



Bureau Veritas Minerals Pty Ltd



MINERAL TESTING & LABORATORY SERVICES

ABN: 30 008 127 802

58 Sorbonne Crescent Canning Vale  
Perth WA 6155 Australia

Telephone (08) 9456 0404  
Facsimile (08) 9456 0403

Reference: **u272535**  
Date Finished: 17/01/2017  
Order:  
Project:  
Date Received: 13/01/2017  
Samples Analysed: **2**

### **FINAL ANALYSIS REPORT**

#### **Analysis of Mineral Samples**

for

#### **BV Adelaide Mineral Processing**

Unit 2, 35 Cormack Road Wingfield SA 5013

**Attention:** Mr R Anderson

**Authorised By:**

Tom Lowther  
Operations Manager  
Bureau Veritas Minerals Pty Ltd



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	Cu ppm	Zn ppm	Co ppm	Ni ppm	As ppm	Ag ppm	Ba ppm	Be ppm
<b>Detection Limit</b>	1	1	2	1	1	0.5	1	0.1
N7459XD17-1	78	128	14	46	13	<0.5	775	1.8
N7459XD17-4	77	120	8	40	13	<0.5	689	4.5
Std Nominal	877	76	286	1.41%	25	0.5	17	
Determined	876	74	282	1.39%	25	0.5	18	0.3
Std Nominal	14	68	58	120	<1	<0.5	92	0.3
Determined	12	70	56	122	<1	<0.5	87	0.4
Std Nominal	316	106	156	6930	15		209	
Determined	312	108	154	6900	15	<0.5	215	1.2
Std Nominal	12	50	2	8	17		120	
Determined	11	49	<2	8	18	<0.5	123	9.3

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	Bi ppm	Cd ppm	Ga ppm	Li ppm	Mn ppm	Mo ppm	P ppm	Pb ppm
<b>Detection Limit</b>	0.1	0.5	0.2	0.5	1	0.5	50	1
N7459XD17-1	0.3	<0.5	12.2	27.5	490	1.0	800	43
N7459XD17-4	1.2	0.5	30.4	84.0	343	2.5	2000	64
Std Nominal	0.9		3.0	10.5	1010		150	5
Determined	1.0	<0.5	3.2	11.0	1010	1.0	100	6
Std Nominal	<0.1		16.0	5.0	1390	1.0	150	2
Determined	<0.1	<0.5	16.0	5.0	1390	1.0	150	2
Std Nominal					1070		1300	
Determined	<0.1	<0.5	14.6	6.5	1050	1.5	1250	3
Std Nominal	0.3		27.0	12.0	160	3.0		40
Determined	0.3	<0.5	27.0	11.5	157	3.5	<50	38

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	Sb ppm	Sc ppm	Sn ppm	Sr ppm	V ppm	W ppm	Ta ppm	Y ppm
<b>Detection Limit</b>	0.2	0.5	1	0.5	2	0.5	0.1	0.1
N7459XD17-1	1.4	10.5	3	243	92	2.0	0.5	21.5
N7459XD17-4	1.8	18.5	10	538	134	3.5	2.5	44.0
Std Nominal	0.6	8.0		17.0	40	4.5		3.5
Determined	0.8	7.5	2	18.0	44	4.5	0.1	3.8
Std Nominal	<0.2	38.0	<1	260	220	0.5	0.1	7.0
Determined	<0.2	37.5	<1	272	216	0.5	<0.1	6.7
Std Nominal		19.0		365	156			
Determined	0.2	19.0	2	351	156	0.5	0.8	18.8
Std Nominal	1.0			10.0	2	1.0		143
Determined	1.0	0.5	4	10.5	2	1.0	4.5	136

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	Hf ppm	Zr ppm	Nb ppm	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm
<b>Detection Limit</b>	0.2	1	0.5	0.1	0.1	0.02	0.05	0.05
N7459XD17-1	3.4	123	7.5	30.1	61.5	7.34	28.8	5.75
N7459XD17-4	9.2	318	38.0	58.8	124	12.5	45.9	9.65
Std Nominal	0.4	8	1.0	2.9	5.7	0.62	2.30	0.55
Determined	0.4	9	1.0	2.8	5.5	0.60	2.30	0.55
Std Nominal	0.4	23	1.0	3.0	6.0	0.76	3.00	0.85
Determined	0.4	22	1.0	3.1	5.7	0.72	3.20	0.80
Std Nominal		126						
Determined	3.0	131	14.0	13.6	27.4	3.50	15.1	3.85
Std Nominal		300	53.0	109	195		72.0	15.8
Determined	12.0	283	51.5	111	202	19.6	75.1	15.8

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	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm
<b>Detection Limit</b>	0.05	0.2	0.02	0.05	0.02	0.05	0.02	0.05
N7459XD17-1	1.10	4.6	0.66	3.75	0.68	2.00	0.28	1.80
N7459XD17-4	1.80	8.0	1.16	7.20	1.40	4.35	0.60	3.80
Std Nominal	0.15	0.6	0.10	0.60	0.12	0.35	0.06	0.35
Determined	0.15	0.6	0.08	0.65	0.12	0.35	0.08	0.40
Std Nominal	0.65	1.0	0.16	1.10	0.26	0.70	0.10	0.70
Determined	0.65	1.0	0.16	1.15	0.26	0.70	0.10	0.70
Std Nominal								
Determined	1.35	4.0	0.58	3.55	0.64	1.70	0.24	1.45
Std Nominal	0.35	14.0	3.00	17.0			2.00	14.2
Determined	0.40	14.6	2.84	17.7	3.90	12.4	1.84	13.6

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	Lu ppm	Th ppm	U ppm	Se ppm	Rb ppm	In ppm	Te ppm	Cs ppm
<b>Detection Limit</b>	0.02	0.1	0.1	5	0.2	0.02	0.2	0.1
N7459XD17-1	0.34	9.6	2.2	<5	90.8	0.10	<0.2	4.5
N7459XD17-4	0.54	29.7	5.7	<5	74.0	0.16	<0.2	7.3
Std Nominal	0.06	1.2	0.4		8.4	0.06		1.8
Determined	0.06	1.1	0.5	<5	8.2	0.08	0.2	1.9
Std Nominal	0.10	0.4	0.3	<5	3.6	0.02	0.2	0.3
Determined	0.10	0.5	0.3	<5	3.8	0.02	<0.2	0.3
Std Nominal								
Determined	0.18	2.1	2.3	<5	15.6	0.06	<0.2	0.7
Std Nominal	2.00	51.0	15.0		325			
Determined	1.88	51.0	15.8	<5	338	0.06	<0.2	0.9

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	Re ppm	Tl ppm	Fe %	Al %	Ca %	Mg MAD %	Ti MAD %	Na %
<b>Detection Limit</b>	0.1	0.1	0.01	0.01	0.01	0.01	0.01	0.01
N7459XD17-1	0.1	0.8	3.26	5.64	3.88	1.02	0.32	1.63
N7459XD17-4	<0.1	0.8	2.65	10.1	3.37	1.57	0.74	1.91
Std Nominal		0.2	9.20	1.28	1.51	19.7	0.08	0.10
Determined	0.2	0.2	9.29	1.30	1.52	19.9	0.07	0.11
Std Nominal		<0.1	6.27	8.73	8.22	4.52	0.12	1.82
Determined	0.2	<0.1	6.17	8.74	8.25	4.42	0.11	1.87
Std Nominal			9.63	7.25		4.05	1.02	2.15
Determined	0.2	0.1	9.58	7.20	5.80	4.10	1.00	2.12
Std Nominal			1.40	6.39	0.59	0.04	0.05	2.51
Determined	0.1	0.9	1.40	6.20	0.58	0.04	0.05	2.44

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	K %	S ppm
<b>Detection Limit</b>	0.01	50
N7459XD17-1	1.90	2750
N7459XD17-4	1.08	3750
Std Nominal	0.10	3.31%
Determined	0.09	3.27%
Std Nominal	0.21	100
Determined	0.21	100
Std Nominal		1.74%
Determined	0.59	1.74%
Std Nominal	4.14	
Determined	4.14	100

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These results pertain to the samples as received at this laboratory.  
 Where standards are reported, the nominal value for the element is reported above the result found.

"%" Implies this result reported in %

**Sample Storage**

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The excess material (Residue) will be held after 30 days  
 The pulp samples (Pulp) will be held after 60 days as per instructions.

**Sample Preparation**

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No sample preparation was required on these samples.

**Digest and Analysis:**

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The sample(s) have been digested with a mixture of Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. This digest approaches a Total digest for many elements however some refractory oxides are not completely attacked. (Methods I-9101-DI-200 and WI 7.14.7)

Al, Ca, Co, Cu, Fe, K, Mg, MAD, Mn, Na, Ni, P, S, Sc, Ti, MAD, V, Zn  
 have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

Ag, As, Ba, Be, Bi, Cd, Ce, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, In, La, Li, Lu, Mo, Nb, Nd, Pb, Pr, Rb, Re, Sb, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Tl, Tm, U, W, Y, Yb, Zr  
 have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.