



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

Page: 1  
Finalized Date: 21-JUN-2011  
Account: WEDES

## CERTIFICATE AS11095006

Project: ROPER BAR

P.O. No.: TI\_110530

This report is for 98 Rock samples submitted to our lab in Alice Springs, NT, Australia on 31-MAY-2011.

The following have access to data associated with this certificate:

ANDY BENNETT

CHRIS GAUGHAN

GAVIN OTTO

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
PUL-23	Pulv Sample - Split/Retain
PUL-QC	Pulverizing QC Test

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-GRA05	H2O/LOI by TGA furnace	TGA
ME-XRF11b	Iron Ore by Fusion XRF	XRF

To: WESTERN DESERT RESOURCES  
ATTN: CHRIS GAUGHAN  
LEVEL 1, 26 GREENHILL ROAD  
WAYVILLE SA 5034

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.

Signature:

Wayne Abbott, Operations Manager, Western Australia

Project: ROPER BAR

**CERTIFICATE OF ANALYSIS AS11095006**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	ME-XRF11b Al2O3 % 0.01	ME-XRF11b As % 0.001	ME-XRF11b Ba % 0.001	ME-XRF11b CaO % 0.01	ME-XRF11b Cl % 0.001	ME-XRF11b Co % 0.001	ME-XRF11b Cr2O3 % 0.001	ME-XRF11b Cu % 0.001	ME-XRF11b Fe % 0.01	ME-XRF11b K2O % 0.01	ME-XRF11b MgO % 0.01	ME-XRF11b MnO % 0.001	ME-XRF11b Mn % 0.001
11Ti0001		0.66		4.78	0.006	<0.001	0.34	0.009	<0.001	0.004	0.001	32.23	0.23	0.24	0.059	0.046
11Ti0002		0.51		1.93	0.002	<0.001	0.16	0.007	0.001	0.005	0.007	45.62	0.14	0.33	0.254	0.196
11Ti0003		0.39		1.39	0.001	<0.001	0.07	0.010	0.002	0.006	<0.001	40.10	0.04	0.06	0.142	0.110
11Ti0004		0.79		0.99	0.002	<0.001	0.07	0.008	<0.001	0.004	<0.001	34.67	0.04	0.15	0.212	0.164
11Ti0005		0.83		3.18	0.002	<0.001	0.04	0.007	<0.001	0.004	<0.001	41.01	0.02	0.02	0.106	0.082
11Ti0006		0.61		0.47	<0.001	<0.001	0.02	0.009	<0.001	0.001	<0.001	26.01	0.01	0.05	0.068	0.052
11Ti0007		0.44		1.27	<0.001	<0.001	0.17	0.010	<0.001	0.007	<0.001	46.34	0.02	0.04	0.065	0.050
11Ti0008		0.44		0.70	<0.001	0.050	0.04	0.008	0.002	0.001	0.004	29.76	0.11	0.16	3.06	2.37
11Ti0009		0.53		1.17	<0.001	0.019	0.10	0.014	0.001	0.005	<0.001	37.33	0.04	0.21	1.920	1.485
11Ti0010		0.53	97.7	2.59	0.001	0.044	0.06	0.011	0.003	0.002	<0.001	25.57	0.05	0.07	1.805	1.400
11Ti0011		0.62		1.22	<0.001	0.005	0.03	0.010	0.001	0.005	<0.001	23.30	0.01	0.20	0.663	0.513
11Ti0012		0.56		0.74	0.001	0.019	0.04	0.013	0.006	<0.001	<0.001	37.31	0.47	0.16	7.68	5.94
11Ti0013		1.06		1.10	<0.001	0.025	0.11	0.010	0.001	0.009	<0.001	48.55	0.04	0.15	0.568	0.440
11Ti0014		0.83		0.70	0.001	0.029	0.03	0.006	0.001	0.006	<0.001	60.17	0.10	0.14	2.94	2.28
11Ti0015		0.78		0.83	0.002	0.038	0.04	0.015	0.005	0.005	<0.001	48.40	0.05	0.32	2.17	1.675
11Ti0016		0.78		0.45	<0.001	0.015	0.12	0.011	<0.001	0.004	<0.001	39.43	0.03	0.04	0.564	0.437
11Ti0017		0.56		1.90	0.001	0.058	0.02	0.009	0.003	0.010	<0.001	39.99	0.03	0.50	1.780	1.375
11Ti0018		0.72		0.51	<0.001	0.004	0.06	0.008	<0.001	0.001	<0.001	58.20	0.02	0.07	0.344	0.266
11Ti0019		0.79		0.81	<0.001	0.007	0.02	0.009	<0.001	0.012	<0.001	59.25	0.01	0.23	0.835	0.646
11Ti0020		0.63		0.83	<0.001	0.006	0.05	0.009	<0.001	0.002	0.001	63.88	0.01	0.10	0.514	0.398
11Ti0021		0.60		1.10	<0.001	0.026	0.01	0.008	0.005	0.008	<0.001	59.04	0.02	0.32	2.000	1.545
11Ti0022		0.67		0.70	<0.001	<0.001	0.03	0.016	<0.001	0.008	0.004	63.50	<0.01	0.12	0.624	0.483
11Ti0023		0.83		1.10	0.003	<0.001	0.02	0.008	0.002	0.007	<0.001	55.28	0.01	0.11	0.581	0.450
11Ti0024		1.02		2.10	0.003	<0.001	0.01	0.007	0.002	0.002	<0.001	54.74	0.01	0.34	0.440	0.341
11Ti0025		1.03		0.90	0.003	<0.001	0.07	0.012	0.003	0.007	<0.001	52.36	0.01	0.37	0.741	0.573
11Ti0026		0.56		1.24	0.001	0.002	0.05	0.008	0.004	0.007	0.001	44.18	0.01	0.32	0.570	0.441
11Ti0027		0.85		0.90	0.001	<0.001	0.03	0.009	0.001	0.008	<0.001	49.07	0.01	0.37	0.421	0.326
11Ti0101		1.25		0.51	0.001	<0.001	0.02	0.008	<0.001	0.002	<0.001	34.04	0.01	0.26	0.364	0.282
11Ti0102		0.77		0.82	<0.001	<0.001	0.01	0.010	0.001	0.006	<0.001	47.22	0.01	0.24	0.343	0.266
11Ti0103		1.28		0.76	<0.001	<0.001	0.01	0.011	<0.001	0.003	<0.001	55.42	0.01	0.26	0.387	0.299
11Ti0104		1.14		0.74	<0.001	<0.001	0.03	0.010	0.001	0.008	<0.001	37.19	0.03	0.26	0.231	0.178
11Ti0105		1.27		0.58	<0.001	<0.001	0.01	0.010	0.001	0.002	<0.001	50.42	<0.01	0.15	0.173	0.134
11Ti0106		1.03		0.45	0.001	<0.001	0.02	0.007	<0.001	0.006	<0.001	31.92	0.01	0.06	0.067	0.051
11Ti0107		0.91		0.65	0.001	<0.001	0.01	0.005	<0.001	0.007	<0.001	45.08	0.01	0.05	0.140	0.109
11Ti0108		1.33		0.83	<0.001	0.032	0.01	0.006	0.001	0.005	<0.001	36.62	0.07	0.24	2.58	2.000
11Ti0109		0.95		9.16	0.004	0.091	0.05	0.010	0.005	0.008	<0.001	29.25	0.34	0.12	1.605	1.245
11Ti0110		1.13		0.53	0.002	0.017	0.01	0.010	0.001	0.005	<0.001	34.05	0.09	0.37	3.88	3.00
11Ti0111		1.04		2.07	0.001	0.035	0.10	0.019	0.001	0.001	<0.001	31.42	0.21	0.06	2.48	1.915
11Ti0112		1.42		6.39	0.003	0.037	0.02	0.013	0.004	0.013	<0.001	28.71	0.21	0.13	1.355	1.050
11Ti0113		1.66		1.02	<0.001	<0.001	0.04	0.013	0.001	0.002	<0.001	46.09	0.04	0.12	0.640	0.496



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

Page: 2 - B  
 Total # Pages: 4 (A - B)  
 Finalized Date: 21-JUN-2011  
 Account: WEDES

Project: ROPER BAR

**CERTIFICATE OF ANALYSIS AS11095006**

Sample Description	Method Analyte Units LOR	ME-XRF11b Na2O %	ME-XRF11b Ni %	ME-XRF11b P %	ME-XRF11b Pb %	ME-XRF11b S %	ME-XRF11b SiO2 %	ME-XRF11b Sn %	ME-XRF11b Sr %	ME-XRF11b TiO2 %	ME-XRF11b V %	ME-XRF11b Zn %	ME-XRF11b Zr %	ME-XRF11b Total %	ME-GRA05 LOI %
11Ti0001		0.205	<0.001	0.015	<0.001	0.041	44.0	<0.001	<0.001	0.16	0.001	<0.001	0.010	99.97	3.71
11Ti0002		0.207	<0.001	0.023	<0.001	0.038	30.2	<0.001	<0.001	0.09	0.004	<0.001	0.006	99.99	1.27
11Ti0003		<0.001	<0.001	0.028	<0.001	0.016	36.2	<0.001	<0.001	0.03	0.003	<0.001	0.005	100.00	4.61
11Ti0004		0.009	<0.001	0.027	<0.001	0.023	46.6	<0.001	<0.001	0.02	0.002	<0.001	0.003	100.00	2.23
11Ti0005		<0.001	<0.001	0.015	<0.001	0.004	36.1	<0.001	<0.001	0.06	0.002	<0.001	0.007	100.00	1.80
11Ti0006		<0.001	<0.001	0.009	<0.001	0.014	61.5	<0.001	<0.001	0.03	0.001	<0.001	0.003	100.00	0.62
11Ti0007		<0.001	<0.001	0.012	<0.001	0.051	30.8	<0.001	0.003	0.02	0.001	<0.001	0.007	100.00	1.20
11Ti0008		<0.001	<0.001	0.006	<0.001	0.008	51.2	<0.001	0.001	0.02	0.002	<0.001	0.005	99.96	2.01
11Ti0009		<0.001	<0.001	0.014	<0.001	0.026	39.2	<0.001	0.003	0.03	0.001	<0.001	0.006	99.98	3.80
11Ti0010		<0.001	<0.001	0.004	<0.001	0.014	54.8	<0.001	0.003	0.02	0.003	<0.001	0.006	99.98	3.91
11Ti0011		<0.001	<0.001	0.016	<0.001	0.018	63.0	<0.001	<0.001	0.02	0.002	<0.001	0.004	99.98	1.43
11Ti0012		<0.001	<0.001	0.028	<0.001	0.022	33.9	<0.001	0.003	0.01	0.001	<0.001	0.005	100.05	3.52
11Ti0013		<0.001	<0.001	0.028	<0.001	0.022	26.3	<0.001	0.004	0.01	0.001	<0.001	0.007	100.05	2.16
11Ti0014		<0.001	<0.001	0.019	<0.001	0.008	8.31	<0.001	0.005	0.01	0.002	<0.001	0.009	100.00	1.60
11Ti0015		<0.001	<0.001	0.016	<0.001	0.015	21.9	<0.001	0.002	0.01	0.003	<0.001	0.006	99.98	5.31
11Ti0016		<0.001	<0.001	0.016	<0.001	0.027	41.0	<0.001	0.002	0.02	0.001	<0.001	0.005	100.00	1.27
11Ti0017		<0.001	0.001	0.011	<0.001	0.028	32.6	<0.001	0.001	0.02	0.002	<0.001	0.006	100.00	5.81
11Ti0018		<0.001	<0.001	0.025	<0.001	0.010	14.40	<0.001	0.003	0.01	0.001	<0.001	0.006	100.00	1.30
11Ti0019		<0.001	0.003	0.017	<0.001	0.021	10.55	<0.001	0.003	0.01	0.002	<0.001	0.009	100.00	2.70
11Ti0020		<0.001	0.001	0.016	0.004	0.005	6.02	<0.001	0.010	0.01	0.004	<0.001	0.013	100.00	1.05
11Ti0021		<0.001	<0.001	0.015	<0.001	0.020	7.60	<0.001	0.004	0.01	0.004	<0.001	0.012	100.00	4.40
11Ti0022		<0.001	0.001	0.017	<0.001	0.008	6.40	<0.001	0.006	0.02	0.002	<0.001	0.011	100.00	1.23
11Ti0023		<0.001	<0.001	0.012	<0.001	0.011	17.55	<0.001	0.002	0.02	0.004	<0.001	0.008	99.98	1.46
11Ti0024		<0.001	<0.001	0.024	<0.001	0.021	12.30	<0.001	0.002	0.04	0.008	<0.001	0.011	100.05	6.39
11Ti0025		<0.001	<0.001	0.013	<0.001	0.012	19.70	<0.001	0.003	0.01	0.007	<0.001	0.009	99.99	3.22
11Ti0026		<0.001	<0.001	0.027	0.004	0.019	30.7	<0.001	0.006	0.03	0.007	<0.001	0.013	100.05	3.78
11Ti0027		<0.001	<0.001	0.016	<0.001	0.013	23.0	<0.001	<0.001	0.01	0.005	<0.001	0.005	99.98	4.98
11Ti0101		<0.001	<0.001	0.023	<0.001	0.008	47.1	<0.001	<0.001	0.01	0.002	<0.001	0.004	100.00	2.97
11Ti0102		<0.001	<0.001	0.038	<0.001	0.007	28.2	<0.001	0.002	0.01	0.003	<0.001	0.008	99.96	2.69
11Ti0103		<0.001	<0.001	0.026	<0.001	0.018	16.25	<0.001	0.005	0.01	0.003	<0.001	0.010	100.05	2.98
11Ti0104		<0.001	<0.001	0.021	<0.001	0.010	42.2	<0.001	0.002	0.04	0.002	<0.001	0.006	99.98	3.17
11Ti0105		<0.001	<0.001	0.123	<0.001	0.014	24.1	<0.001	0.003	0.01	0.005	<0.001	0.009	100.00	2.55
11Ti0106		<0.001	<0.001	0.014	<0.001	0.006	52.6	<0.001	<0.001	0.01	0.002	<0.001	0.003	99.96	1.04
11Ti0107		<0.001	<0.001	0.028	<0.001	0.011	29.0	<0.001	<0.001	0.01	0.001	<0.001	0.003	100.05	5.62
11Ti0108		<0.001	<0.001	0.009	<0.001	0.011	37.8	<0.001	<0.001	0.01	0.001	<0.001	0.004	100.00	6.02
11Ti0109		<0.001	<0.001	0.027	<0.001	0.029	40.2	<0.001	0.003	0.41	0.007	<0.001	0.034	100.00	5.98
11Ti0110		<0.001	<0.001	0.031	<0.001	0.032	39.3	<0.001	<0.001	<0.01	0.001	<0.001	0.004	99.95	6.90
11Ti0111		<0.001	<0.001	0.248	<0.001	0.130	42.6	<0.001	0.004	0.06	0.002	<0.001	0.007	99.99	6.54
11Ti0112		<0.001	<0.001	0.037	<0.001	0.037	44.7	<0.001	<0.001	0.29	0.008	<0.001	0.022	100.00	5.60
11Ti0113		<0.001	<0.001	0.120	<0.001	0.038	24.5	<0.001	0.003	0.01	0.003	<0.001	0.006	100.00	7.37

Project: ROPER BAR

**CERTIFICATE OF ANALYSIS AS11095006**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	ME-XRF11b Al2O3 % 0.01	ME-XRF11b As % 0.001	ME-XRF11b Ba % 0.001	ME-XRF11b CaO % 0.01	ME-XRF11b Cl % 0.001	ME-XRF11b Co % 0.001	ME-XRF11b Cr2O3 % 0.001	ME-XRF11b Cu % 0.001	ME-XRF11b Fe % 0.01	ME-XRF11b K2O % 0.01	ME-XRF11b MgO % 0.01	ME-XRF11b MnO % 0.001	ME-XRF11b Mn % 0.001
11TiO114		1.66		0.89	0.001	0.001	0.19	0.085	0.001	0.001	<0.001	30.20	0.03	0.11	0.187	0.144
11TiO115		0.94		1.56	<0.001	0.018	0.08	0.020	0.001	0.002	<0.001	27.84	0.04	0.25	0.329	0.255
11TiO116		1.43		2.78	0.002	<0.001	0.04	0.019	<0.001	0.011	<0.001	48.61	0.04	0.09	0.089	0.069
11TiO117		1.26		0.87	0.001	0.033	0.02	0.014	0.002	<0.001	<0.001	42.19	<0.01	0.80	1.595	1.235
11TiO118		0.75		1.02	<0.001	0.021	0.01	0.013	0.001	<0.001	<0.001	55.46	<0.01	0.35	0.873	0.677
11TiO119		1.33		1.38	<0.001	0.016	0.05	0.009	0.001	<0.001	0.001	61.15	<0.01	0.16	0.907	0.702
11TiO120		1.56		0.80	<0.001	0.002	0.02	0.013	0.001	<0.001	<0.001	62.07	<0.01	0.07	0.731	0.566
11TiO121		1.38		0.40	<0.001	<0.001	0.02	0.012	<0.001	0.001	<0.001	21.96	<0.01	0.03	0.097	0.075
11TiO122		1.62		0.88	<0.001	<0.001	0.02	0.013	0.001	<0.001	<0.001	58.53	<0.01	0.28	0.791	0.613
11TiO123		1.94	91.6	0.62	<0.001	0.002	0.09	0.008	<0.001	<0.001	<0.001	16.27	0.03	0.01	0.034	0.026
11TiO124		1.18		9.49	0.003	0.023	0.02	0.007	0.005	<0.001	<0.001	36.72	0.11	0.12	0.621	0.481
11TiO125		1.00		2.60	0.001	0.025	0.01	0.007	0.030	<0.001	<0.001	45.35	0.01	0.22	1.235	0.956
11TiO126		0.89		1.52	0.001	0.045	0.06	0.011	0.002	<0.001	<0.001	37.09	0.10	0.08	4.00	3.09
11TiO127		1.19		1.00	0.003	<0.001	0.04	0.007	0.006	<0.001	<0.001	47.43	<0.01	0.15	1.460	1.130
11TiO128		1.44		0.84	0.002	0.012	0.02	0.011	0.002	<0.001	0.004	47.92	<0.01	0.45	1.005	0.778
11TiO129		0.93		0.68	0.001	<0.001	0.01	0.013	0.002	<0.001	<0.001	51.16	<0.01	0.39	0.893	0.691
11TiO130		1.23		0.70	0.001	0.020	0.01	0.014	0.004	<0.001	<0.001	52.63	<0.01	0.34	1.095	0.849
11TiO131		1.62		0.99	0.002	<0.001	0.01	0.009	0.001	<0.001	<0.001	56.73	<0.01	0.08	0.198	0.153
11TiO132		1.04		0.92	0.002	<0.001	0.02	0.012	0.001	<0.001	<0.001	52.03	<0.01	0.26	0.571	0.442
11TiO133		1.18		0.60	<0.001	<0.001	0.03	0.021	0.001	<0.001	<0.001	32.85	<0.01	0.05	0.095	0.073
11TiO134		0.86		1.04	0.002	0.084	0.10	0.039	0.001	<0.001	<0.001	38.51	0.03	0.30	0.492	0.381
11TiO203		1.26		1.19	<0.001	0.014	0.04	0.016	0.002	<0.001	<0.001	28.85	0.02	0.34	1.180	0.914
11TiO204		1.09		3.07	<0.001	0.043	0.02	0.019	0.002	<0.001	<0.001	16.46	0.04	0.07	0.907	0.702
11TiO205		1.79		1.38	<0.001	0.027	0.01	0.009	0.004	<0.001	<0.001	36.46	0.18	0.11	3.81	2.95
11TiO206		1.04		0.76	0.001	0.003	0.01	0.011	0.001	<0.001	<0.001	44.89	0.01	0.06	0.722	0.559
11TiO207		1.61		0.40	<0.001	<0.001	0.03	0.014	<0.001	<0.001	<0.001	40.92	<0.01	0.02	0.126	0.098
11TiO208		1.06		0.45	<0.001	<0.001	0.06	0.015	<0.001	<0.001	<0.001	56.74	<0.01	0.02	0.076	0.059
11TiO209		1.61		0.90	<0.001	<0.001	0.03	0.012	0.001	0.002	<0.001	26.65	<0.01	0.18	0.246	0.190
11TiO210		1.14		0.59	<0.001	0.005	0.01	0.013	0.003	<0.001	0.001	31.89	<0.01	0.16	0.327	0.252
11TiO211		1.51		0.36	<0.001	<0.001	<0.01	0.010	<0.001	<0.001	<0.001	49.29	<0.01	0.22	0.378	0.292
11TiO213		2.09		0.48	<0.001	<0.001	0.08	0.008	<0.001	<0.001	<0.001	53.66	<0.01	0.06	0.120	0.092
11TiO220		1.42		2.14	0.005	0.023	0.31	0.021	0.003	<0.001	<0.001	36.67	0.10	0.55	1.735	1.340
11TiO222		1.27		3.31	<0.001	0.017	0.41	0.011	0.001	<0.001	<0.001	22.62	0.12	0.42	0.625	0.484
11TiO224		1.14		2.19	<0.001	0.004	0.14	0.009	0.004	<0.001	<0.001	41.79	<0.01	0.58	0.921	0.713
11TiO227		1.76		1.22	<0.001	<0.001	0.04	0.011	<0.001	<0.001	<0.001	38.63	<0.01	0.04	0.063	0.049
11TiO228		1.45		0.52	<0.001	<0.001	0.06	0.023	<0.001	0.001	<0.001	55.17	<0.01	0.05	0.059	0.046
11TiO231		1.37		0.67	<0.001	<0.001	0.01	0.010	0.001	<0.001	<0.001	39.83	<0.01	0.01	0.044	0.033
11TiO232		0.85		0.45	<0.001	<0.001	0.04	0.013	<0.001	<0.001	<0.001	25.10	<0.01	0.01	0.030	0.023
11TiO236		1.60		0.71	<0.001	<0.001	0.01	0.010	<0.001	<0.001	<0.001	36.93	<0.01	<0.01	0.019	0.015
11TiO237		3.05		0.47	<0.001	<0.001	0.01	0.009	0.001	<0.001	<0.001	38.41	<0.01	<0.01	0.005	0.004

Project: ROPER BAR

**CERTIFICATE OF ANALYSIS AS11095006**

Sample Description	Method Analyte Units LOR	ME-XRF11b Na2O %	ME-XRF11b Ni %	ME-XRF11b P %	ME-XRF11b Pb %	ME-XRF11b S %	ME-XRF11b SiO2 %	ME-XRF11b Sn %	ME-XRF11b Sr %	ME-XRF11b TiO2 %	ME-XRF11b V %	ME-XRF11b Zn %	ME-XRF11b Zr %	ME-XRF11b Total %	ME-GRA05 LOI %
		0.001	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
11TiO114		0.035	<0.001	0.048	<0.001	0.051	53.7	<0.001	<0.001	0.03	0.002	<0.001	0.004	100.00	1.41
11TiO115		<0.001	<0.001	0.027	<0.001	0.052	53.4	<0.001	0.001	0.02	0.003	<0.001	0.005	100.05	4.32
11TiO116		<0.001	<0.001	0.030	<0.001	0.014	25.2	<0.001	0.005	0.05	0.013	0.001	0.012	99.95	2.00
11TiO117		0.005	<0.001	0.039	<0.001	0.093	28.3	<0.001	<0.001	0.01	0.004	<0.001	0.004	99.95	7.64
11TiO118		0.007	<0.001	0.052	<0.001	0.018	14.25	<0.001	0.001	0.02	0.006	<0.001	0.009	100.00	3.97
11TiO119		0.014	<0.001	0.013	0.003	0.003	8.41	<0.001	0.007	0.02	0.006	0.001	0.014	100.00	1.53
11TiO120		0.006	<0.001	0.018	<0.001	<0.001	7.65	<0.001	0.003	0.02	0.003	<0.001	0.011	99.99	1.89
11TiO121		0.028	<0.001	0.011	<0.001	0.005	67.2	<0.001	<0.001	0.03	0.001	<0.001	0.002	99.97	0.72
11TiO122		0.002	<0.001	0.018	<0.001	0.002	10.50	<0.001	<0.001	0.01	0.005	<0.001	0.008	99.99	3.75
11TiO123		0.027	<0.001	0.034	<0.001	0.124	74.5	<0.001	0.001	0.02	<0.001	<0.001	0.003	100.05	1.04
11TiO124		0.023	<0.001	0.028	<0.001	0.011	29.2	<0.001	0.002	0.37	0.017	<0.001	0.030	100.05	7.39
11TiO125		0.012	<0.001	0.011	<0.001	0.001	22.2	<0.001	<0.001	0.06	0.005	<0.001	0.013	100.05	8.73
11TiO126		0.008	<0.001	0.014	<0.001	0.013	39.3	<0.001	0.004	0.04	0.002	<0.001	0.006	100.05	1.76
11TiO127		0.005	<0.001	0.022	<0.001	<0.001	25.4	<0.001	<0.001	0.01	0.002	<0.001	0.003	100.05	4.09
11TiO128		0.006	<0.001	0.022	<0.001	0.029	23.6	<0.001	<0.001	0.02	0.004	<0.001	0.007	99.99	5.37
11TiO129		0.006	<0.001	0.016	<0.001	0.018	19.90	<0.001	<0.001	0.01	0.003	<0.001	0.006	100.00	4.88
11TiO130		0.005	<0.001	0.009	<0.001	0.008	18.40	<0.001	0.001	0.01	0.005	<0.001	0.008	99.98	4.08
11TiO131		<0.001	<0.001	0.008	<0.001	0.001	15.80	<0.001	<0.001	0.01	0.005	<0.001	0.008	100.00	1.75
11TiO132		0.010	<0.001	0.013	<0.001	0.006	20.7	<0.001	<0.001	0.01	0.005	<0.001	0.008	100.00	3.06
11TiO133		0.022	<0.001	0.025	<0.001	0.013	51.0	<0.001	<0.001	0.02	0.005	<0.001	0.004	100.00	1.13
11TiO134		0.024	<0.001	0.026	<0.001	0.063	38.8	<0.001	<0.001	0.02	0.004	<0.001	0.005	100.00	3.80
11TiO203		<0.001	<0.001	0.014	<0.001	0.024	53.5	<0.001	0.002	0.03	0.002	<0.001	0.010	99.96	2.29
11TiO204		0.030	<0.001	0.057	<0.001	0.067	69.2	<0.001	0.001	0.05	0.004	<0.001	0.011	99.98	2.68
11TiO205		0.016	<0.001	0.015	<0.001	0.018	37.6	<0.001	0.001	0.02	0.003	<0.001	0.006	100.00	4.61
11TiO206		0.014	<0.001	0.023	<0.001	0.001	31.2	<0.001	0.001	0.02	0.003	<0.001	0.008	99.98	2.93
11TiO207		0.023	<0.001	0.010	<0.001	<0.001	40.0	<0.001	<0.001	0.01	0.002	<0.001	0.005	99.98	0.83
11TiO208		0.017	<0.001	0.015	<0.001	0.019	17.65	<0.001	0.004	0.01	0.002	<0.001	0.009	100.05	0.51
11TiO209		0.031	<0.001	0.036	<0.001	0.006	58.2	<0.001	<0.001	0.01	0.001	<0.001	0.002	100.00	2.21
11TiO210		0.031	<0.001	0.019	0.004	0.028	50.6	<0.001	0.002	0.03	0.004	<0.001	0.010	100.00	2.52
11TiO211		0.002	<0.001	0.055	<0.001	0.008	25.6	<0.001	<0.001	0.01	0.002	<0.001	0.005	99.98	2.78
11TiO213		0.008	<0.001	0.011	<0.001	0.025	21.4	<0.001	<0.001	<0.01	0.001	<0.001	0.006	99.98	1.02
11TiO220		0.078	<0.001	0.016	<0.001	0.012	35.7	<0.001	<0.001	0.04	0.003	<0.001	0.006	99.99	6.79
11TiO222		0.104	<0.001	0.050	<0.001	0.041	58.9	<0.001	<0.001	0.07	0.005	<0.001	0.006	100.05	3.48
11TiO224		0.021	<0.001	0.018	<0.001	0.002	32.4	<0.001	<0.001	0.03	0.005	<0.001	0.008	100.05	3.93
11TiO227		0.028	<0.001	0.010	<0.001	0.003	42.3	<0.001	<0.001	0.02	0.002	<0.001	0.005	100.00	1.02
11TiO228		0.028	<0.001	0.039	<0.001	0.015	19.65	<0.001	0.003	0.01	0.002	<0.001	0.009	100.00	0.61
11TiO231		0.023	<0.001	0.007	<0.001	0.013	41.3	<0.001	<0.001	0.02	0.002	<0.001	0.007	99.99	0.89
11TiO232		0.025	<0.001	0.027	<0.001	0.024	62.8	<0.001	<0.001	0.02	0.003	<0.001	0.004	99.96	0.56
11TiO236		0.021	<0.001	0.015	<0.001	<0.001	46.0	<0.001	<0.001	0.02	0.002	<0.001	0.006	100.00	0.37
11TiO237		0.020	<0.001	0.015	<0.001	0.007	44.2	<0.001	<0.001	0.01	0.002	<0.001	0.005	100.00	0.30



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

Page: 4 - A  
Total # Pages: 4 (A - B)  
Finalized Date: 21-JUN-2011  
Account: WESEDES

Project: ROPER BAR

**CERTIFICATE OF ANALYSIS AS11095006**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	PUL-QC Pass75um %	ME-XRF11b Al2O3 %	ME-XRF11b As %	ME-XRF11b Ba %	ME-XRF11b CaO %	ME-XRF11b Cl %	ME-XRF11b Co %	ME-XRF11b Cr2O3 %	ME-XRF11b Cu %	ME-XRF11b Fe %	ME-XRF11b K2O %	ME-XRF11b MgO %	ME-XRF11b MnO %	ME-XRF11b Mn %
		0.02	0.01	0.01	0.001	0.001	0.01	0.001	0.001	0.001	0.001	0.01	0.01	0.01	0.001	0.001
11TiO238		1.41		0.56	0.001	<0.001	0.02	0.019	<0.001	<0.001	<0.001	55.00	<0.01	<0.01	0.003	0.002
11TiO239		1.68		0.60	<0.001	0.017	0.04	0.010	0.002	0.001	<0.001	33.05	<0.01	0.03	0.029	0.023
11TiO240		1.28		0.84	<0.001	0.027	0.03	0.011	0.001	<0.001	0.001	62.57	<0.01	0.03	0.194	0.150
11TiO242		0.93		0.82	<0.001	0.006	0.09	0.031	0.001	<0.001	<0.001	13.46	0.01	0.25	0.240	0.186
11TiO245		0.56		0.86	<0.001	0.017	0.34	0.014	0.001	<0.001	0.001	52.99	<0.01	0.03	0.060	0.046
11TiO247		1.21		0.82	0.001	<0.001	0.02	0.011	0.004	<0.001	0.003	54.20	<0.01	0.48	0.412	0.319
11TiO253		1.05		0.78	0.002	0.034	0.07	0.049	0.003	0.005	<0.001	56.76	0.01	0.87	2.06	1.600
11TiO254		1.28		1.30	0.003	<0.001	0.02	0.025	0.003	<0.001	<0.001	56.65	<0.01	0.60	1.290	0.999
11TiO258		0.96		0.35	<0.001	<0.001	0.01	0.007	<0.001	<0.001	<0.001	24.62	0.01	0.05	0.057	0.045
11TiO270		1.16	86.2	1.22	0.001	<0.001	0.04	0.011	<0.001	<0.001	<0.001	46.41	0.01	0.05	0.128	0.099
11TiO273		1.18		0.59	0.003	<0.001	0.01	0.010	0.016	<0.001	<0.001	45.28	0.03	0.21	1.825	1.415
11TiO278		0.86		0.69	0.002	0.022	0.01	0.018	0.001	<0.001	<0.001	30.97	0.01	0.54	0.979	0.758
11TiO279		1.11		0.69	0.004	<0.001	0.01	0.012	0.003	<0.001	<0.001	46.62	<0.01	0.46	0.603	0.467
11TiO280		1.42		0.74	0.003	<0.001	0.01	0.006	0.001	<0.001	<0.001	64.14	<0.01	0.11	0.180	0.140
11TiO281		1.23		0.75	0.002	<0.001	0.01	0.019	0.001	<0.001	<0.001	50.20	<0.01	0.22	0.460	0.356
11TiO282		1.29		0.68	0.002	0.001	0.01	0.009	0.002	<0.001	0.001	49.62	0.01	0.28	0.644	0.499
11TiO285		1.56		1.44	0.002	0.036	0.02	0.030	0.005	0.001	0.002	54.45	0.03	0.64	1.645	1.275
11TiO288		1.92		0.75	0.004	0.023	0.05	0.014	0.002	<0.001	<0.001	50.55	0.04	0.10	0.340	0.263



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

Page: 4 - B  
Total # Pages: 4 (A - B)  
Finalized Date: 21-JUN-2011  
Account: WESEDES

Project: ROPER BAR

**CERTIFICATE OF ANALYSIS AS11095006**

Sample Description	Method Analyte Units LOR	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-XRF11b	ME-GRA05
		Na2O	Ni	P	Pb	S	SiO2	Sn	Sr	TiO2	V	Zn	Zr	Total	LOI
		%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.001	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
11TiO238		0.012	<0.001	0.033	<0.001	0.001	20.3	<0.001	<0.001	0.01	0.002	<0.001	0.007	100.00	0.36
11TiO239		0.033	<0.001	0.019	0.002	0.001	50.5	<0.001	0.003	0.02	0.005	0.001	0.010	100.00	1.42
11TiO240		0.012	<0.001	0.042	0.003	0.031	6.73	<0.001	0.008	0.02	0.004	0.001	0.013	100.00	2.45
11TiO242		0.037	<0.001	0.037	<0.001	0.071	76.2	<0.001	<0.001	0.02	0.002	<0.001	0.001	100.00	2.81
11TiO245		0.018	<0.001	0.038	0.005	0.085	20.7	<0.001	0.009	0.01	0.005	0.001	0.014	100.00	1.86
11TiO247		0.009	<0.001	0.024	<0.001	<0.001	13.15	<0.001	0.002	0.01	0.005	<0.001	0.010	99.97	7.49
11TiO253		0.005	0.010	0.028	<0.001	0.025	7.66	<0.001	<0.001	0.01	0.006	0.001	0.001	100.00	7.18
11TiO254		<0.001	<0.001	0.011	<0.001	0.011	9.62	<0.001	<0.001	0.02	0.008	<0.001	0.003	99.99	6.08
11TiO258		<0.001	<0.001	0.003	<0.001	0.019	63.7	0.001	<0.001	0.02	0.001	<0.001	0.002	100.05	0.57
11TiO270		<0.001	<0.001	0.022	<0.001	0.023	27.3	<0.001	<0.001	0.01	0.003	<0.001	0.001	100.05	4.81
11TiO273		<0.001	<0.001	0.013	<0.001	0.011	28.4	<0.001	<0.001	0.01	0.002	<0.001	0.001	99.96	4.07
11TiO278		0.016	<0.001	0.006	<0.001	0.029	47.7	<0.001	<0.001	0.01	0.001	<0.001	0.002	100.05	5.68
11TiO279		0.003	<0.001	0.019	<0.001	0.026	26.9	<0.001	<0.001	0.02	0.004	<0.001	0.003	100.00	4.53
11TiO280		<0.001	<0.001	0.010	<0.001	0.012	5.12	<0.001	<0.001	0.01	0.004	0.001	0.003	100.00	2.06
11TiO281		0.079	0.001	0.011	<0.001	0.008	24.0	<0.001	<0.001	0.01	0.005	<0.001	0.003	100.00	2.64
11TiO282		0.002	0.001	0.025	<0.001	0.039	23.0	<0.001	<0.001	0.01	0.004	0.001	0.005	99.99	4.23
11TiO285		0.190	0.002	0.018	0.006	0.017	10.85	<0.001	<0.001	0.03	0.006	0.002	0.010	99.98	7.10
11TiO288		0.021	<0.001	0.042	<0.001	0.058	24.4	<0.001	<0.001	0.01	0.003	0.001	0.002	99.97	1.69