



Australian Laboratory Services Pty. Ltd.
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Total # Pages: 3 (A - F)
Plus Appendix Pages
Finalized Date: 26-JUN-2014
Account: AUSHUA

QC CERTIFICATE FE14089472

This report is for 28 Other samples submitted to our lab in IOTC, WA, Australia on 12-JUN-2014.

The following have access to data associated with this certificate:

LAURIE VESKA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
HOM-01	Homogenize by light pulverizing
FIL-02	Filter the Tailings
LEV-01	Waste Disposal Levy

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
DTR_REC	DTR Recovery	
ME-XRF21c	DTR Conc by XRF	XRF
ME-GRA05c	LOI for DTR conc	TGA
ME-XRF21hu	DTR Heads by XRF - Unnormalized	XRF
ME-GRA05h	LOI for DTR head	TGA
ME-XRF21tu	DTR Tails by XRF - Unnormalized	XRF
WT_DTR	Weight of DTR Fractions	
ME-GRA05t	LOI for DTR tails	TGA
DTR_PREP	DTR Preparation	
CYC-SIZ	Cyclosizing - DTR Client	
MAG-SUS	Magnetic Susceptibility	WST-SEQ

To: AUSTRALIAN HUALONG PTY LTD
ATTN: LAURIE VESKA
19 GUBBUTEH ROAD
LITTLE BAY NSW 2036

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 *****

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

Signature:

Wayne Abbott, Operations Manager Analytical, IOTC



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QC CERTIFICATE OF ANALYSIS FE14089472

Method Analyte Units LOR	MAG-SUS Magnetic %	MAG-SUS MagRaw EMU	ME-XRF21c Al2O3 %	ME-XRF21c As %	ME-XRF21c Ba %	ME-XRF21c CaO %	ME-XRF21c Cl %	ME-XRF21c Co %	ME-XRF21c Cr2O3 %	ME-XRF21c Cu %	ME-XRF21c Fe %	ME-XRF21c K2O %	ME-XRF21c MgO %	ME-XRF21c Mn %	ME-XRF21c Na2O %
Sample Description	0.01	0.01	0.01	0.001	0.001	0.01	0.001	0.001	0.001	0.001	0.01	0.001	0.01	0.001	0.005
STANDARDS															
MS-15	13.99	932.24													
Target Range - Lower Bound															
Upper Bound															
MS-25	24.23	1614.44													
Target Range - Lower Bound															
Upper Bound															
MS-50	51.77	3450.70													
Target Range - Lower Bound															
Upper Bound															
MS-75	78.03	5201.11													
Target Range - Lower Bound															
Upper Bound															
MS-95	94.59	6305.04													
Target Range - Lower Bound															
Upper Bound															
NCSDC18014			1.32	0.002	0.024	0.15	0.008	0.002	0.005	0.001	65.82	0.196	0.06	0.033	0.023
Target Range - Lower Bound			1.26	<0.001	0.022	0.13	0.006	<0.001	0.003	<0.001	65.18	0.186	0.03	0.029	0.012
Upper Bound			1.34	0.005	0.026	0.16	0.011	0.003	0.008	0.004	66.52	0.208	0.07	0.034	0.034
NCSDC28006															
Target Range - Lower Bound															
Upper Bound															
OREAS 401															
Target Range - Lower Bound															
Upper Bound															
SARM-39															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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



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Method Analyte Units LOR	ME-XRF21c Ni %	ME-XRF21c P %	ME-XRF21c Pb %	ME-XRF21c S %	ME-XRF21c SiO2 %	ME-XRF21c Sn %	ME-XRF21c Sr %	ME-XRF21c TiO2 %	ME-XRF21c V %	ME-XRF21c Zn %	ME-XRF21c Zr %	ME-XRF21c Total %	ME-XRF21hu Al2O3 %	ME-XRF21hu As %	ME-XRF21hu Ba %
Sample Description	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001
STANDARDS															
MS-15															
Target Range - Lower Bound															
Upper Bound															
MS-25															
Target Range - Lower Bound															
Upper Bound															
MS-50															
Target Range - Lower Bound															
Upper Bound															
MS-75															
Target Range - Lower Bound															
Upper Bound															
MS-95															
Target Range - Lower Bound															
Upper Bound															
NCSDC18014	0.001	0.071	0.006	0.020	3.24	<0.001	0.025	0.06	0.004	0.002	0.004	100.00			
Target Range - Lower Bound	<0.001	0.066	0.005	0.018	3.13	<0.001	0.019	0.03	<0.001	<0.001	<0.001	97.97			
Upper Bound	0.005	0.076	0.010	0.022	3.28	0.004	0.026	0.07	0.004	0.004	0.005	102.00			
NCSDC28006													0.63	0.001	0.495
Target Range - Lower Bound													0.62	<0.001	0.461
Upper Bound													0.66	0.004	0.512
OREAS 401															
Target Range - Lower Bound															
Upper Bound															
SARM-39															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Method Analyte Units LOR	ME-XRF21hu CaO %	ME-XRF21hu Cl %	ME-XRF21hu Co %	ME-XRF21hu Cr2O3 %	ME-XRF21hu Cu %	ME-XRF21hu Fe %	ME-XRF21hu K2O %	ME-XRF21hu MgO %	ME-XRF21hu Mn %	ME-XRF21hu Na2O %	ME-XRF21hu Ni %	ME-XRF21hu P %	ME-XRF21hu Pb %	ME-XRF21hu S %	ME-XRF21hu SiO2 %
Sample Description	0.01	0.001	0.001	0.001	0.001	0.01	0.001	0.01	0.001	0.005	0.001	0.001	0.001	0.001	0.01
STANDARDS															
MS-15															
Target Range - Lower Bound															
Upper Bound															
MS-25															
Target Range - Lower Bound															
Upper Bound															
MS-50															
Target Range - Lower Bound															
Upper Bound															
MS-75															
Target Range - Lower Bound															
Upper Bound															
MS-95															
Target Range - Lower Bound															
Upper Bound															
NCSDC18014															
Target Range - Lower Bound															
Upper Bound															
NCSDC28006	11.95	0.006	0.001	0.004	0.058	40.30	0.191	1.16	1.350	<0.005	0.003	0.040	<0.001	0.090	8.39
Target Range - Lower Bound	11.70	0.003	<0.001	<0.001	0.054	39.83	0.181	1.14	1.250	<0.005	<0.001	0.037	<0.001	0.083	8.22
Upper Bound	12.20	0.007	0.004	0.005	0.068	40.65	0.203	1.20	1.385	0.016	0.005	0.043	0.004	0.094	8.58
OREAS 401															
Target Range - Lower Bound															
Upper Bound															
SARM-39															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Method Analyte Units LOR	ME-XRF21hu	ME-XRF21hu	ME-XRF21hu	ME-XRF21hu	ME-XRF21hu	ME-XRF21hu	ME-XRF21hu	ME-XRF21tu	ME-XRF21tu	ME-XRF21tu	ME-XRF21tu	ME-XRF21tu	ME-XRF21tu	ME-XRF21tu	ME-XRF21tu
Sample Description	Sn	Sr	TiO2	V	Zn	Zr	Total	Al2O3	As	Ba	CaO	Cl	Co	Cr2O3	Cu
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	0.001	0.001	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.001	0.001	0.001	0.001
STANDARDS															
MS-15															
Target Range - Lower Bound															
Upper Bound															
MS-25															
Target Range - Lower Bound															
Upper Bound															
MS-50															
Target Range - Lower Bound															
Upper Bound															
MS-75															
Target Range - Lower Bound															
Upper Bound															
MS-95															
Target Range - Lower Bound															
Upper Bound															
NCSDC18014															
Target Range - Lower Bound															
Upper Bound															
NCSDC28006	<0.001	0.007	0.03	0.006	0.002	0.002	100.05								
Target Range - Lower Bound	<0.001	0.004	<0.01	0.003	<0.001	<0.001	<0.01								
Upper Bound	0.004	0.009	0.05	0.007	0.003	0.004	0.02								
OREAS 401								2.38	<0.001	0.001	0.09	0.002	0.002	0.009	0.002
Target Range - Lower Bound								2.30	<0.001	<0.001	0.08	<0.001	<0.001	0.008	<0.001
Upper Bound								2.42	0.003	0.003	0.11	0.005	0.003	0.013	0.004
SARM-39								4.22	<0.001	0.175	9.52	0.033	0.008	0.189	0.006
Target Range - Lower Bound								4.19	<0.001	0.161	9.49	0.031	0.005	0.170	0.005
Upper Bound								4.39	0.004	0.180	9.89	0.040	0.010	0.210	0.010
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Method Analyte Units LOR	ME-XRF21tu Fe %	ME-XRF21tu K2O %	ME-XRF21tu MgO %	ME-XRF21tu Mn %	ME-XRF21tu Na2O %	ME-XRF21tu Ni %	ME-XRF21tu P %	ME-XRF21tu Pb %	ME-XRF21tu S %	ME-XRF21tu SiO2 %	ME-XRF21tu Sn %	ME-XRF21tu Sr %	ME-XRF21tu TiO2 %	ME-XRF21tu V %	ME-XRF21tu Zn %
Sample Description	0.01	0.001	0.01	0.001	0.005	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.01	0.001	0.001
STANDARDS															
MS-15															
Target Range - Lower Bound															
Upper Bound															
MS-25															
Target Range - Lower Bound															
Upper Bound															
MS-50															
Target Range - Lower Bound															
Upper Bound															
MS-75															
Target Range - Lower Bound															
Upper Bound															
MS-95															
Target Range - Lower Bound															
Upper Bound															
NCSDC18014															
Target Range - Lower Bound															
Upper Bound															
NCSDC28006															
Target Range - Lower Bound															
Upper Bound															
OREAS 401	45.65	0.011	0.07	0.005	0.022	0.003	0.104	0.001	0.022	24.9	<0.001	0.002	0.25	0.003	0.001
Target Range - Lower Bound	45.16	0.008	0.04	0.003	<0.005	<0.001	0.099	<0.001	0.020	24.4	<0.001	<0.001	0.22	<0.001	<0.001
Upper Bound	46.10	0.012	0.08	0.007	0.027	0.005	0.111	0.003	0.024	25.4	0.002	0.002	0.27	0.005	0.004
SARM-39	6.52	1.065	26.6	0.130	0.611	0.099	0.628	<0.001	0.313	33.5	<0.001	0.143	1.60	0.010	0.006
Target Range - Lower Bound	6.42	0.987	25.7	0.124	0.553	0.089	0.604	<0.001	0.287	32.7	<0.001	0.128	1.49	0.008	0.005
Upper Bound	6.57	1.095	26.7	0.139	0.687	0.111	0.670	0.004	0.320	34.1	0.003	0.159	1.67	0.013	0.010
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															
ST-391															
ST-391															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Sample Description	Method Analyte Units LOR	ME-XRF21tu	ME-XRF21tu	ME-GRA05c	ME-GRA05h	ME-GRA05t
		Zr	Total	LOI 1000	LOI 1000	LOI 1000
		%	%	%	%	%
		0.001	0.01	0.01	0.01	0.01
STANDARDS						
MS-15						
Target Range - Lower Bound						
Upper Bound						
MS-25						
Target Range - Lower Bound						
Upper Bound						
MS-50						
Target Range - Lower Bound						
Upper Bound						
MS-75						
Target Range - Lower Bound						
Upper Bound						
MS-95						
Target Range - Lower Bound						
Upper Bound						
NCSDC18014						
Target Range - Lower Bound						
Upper Bound						
NCSDC28006						
Target Range - Lower Bound						
Upper Bound						
OREAS 401		0.009	100.05			
Target Range - Lower Bound		0.005	<0.01			
Upper Bound		0.010	0.02			
SARM-39		0.021	100.05			
Target Range - Lower Bound		0.020	<0.01			
Upper Bound		0.027	0.02			
ST-391				6.20		
ST-391				6.20		
Target Range - Lower Bound				5.87		
Upper Bound				6.51		
ST-391				6.16		
ST-391				6.16		
Target Range - Lower Bound				5.87		
Upper Bound				6.51		
ST-391					6.23	
ST-391					6.23	
Target Range - Lower Bound					5.87	
Upper Bound					6.51	

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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QC CERTIFICATE OF ANALYSIS FE14089472

Sample Description	Method Analyte Units LOR	MAG-SUS Magnetic %	MAG-SUS MagRaw EMU	ME-XRF21c Al2O3 %	ME-XRF21c As %	ME-XRF21c Ba %	ME-XRF21c CaO %	ME-XRF21c Cl %	ME-XRF21c Co %	ME-XRF21c Cr2O3 %	ME-XRF21c Cu %	ME-XRF21c Fe %	ME-XRF21c K2O %	ME-XRF21c MgO %	ME-XRF21c Mn %	ME-XRF21c Na2O %
		0.01	0.01	0.01	0.001	0.001	0.01	0.001	0.001	0.001	0.001	0.01	0.001	0.01	0.001	0.005
BLANKS																
BLANK				<0.01	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.005
Target Range - Lower Bound				<0.01	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.005
Upper Bound				0.02	0.002	0.002	0.02	0.002	0.002	0.002	0.002	0.02	0.002	0.02	0.002	0.010
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
20141 500um DUP				0.79	0.002	0.003	0.09	0.014	0.006	0.002	0.034	58.15	<0.001	7.04	0.506	0.020
Target Range - Lower Bound				0.80	0.001	0.002	0.09	0.016	0.005	0.003	0.032	57.84	<0.001	7.19	0.500	0.015
Upper Bound				0.78	<0.001	<0.001	0.08	0.013	0.004	<0.001	0.030	57.70	<0.001	7.03	0.489	0.012
				0.81	0.002	0.004	0.10	0.017	0.007	0.004	0.036	58.29	0.002	7.20	0.517	0.023
20142 212um DUP																
Target Range - Lower Bound																
Upper Bound																
40143 150um DUP																
Target Range - Lower Bound																
Upper Bound																
20141 106um DUP																
Target Range - Lower Bound																
Upper Bound																

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.



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Method Analyte Units LOR	ME-XRF21c Ni %	ME-XRF21c P %	ME-XRF21c Pb %	ME-XRF21c S %	ME-XRF21c SiO2 %	ME-XRF21c Sn %	ME-XRF21c Sr %	ME-XRF21c TiO2 %	ME-XRF21c V %	ME-XRF21c Zn %	ME-XRF21c Zr %	ME-XRF21c Total %	ME-XRF21hu Al2O3 %	ME-XRF21hu As %	ME-XRF21hu Ba %
Sample Description	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001
BLANKS															
BLANK	<0.001	<0.001	<0.001	<0.001	100.0	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	100.00			
Target Range - Lower Bound	<0.001	<0.001	<0.001	<0.001	98.0	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.01			
Upper Bound	0.002	0.002	0.002	0.002	100.0	0.002	0.002	0.02	0.002	0.002	0.002	0.02			
BLANK													<0.01	<0.001	<0.001
Target Range - Lower Bound													<0.01	<0.001	<0.001
Upper Bound													0.02	0.002	0.002
BLANK															
Target Range - Lower Bound															
Upper Bound															
DUPLICATES															
20141 500um DUP															
Target Range - Lower Bound															
Upper Bound															
20142 212um DUP	0.001	0.001	0.007	3.44	6.29	0.008	0.001	0.15	0.009	0.027	0.003	108.55	2.94	0.005	<0.001
Target Range - Lower Bound	0.001	0.001	0.006	3.34	6.35	0.008	0.001	0.15	0.009	0.027	0.003	108.10	2.88	0.005	<0.001
Upper Bound	<0.001	<0.001	0.005	3.30	6.25	0.007	<0.001	0.14	0.008	0.025	0.002	107.25	2.87	0.004	<0.001
	0.002	0.002	0.008	3.48	6.39	0.009	0.002	0.16	0.010	0.029	0.004	109.40	2.95	0.006	0.002
40143 150um DUP															
Target Range - Lower Bound															
Upper Bound															
20141 106um DUP															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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

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Method Analyte Units LOR	ME-XRF21hu CaO %	ME-XRF21hu Cl %	ME-XRF21hu Co %	ME-XRF21hu Cr2O3 %	ME-XRF21hu Cu %	ME-XRF21hu Fe %	ME-XRF21hu K2O %	ME-XRF21hu MgO %	ME-XRF21hu Mn %	ME-XRF21hu Na2O %	ME-XRF21hu Ni %	ME-XRF21hu P %	ME-XRF21hu Pb %	ME-XRF21hu S %	ME-XRF21hu SiO2 %
Sample Description	0.01	0.001	0.001	0.001	0.001	0.01	0.001	0.01	0.001	0.005	0.001	0.001	0.001	0.001	0.01
BLANK	BLANKS														
Target Range - Lower Bound															
Upper Bound															
BLANK	<0.01	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	100.0
Target Range - Lower Bound	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	98.0
Upper Bound	0.02	0.002	0.002	0.002	0.002	0.02	0.002	0.02	0.002	0.010	0.002	0.002	0.002	0.002	100.0
BLANK															
Target Range - Lower Bound															
Upper Bound															
20141 500um DUP	DUPLICATES														
Target Range - Lower Bound															
Upper Bound															
20142 212um DUP	0.23 0.24	0.026 0.027	0.005 0.005	<0.001 <0.001	0.028 0.027	36.47 36.48	0.002 0.003	19.30 19.15	0.372 0.379	0.009 0.012	<0.001 <0.001	0.004 0.003	0.007 0.003	2.45 2.43	18.75 18.55
Target Range - Lower Bound	0.22	0.024	0.004	<0.001	0.025	36.28	<0.001	19.00	0.365	<0.005	<0.001	0.002	0.004	2.38	18.45
Upper Bound	0.25	0.029	0.006	0.002	0.030	36.67	0.004	19.45	0.386	0.016	0.002	0.005	0.006	2.50	18.85
40143 150um DUP															
Target Range - Lower Bound															
Upper Bound															
20141 106um DUP															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Method Analyte Units LOR	ME-XRF21hu Sn %	ME-XRF21hu Sr %	ME-XRF21hu TiO2 %	ME-XRF21hu V %	ME-XRF21hu Zn %	ME-XRF21hu Zr %	ME-XRF21hu Total %	ME-XRF21tu Al2O3 %	ME-XRF21tu As %	ME-XRF21tu Ba %	ME-XRF21tu CaO %	ME-XRF21tu Cl %	ME-XRF21tu Co %	ME-XRF21tu Cr2O3 %	ME-XRF21tu Cu %
Sample Description	0.001	0.001	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.001	0.01	0.001	0.001	0.001
BLANK	BLANKS														
Target Range - Lower Bound															
Upper Bound															
BLANK	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	100.00								
Target Range - Lower Bound	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.01								
Upper Bound	0.002	0.002	0.02	0.002	0.002	0.002	0.02								
BLANK								0.01	<0.001	0.001	<0.01	<0.001	0.001	<0.001	<0.001
Target Range - Lower Bound								<0.01	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001
Upper Bound								0.02	0.002	0.002	0.02	0.002	0.002	0.002	0.002
20141 500um DUP	DUPLICATES														
Target Range - Lower Bound															
Upper Bound															
20142 212um DUP	0.006	0.001	0.11	0.005	0.025	0.005	106.15	6.53	0.012	<0.001	0.45	0.032	0.002	<0.001	0.027
Target Range - Lower Bound	0.006	0.001	0.11	0.005	0.025	0.005	105.75	6.53	0.011	0.002	0.47	0.034	0.004	<0.001	0.025
Upper Bound	0.005	<0.001	0.10	0.004	0.023	0.004	104.90	6.45	0.010	<0.001	0.45	0.030	0.002	<0.001	0.024
	0.007	0.002	0.12	0.006	0.027	0.006	107.00	6.61	0.013	0.002	0.47	0.036	0.004	0.002	0.028
40143 150um DUP															
Target Range - Lower Bound															
Upper Bound															
20141 106um DUP															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Method Analyte Units LOR	ME-XRF21tu Fe %	ME-XRF21tu K2O %	ME-XRF21tu MgO %	ME-XRF21tu Mn %	ME-XRF21tu Na2O %	ME-XRF21tu Ni %	ME-XRF21tu P %	ME-XRF21tu Pb %	ME-XRF21tu S %	ME-XRF21tu SiO2 %	ME-XRF21tu Sn %	ME-XRF21tu Sr %	ME-XRF21tu TiO2 %	ME-XRF21tu V %	ME-XRF21tu Zn %
Sample Description	0.01	0.001	0.01	0.001	0.005	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.01	0.001	0.001
BLANK	BLANKS														
Target Range - Lower Bound															
Upper Bound															
BLANK															
Target Range - Lower Bound															
Upper Bound															
BLANK	<0.01	<0.001	<0.01	<0.001	<0.005	0.002	<0.001	<0.001	<0.001	100.0	<0.001	<0.001	<0.01	<0.001	<0.001
Target Range - Lower Bound	<0.01	<0.001	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	98.0	<0.001	<0.001	<0.01	<0.001	<0.001
Upper Bound	0.02	0.002	0.02	0.002	0.010	0.002	0.002	0.002	0.002	100.0	0.002	0.002	0.02	0.002	0.002
20141 500um DUP	DUPLICATES														
Target Range - Lower Bound															
Upper Bound															
20142 212um DUP	2.73	0.009	38.1	0.172	0.026	0.002	0.010	<0.001	0.677	37.6	<0.001	<0.001	0.04	<0.001	0.019
Target Range - Lower Bound	2.70	0.009	38.2	0.170	0.028	0.002	0.010	<0.001	0.690	37.7	<0.001	<0.001	0.04	<0.001	0.017
Upper Bound	2.69	0.008	37.8	0.166	0.021	<0.001	0.009	<0.001	0.665	37.3	<0.001	<0.001	0.03	<0.001	0.016
40143 150um DUP	2.74	0.010	38.5	0.176	0.033	0.003	0.011	0.002	0.702	38.0	0.002	0.002	0.05	0.002	0.020
Target Range - Lower Bound															
Upper Bound															
20141 106um DUP															
Target Range - Lower Bound															
Upper Bound															

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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Sample Description	Method Analyte Units LOR	ME-XRF21tu Zr %	ME-XRF21tu Total %	ME-GRA05c LOI 1000 %	ME-GRA05h LOI 1000 %	ME-GRA05t LOI 1000 %
		0.001	0.01	0.01	0.01	0.01
BLANKS						
BLANK						
Target Range - Lower Bound						
Upper Bound						
BLANK						
Target Range - Lower Bound						
Upper Bound						
BLANK		<0.001	100.00			
Target Range - Lower Bound		<0.001	<0.01			
Upper Bound		0.002	0.02			
DUPLICATES						
20141 500um			5.81	8.56	12.93	
DUP			5.32	8.51	12.93	
Target Range - Lower Bound			5.42	8.31	12.60	
Upper Bound			5.71	8.76	13.26	
20142 212um		<0.001	101.65			
DUP		<0.001	101.85			
Target Range - Lower Bound		<0.001	100.70			
Upper Bound		0.002	102.80			
40143 150um			0.87	17.15	24.26	
DUP			0.91	17.28	24.30	
Target Range - Lower Bound			0.86	16.77	23.66	
Upper Bound			0.92	17.66	24.90	
20141 106um			5.78	8.34	13.04	
DUP			5.99	8.23	13.10	
Target Range - Lower Bound			5.73	8.07	12.73	
Upper Bound			6.04	8.50	13.41	

Comments: Screening results reported as CYC-SIZ (P80). Seq 25 -28 used for Crushing and Mat-Rolling prices.// Some samples present high %Totals due to high SO3.

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	CERTIFICATE COMMENTS			
Applies to Method:	LABORATORY ADDRESSES			
	Processed at ALS Iron Ore Technical Centre located at 26 Rigali Way, Wangara, Perth, WA, Australia.			
	CRU-21	CYC-SIZ	DTR_PREP	DTR_REC
	FIL-02	HOM-01	LEV-01	LOG-22
	MAG-SUS	ME-GRA05c	ME-GRA05h	ME-GRA05t
	ME-XRF21c	ME-XRF21hu	ME-XRF21tu	WT_DTR