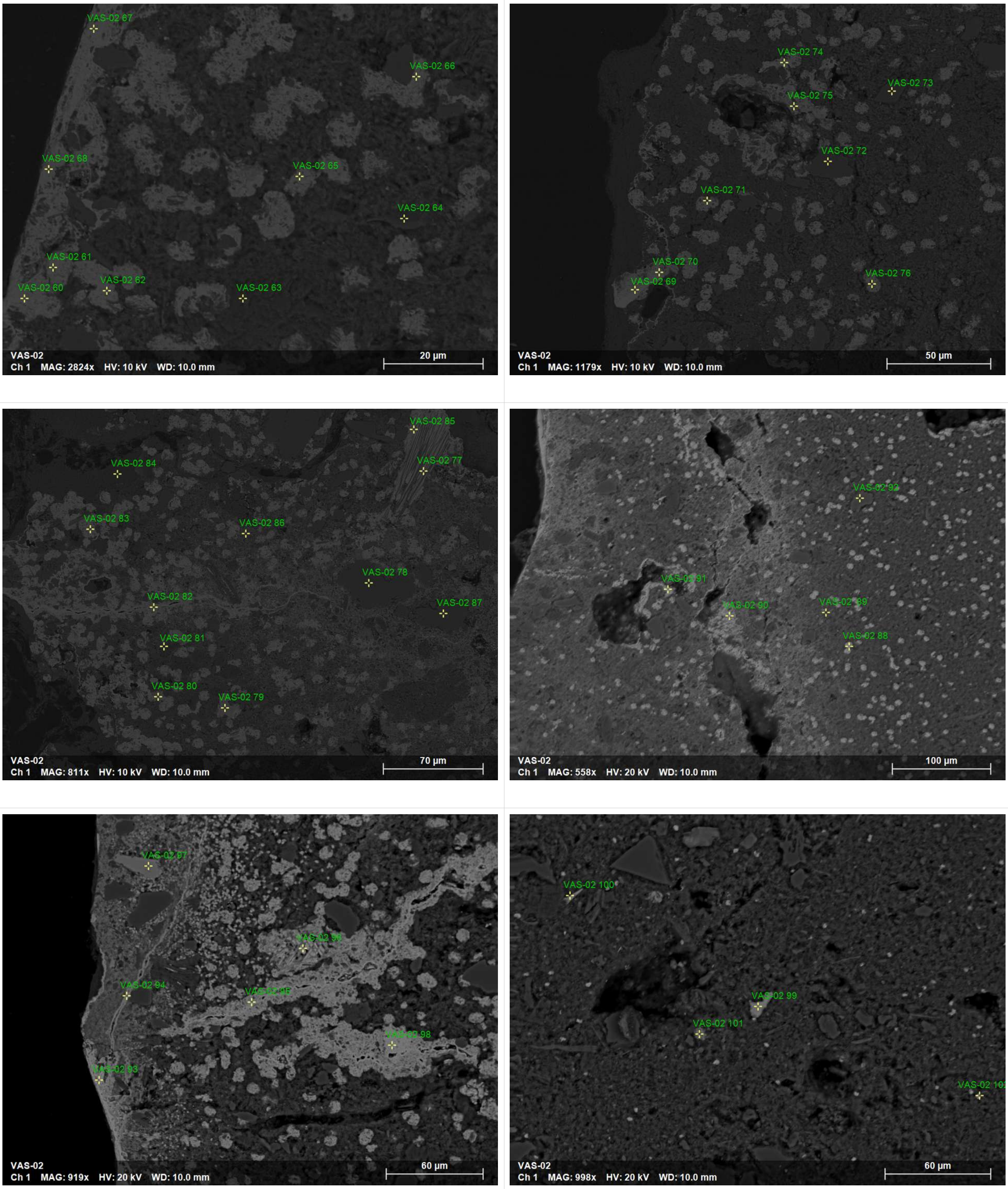
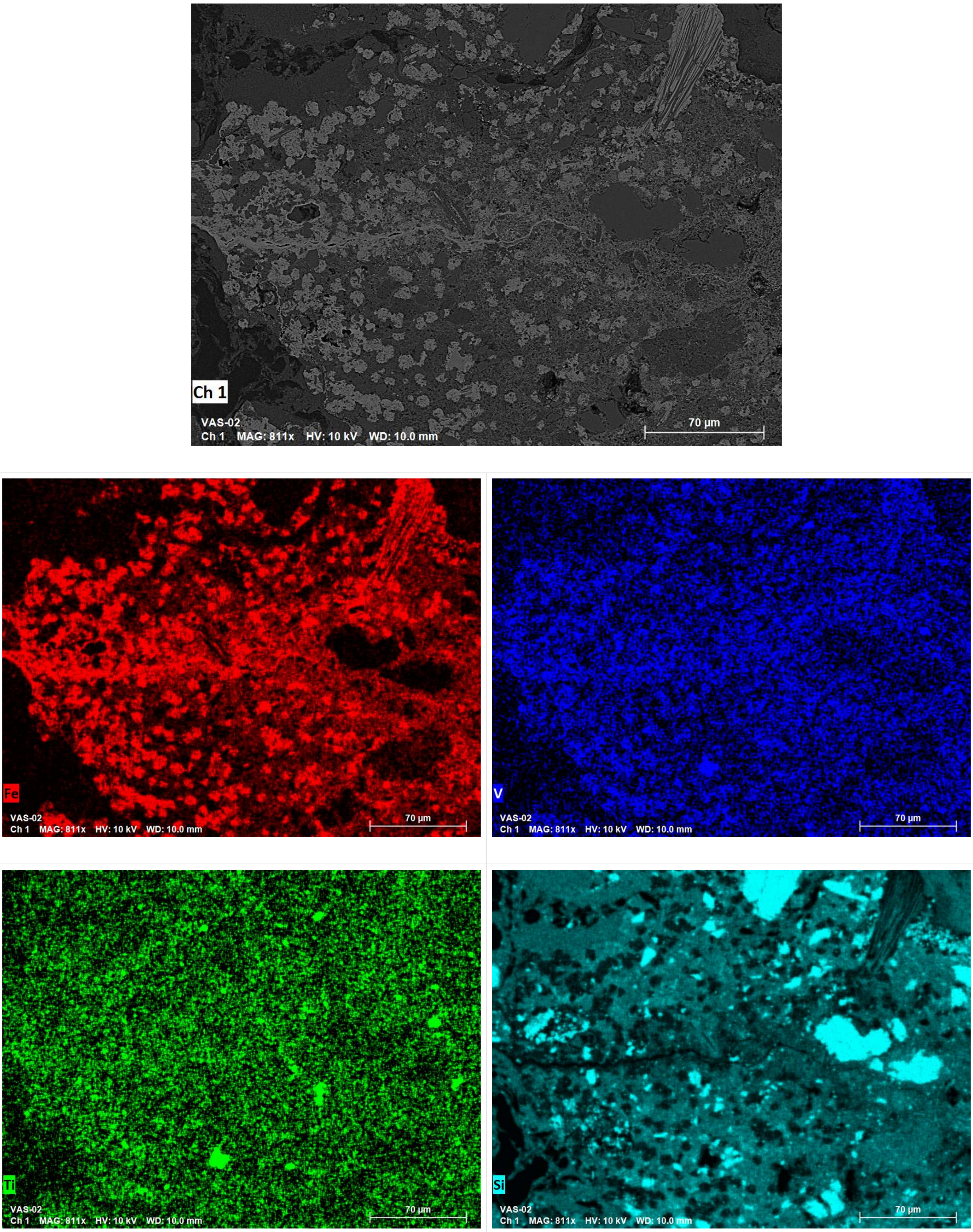


Figure 5: Table of results for the analysis points in VAS-02

Site of interest	Spectrum	O	Al	Si	P	Ti	V	Fe	Mineral
1	VAS-02 60	25.1					1.9	72.9	Magnetite
	VAS-02 61	26.4		7.0			1.6	65.0	Hematite
	VAS-02 62	26.7					1.8	71.6	Hematite
	VAS-02 63	42.7	25.7	31.6					Kaolinite
	VAS-02 64	42.9		57.1					Quartz
	VAS-02 65	28.7					1.7	69.6	Hematite
	VAS-02 66	26.8					1.7	71.5	Hematite
	VAS-02 67	26.5					1.2	72.3	Hematite
	VAS-02 68	25.2					1.6	73.2	Magnetite
2	VAS-02 69	23.4					1.8	74.8	Magnetite
	VAS-02 70	25.7					1.8	72.6	Magnetite
	VAS-02 71	35.1	12.2	14.7				38.1	Chlorite
	VAS-02 72	44.4		55.6					Quartz
	VAS-02 73	43.3		56.7					Quartz
	VAS-02 74	26.5		6.9			1.7	64.9	Hematite
	VAS-02 75	33.9	8.1	15.6				42.4	Chlorite
	VAS-02 76	27.4					1.7	70.9	Hematite
3	VAS-02 77	25.4	7.2	8.6	2.4		1.1	55.3	Goethite
	VAS-02 78	43.5		56.5					Quartz
	VAS-02 79	31.9				41.9	*2.2*	23.9	Ilmenite
	VAS-02 80	27.4		10.7			1.6	60.3	Goethite
	VAS-02 81	40.3	26.4	30.9				2.5	Kaolinite
	VAS-02 82	24.8					1.9	73.3	Magnetite
	VAS-02 83	26.8	5.5	7.9			1.5	58.3	Goethite
	VAS-02 84	40.1	27.2	32.7					Kaolinite
	VAS-02 85	40.0	17.0	21.5	7.8			13.7	Chlorite
	VAS-02 86	35.3	9.3	23.8				31.7	Chlorite
	VAS-02 87	43.5		56.5					Quartz
4	VAS-02 88	29.2	8.6	13.7			1.0	47.4	Chlorite
	VAS-02 89	29.4	10.6	36.5		2.4	0.5	20.6	Chlorite
	VAS-02 90	18.9		9.3			1.5	70.3	Hematite
	VAS-02 91	21.7	3.0	6.5			1.5	67.3	Hematite
	VAS-02 92	39.2		60.8					Quartz
5	VAS-02 93	15.8					1.8	82.1	Hematite
	VAS-02 94	19.1					1.5	79.1	Hematite
	VAS-02 95	14.4					2.0	83.4	Magnetite
	VAS-02 96	15.5				4.2	2.2	78.2	Magnetite
	VAS-02 97	23.6				71.5	*3.2*	1.6	Rutile
	VAS-02 98	14.8					2.0	83.0	Magnetite
6	VAS-02 99	22.7				40.2	*1.9*	35.2	Ilmenite
	VAS-02 100	44.9				31.4	*1.7*	22.0	Ilmenite
	VAS-02 101	41.1				53.8	*2.4*	2.7	Rutile
	VAS-02 102	45.0				0.7	1.0	53.2	Goethite

Figure 6: Long acquisition elemental map for VAS-02 site of interest 3



13 Appendix 3 – Geochemical Results from Wet Tabling

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 7 3243 7222 Fax: +61 7 3243 7218
www.alsglobal.com/geochemistry

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation No: 825, Corporate Site No: 23001.

To: HOLDFAST EXPLORATION PTY LTD
1 BEELARA WAY
WANEROO WA 6065

Finalized Date: 19-JAN-2021
This copy reported on 20-JAN-2021
Account: HOLDFAST

CERTIFICATE PH20302316

Project: 344702

This report is for 3 Concentrate samples submitted to our lab in Perth, WA, Australia on 18-DEC-2020.

The following have access to data associated with this certificate:

PETER PIROMANSKI BEN PIROMANSKI	BEN PIROMANSKI	PETER PIROMANSKI

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-QC	Pulverizing QC Test
LEV-01	Waste Disposal Levy
LOG-22	Sample login - Rcd w/o BarCode
BAG-01	Bulk Master for Storage
PUL-31h	Pulverize 750g to 85% < 75 um
SPL-22	Split sample - rotary splitter
PUL-23	Pulv Sample - Split/Retain
SPL-21	Split sample - riffle splitter

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS61	48 element four acid ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Cameron Brosnan, Laboratory Manager, Perth

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 7 3243 7222 Fax: +61 7 3243 7218
www.alsglobal.com/geochemistry

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation No: 825, Corporate Site No: 23001.

To: HOLDFAST EXPLORATION PTY LTD
1 BEELARA WAY
WANEROO WA 6065

Finalized Date: 19-JAN-2021
Account: HOLDFAST

Project: 344702

CERTIFICATE OF ANALYSIS PH20302316

Sample Description	Method	WEI-21	PUL-QC	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Pass75um	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
AVI-005-CONCENTRATE		1.12	91.0	0.08	7.07	54.0	130	1.03	0.54	0.03	<0.02	33.4	1.2	144	1.14	22.2
AVI-005-TAILINGS		5.74		0.08	6.86	51.3	130	0.99	0.53	0.03	<0.02	32.5	1.2	142	1.13	21.4
AVI-005-SLIMES		0.79		0.08	6.96	47.7	130	0.92	0.53	0.03	<0.02	33.9	1.1	140	1.19	20.6

***** See Appendix Page for comments regarding this certificate *****

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 7 3243 7222 Fax: +61 7 3243 7218
www.alsglobal.com/geochemistry

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation No: 825, Corporate Site No: 23001.

To: HOLDFAST EXPLORATION PTY LTD
1 BEELARA WAY
WANEROO WA 6065

Finalized Date: 19-JAN-2021
Account: HOLDFAST

Project: 344702

CERTIFICATE OF ANALYSIS PH20302316

Sample Description	Method / Analyte / Units / LOD	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10
AVI-005-CONCENTRATE		32.7	25.1	0.54	4.3	0.158	0.29	20.8	5.1	0.04	<5	4.44	0.04	9.0	6.3	320
AVI-005-TAILINGS		31.8	24.0	1.39	3.9	0.144	0.29	20.0	4.8	0.04	6	4.51	0.04	8.9	6.0	310
AVI-005-SLIMES		31.3	23.7	0.66	4.3	0.139	0.30	20.9	4.9	0.04	7	4.19	0.04	9.0	5.9	310

***** See Appendix Page for comments regarding this certificate *****

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 7 3243 7222 Fax: +61 7 3243 7218
www.alsglobal.com/geochemistry

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation No: 825, Corporate Site No: 23001.

To: **HOLDFAST EXPLORATION PTY LTD**
1 BEELARA WAY
WANEROO WA 6065

Finalized Date: 19-JAN-2021
Account: HOLDFAST

Project: 344702

CERTIFICATE OF ANALYSIS PH20302316

Sample Description	Method / Analyte / Units / LOD	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1
AVI-005-CONCENTRATE		36.1	17.2	<0.002	0.05	0.39	18.6	5	2.6	47.6	0.66	0.15	15.05	0.436	0.10	2.5
AVI-005-TAILINGS		35.7	16.0	<0.002	0.05	0.38	17.7	5	2.5	45.9	0.66	0.18	14.20	0.426	0.10	2.3
AVI-005-SLIMES		35.4	17.1	<0.002	0.05	0.39	17.1	4	2.6	47.6	0.63	0.15	14.20	0.435	0.10	2.2

***** See Appendix Page for comments regarding this certificate *****

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 7 3243 7222 Fax: +61 7 3243 7218
www.alsglobal.com/geochemistry

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation No: 825, Corporate Site No: 23001.

To: HOLDFAST EXPLORATION PTY LTD
1 BEELARA WAY
WANEROO WA 6065

Finalized Date: 19-JAN-2021
Account: HOLDFAST

Project: 344702

CERTIFICATE OF ANALYSIS PH20302316

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
AVI-005-CONCENTRATE		708	1.5	6.9	77	149.5
AVI-005-TAILINGS		683	1.4	6.7	35	143.5
AVI-005-SLIMES		660	1.4	6.8	30	146.5

***** See Appendix Page for comments regarding this certificate *****

Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 7 3243 7222 Fax: +61 7 3243 7218
www.alsglobal.com/geochemistry

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation No: 825, Corporate Site No: 23001.

To: HOLDFAST EXPLORATION PTY LTD
1 BEELARA WAY
WANEROO WA 6065

Finalized Date: 19-JAN-2021
Account: HOLDFAST

Project: 344702

CERTIFICATE OF ANALYSIS PH20302316

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REEs may not be totally soluble in this method.

Applies to Method: ME-MS61

ACCREDITATION COMMENTS

NATA Accreditation covers the performance of this service but does not cover the performance of ALS Perth Sample Preparation. Corporate Accreditation No: 825, Corporate Site No: 23001. The Technical Signatory is Wendy Wong, Senior QC Chemist

Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Perth located at 31 Denninup Way, Malaga, Australia. Processed at ALS Perth Sample Preparation at 79 Distinction Road, Wangara, WA, Australia

Applies to Method:

BAG-01	LEV-01	LOG-22	ME-MS61
PUL-23	PUL-31h	PUL-QC	SPL-21
SPL-22	WEI-21		