

MINERAL HOLDINGS AUSTRALIA PTY LTD

EXPLORATION LICENCE 47/2011 DIP RANGE, NW TASMANIA

ANNUAL REPORT ON EXPLORATION TO AUGUST 2013

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ABSTRACT

This report gives a review of the exploration work carried out by Mineral Holdings Australia Pty Ltd (MHA) over the past 12 months on EL47/2011, which covers 186km² in the Dip Ranges and surrounds the Thomas Mountain Silica Mine within 23M2009 and RL1/2005.

The licence covers outcrops of the Detention Quartzite and the Jacobs Quartzite of the Rocky Cape Group and the target of the exploration program is silica, silica sand and quartzite for the chemical, metallurgical glass and coal seam methane industries.

Previous exploration by MHA, and its joint venture partners, has outlined a substantial inventory of potential silica products in RL1/2005 and the intention was to explore the adjacent areas for any further resources of a similar nature.

A detailed program of foot traversing was carried out. No significant quartzite bodies were located but 5 samples of silica sand were collected for evaluation as a potential source of frac sand. Further evaluation of the frac sand potential is warranted.

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1.0 INTRODUCTION

EL47/2011 was granted to Mineral Holdings Australia Pty Ltd on 16 September 2012 for a period of 5 years. The licence covers 186 km² in the Dip Ranges and surrounds the Thomas Mountain Silica Mine within 23M2009 and RL1/2005.

The Thomas Mountain Mine contains significant resources of high-quality quartzite and frac sand located in the northern Dip Range about 25km south-west of Wynyard and 20km south-east of a deep-water harbour at Port Latta. Access is via the township of Montumana on the Bass Highway, 25km west of Wynyard, thence 6km south along Montumana and Newhaven roads to a turn-off just east of Hogarths Creek. The mine site is held within 23M/2009, covering an area of 2km² inside RL1/2005.

Exploration Licence 47/2011 covers outcrops of the Detention Quartzite and the Jacobs Quartzite of the Rocky Cape Group surrounding the Thomas Mountain Mine and the target of the exploration program is for any additional resources of silica, silica sand and quartzite for the chemical, metallurgical glass and coal seam methane industries.

A detailed program of foot traversing was carried out throughout the Licence area. No significant quartzite bodies were located but 5 samples of silica sand were collected for evaluation as potential additional sources of frac sand and full results are attached. Further evaluation of the frac sand potential is warranted.

2.0 GEOLOGY

Resources of high grade quartzite have been reported in various government publications as occurring within the Proterozoic rocks of north-west Tasmania. The better quartzite occurred within the Detention Quartzite and Jacob Quartzite sub-groups and rocks of these sub-groups underlie most of the licence area.

Gee (1971) described the Proterozoic sequence within the Rocky Cape Group from youngest to oldest as – the Jacob Quartzite (1,130m in thickness), the Irby Siltstone (760m) and the Detention Quartzite (1,400m). Gee suggested the Detention Quartzite contained about 10% siltstone in beds from a few metres to more than 80 metres in thickness while the Jacob Quartzite is a pure quartz sandstone and is the coarser grained of the two. The Rocky Cape Group, in turn, overlies the Cowrie Siltstone which was at least 2,400m in thickness.

Structurally, the Detention Quartzite and the Jacob Quartzite are folded into a tight series of anticlines and synclines with north-east trending and dipping axes with folds becoming overturned in the east resulting in north-west dipping beds at 45 degrees or above.

Gee (1971) described the quartzites as uniformly fine grained orthoquartzites with 99% quartz grains and a granular to glassy texture depending on the degree of cementation by silica. Turner (1989), on the other hand, preferred to call the mature, quartzose, sandy sediments quartz arenites and attributes their variable physical character as mostly due to variable silicification and occasionally to metamorphism.

3.0 CURRENT EXPLORATION.

The area was extensively traversed of foot by prospector, Mr Kevin Pinner, and much of the area was better exposed after recent bushfires, giving a much better look at the geology. No new significant quartzite deposits were identified but several new areas of frac sand were identified. Five samples were collected and these were forwarded to AMDEL for size analysis. Results are appended.

In general the sands are finer grained than the Thomas Mountain sand and as such would contain less of the -20 +40 size fraction that is most in demand. Roundness and chemical purity tests are ongoing.

4.0 EXPENDITURE

Expenditure on the Licence to date by Mineral Holdings Australia Pty Ltd has been \$8,312.48 but this does not include any time spent by Mr N Thomas or any other overheads. Expenditure for the next twelve months is expected to be in the order of \$10,000.

5.0 CONCLUSION

Several new sources of potential frac sand material have been identified and evaluation of the sand is continuing.

6.0 REFERENCES

Bacon, C.A. 1989. Silica. Mineral Resources Tasmania. 12.

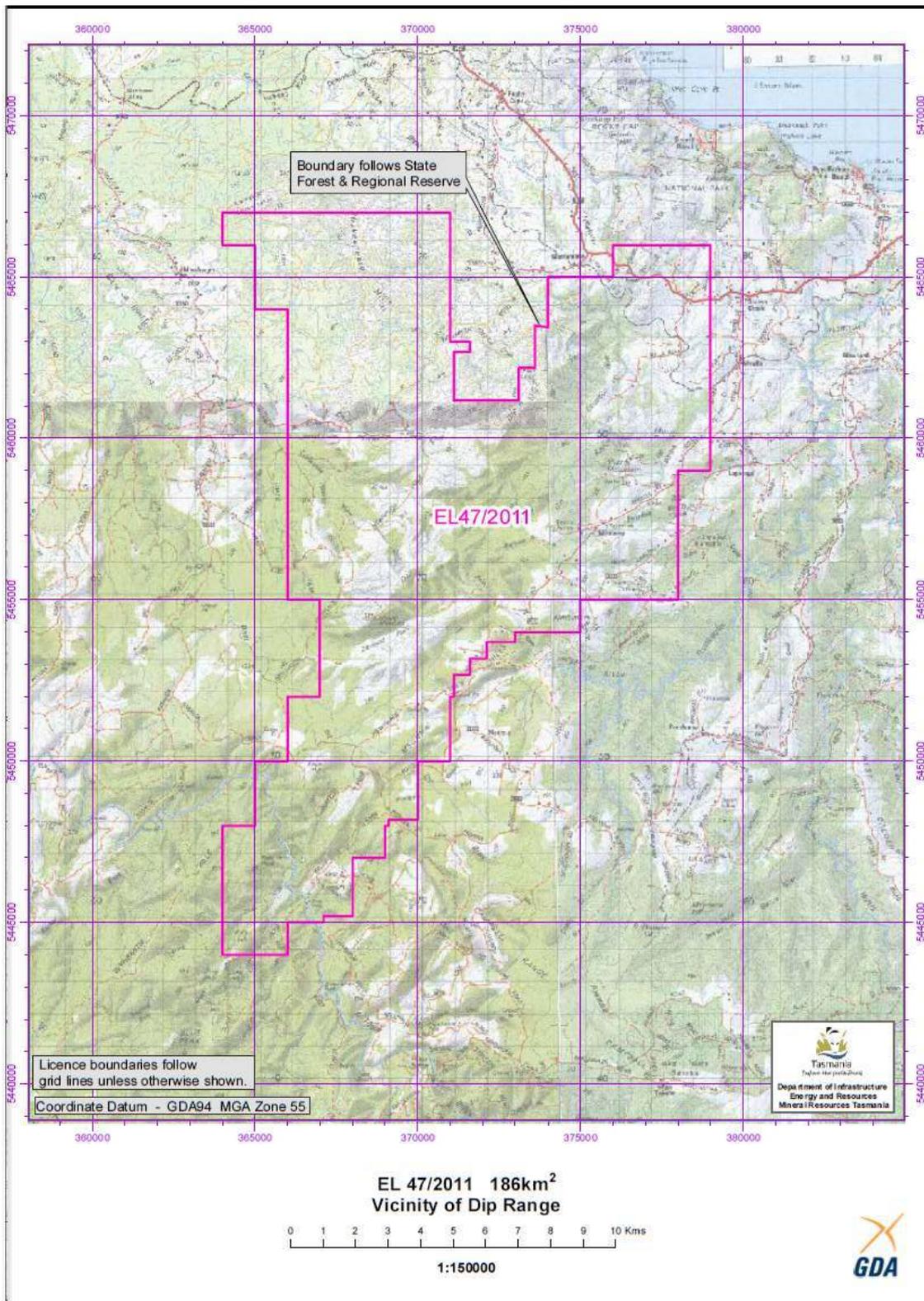
Gee, R.D, 1971. Table Cape, Tasmania. Tasmanian Geological Atlas 1 Mile Series Expl. Rep., Sheet 22 (8016S).

7.0 KEYWORDS

Dip Range, Thomas Mountain, Detention Subgroup, Jacob Quartzite, Rocky Cape Group, Frac Sand, Quartzite, Silica Resources.

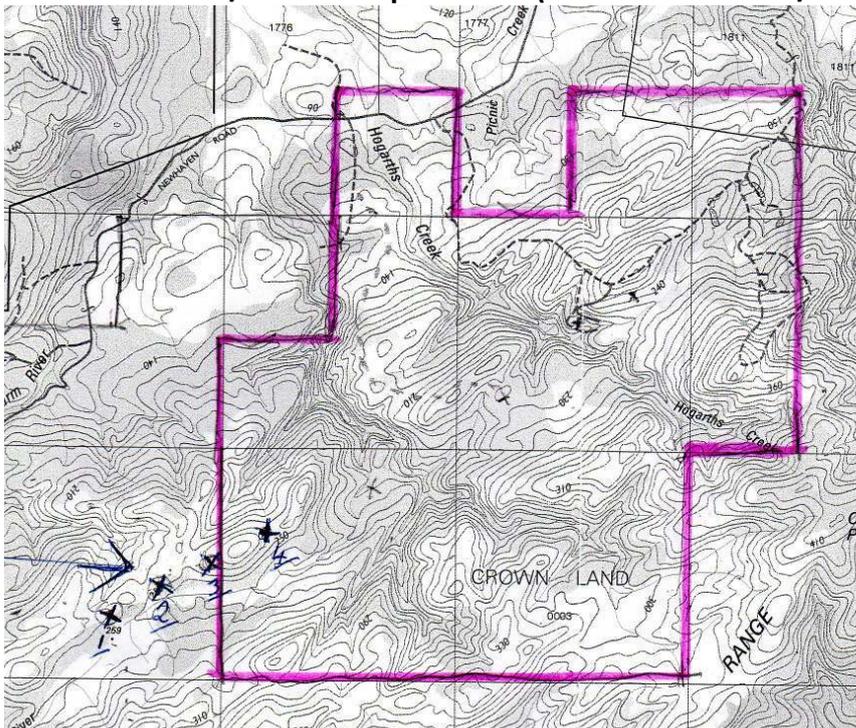


PLAN 1: Location Diagram - EL47/2011 Dip Range



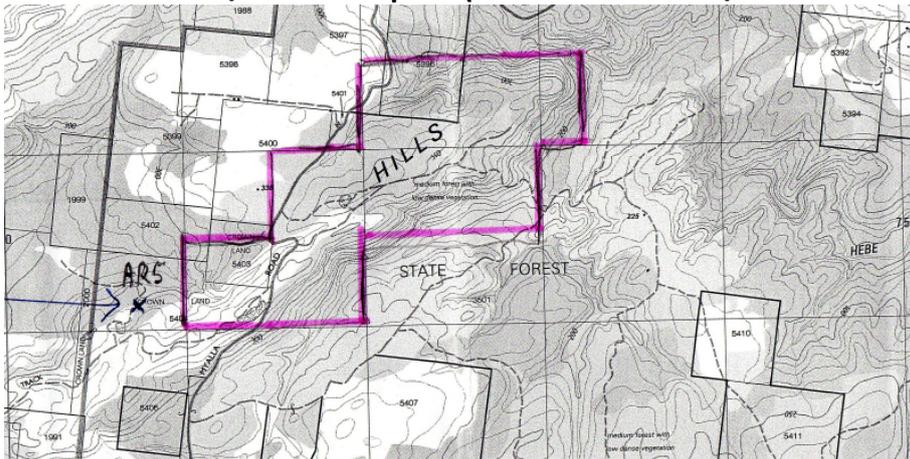
PLAN 2: Exploration Licence 47/2011 - Dip Range

DIP RANGE EL 47/2011 - Samples 1 to 4 (with outline of RL1/2005 – Hogarth Creek)



Sample locations	1	370,690 mE	1,461,430 mN
	2	370,820 mE	1,461,605 mN
	3	371,065 mE	1,461,630 mN
	4	371,290 mE	1,461,805 mN

DIP RANGE EL 47/2011 - Sample 5 (with outline of RL1/2001 – Meunna Hills)



Sample location	5	370,910 mE	1,452,415 mN
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PLAN 3: Sample Locations

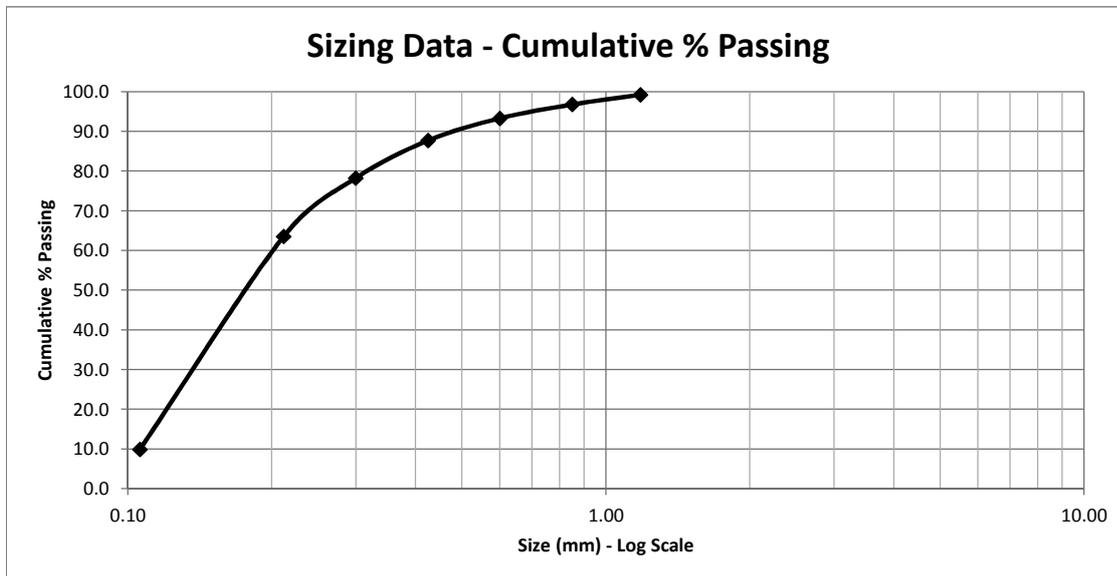
NOTE: Grid coordinates on these diagrams are AGD66 coordinates and sample locations are GDA94.

APPENDIX 1

Size Analysis of Samples from EL47/2011

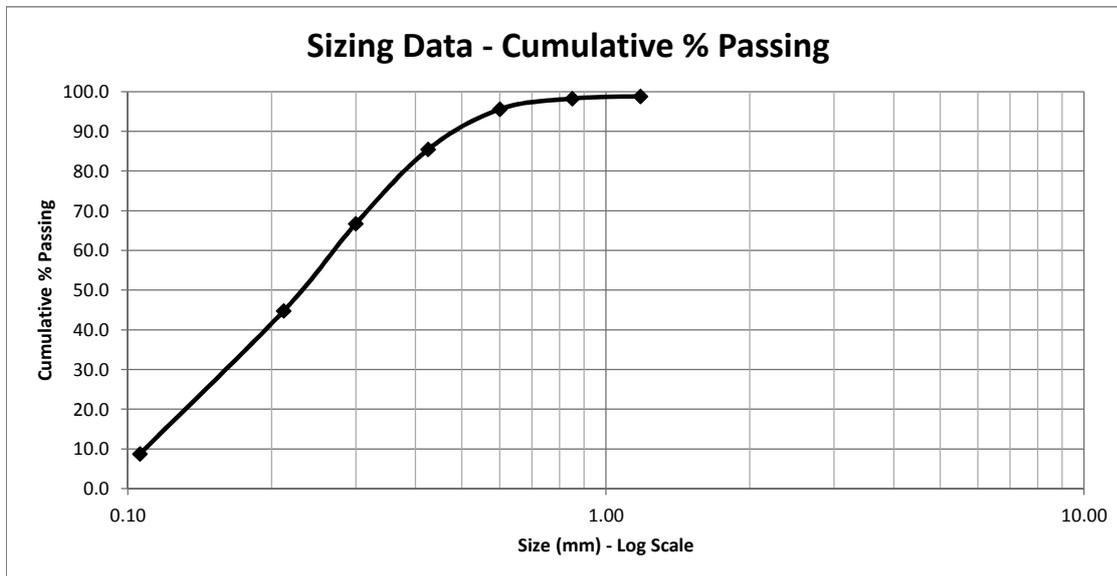
SIZE DISTRIBUTION

Test No		1		
Sample Tested		Alarm River 1		
SCREEN SIZING				
Sample Weight		585.50 g		
Screen Aperture	Weight Retained		Cumulative Weight	
mm	g	%	% Retained	% Passing
1.180	4.63	0.8	0.8	99.2
0.850	14.38	2.5	3.3	96.7
0.600	20.36	3.5	6.7	93.3
0.425	32.47	5.6	12.3	87.7
0.300	55.50	9.5	21.8	78.2
0.212	85.78	14.7	36.5	63.5
0.106	313.56	53.7	90.2	9.8
-0.106	57.51	9.8		
Total	584.19	100.0		
Wt Loss	1.31	0.22		
Printed 10/04/13		Comments:		
Job No. N5532CO13		d95 = 0.693 mm		
Technician BW		d80 = 0.317 mm		
Test Date 02/04/13		d50 = 0.177 mm		
File ref AR1		d10 = 0.106 mm		
		Version 5a		



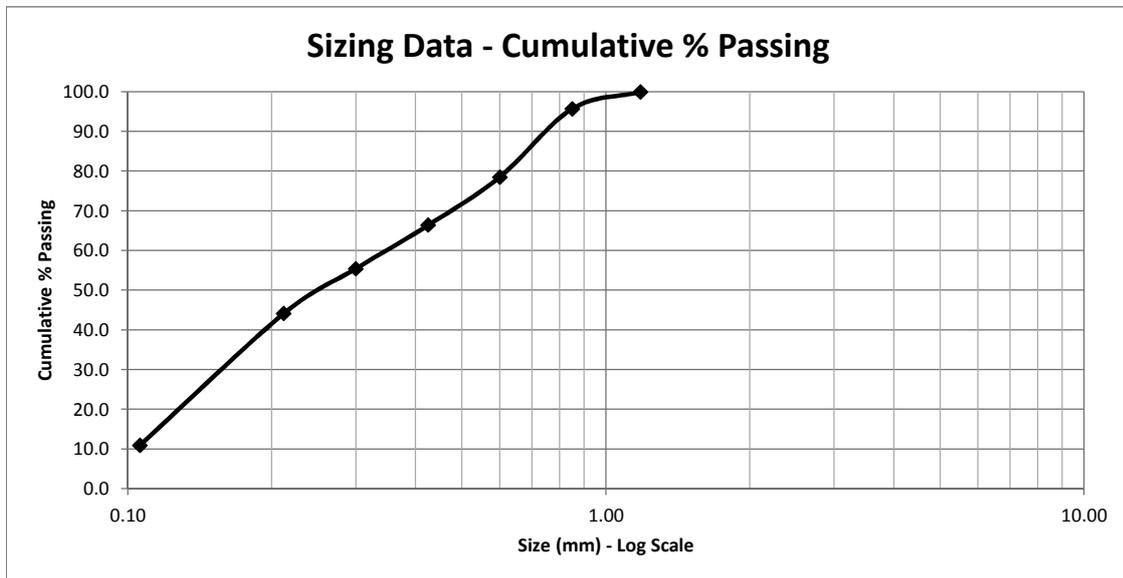
SIZE DISTRIBUTION

Test No	2			
Sample Tested	Alarm River 2			
SCREEN SIZING				
Sample Weight	250.89 g			
Screen Aperture	Weight Retained		Cumulative Weight	
mm	g	%	% Retained	% Passing
1.180	2.95	1.2	1.2	98.8
0.850	1.43	0.6	1.7	98.3
0.600	6.72	2.7	4.4	95.6
0.425	25.41	10.1	14.6	85.4
0.300	46.83	18.7	33.3	66.7
0.212	55.08	22.0	55.2	44.8
0.106	90.37	36.1	91.3	8.7
-0.106	21.85	8.7		
Total	250.64	100.0		
Wt Loss	0.25	0.10		
Printed	10/04/13	Comments:		
Job No.	N5532CO13	d95 = 0.580 mm		
Technician	WW	d80 = 0.374 mm		
Test Date	02/04/13	d50 = 0.228 mm		
File ref	AR2	d10 = 0.110 mm		
		Version 5a		



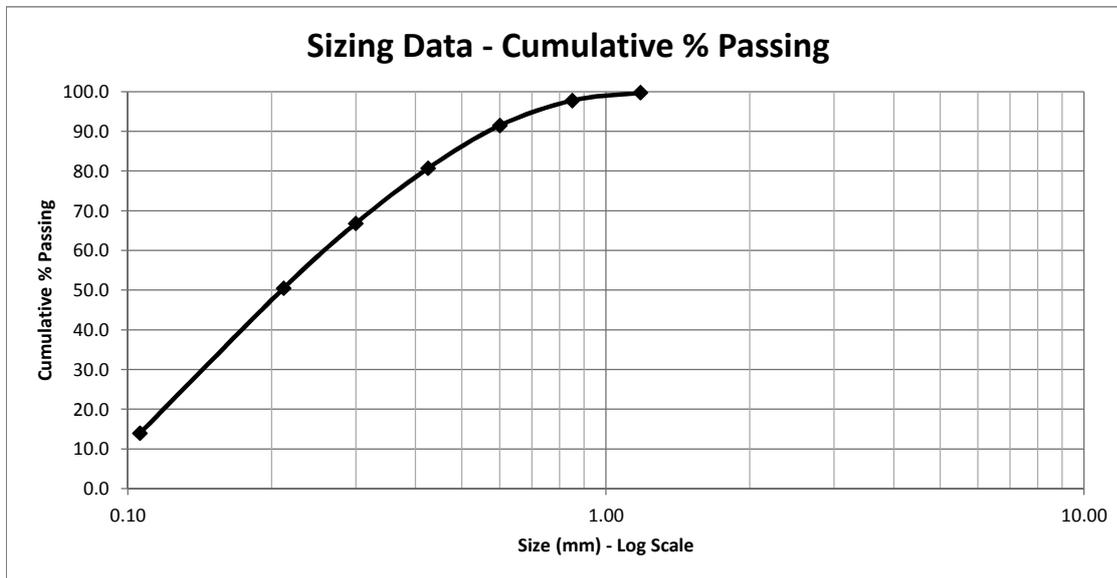
SIZE DISTRIBUTION

Test No	3			
Sample Tested	Alarm River 3			
SCREEN SIZING				
Sample Weight	253.96 g			
Screen Aperture	Weight Retained		Cumulative Weight	
mm	g	%	% Retained	% Passing
1.180	0.27	0.1	0.1	99.9
0.850	10.72	4.2	4.3	95.7
0.600	43.56	17.2	21.5	78.5
0.425	30.72	12.1	33.6	66.4
0.300	27.84	11.0	44.6	55.4
0.212	28.60	11.3	55.9	44.1
0.106	84.18	33.2	89.1	10.9
-0.106	27.56	10.9		
Total	253.45	100.0		
Wt Loss	0.51	0.20		
Printed	10/04/13	Comments:		
Job No.	N5532CO13	d95 = 0.825 mm		
Technician	WW	d80 = 0.610 mm		
Test Date	02/04/13	d50 = 0.253 mm		
File ref	AR3	d10 < 0.106 mm		
		Version 5a		



SIZE DISTRIBUTION

Test No	4			
Sample Tested	Alarm River 4			
SCREEN SIZING				
Sample Weight	253.93 g			
Screen Aperture	Weight Retained		Cumulative Weight	
mm	g	%	% Retained	% Passing
1.180	0.68	0.3	0.3	99.7
0.850	5.03	2.0	2.3	97.7
0.600	15.96	6.3	8.5	91.5
0.425	27.29	10.8	19.3	80.7
0.300	35.24	13.9	33.2	66.8
0.212	41.41	16.3	49.5	50.5
0.106	92.65	36.5	86.0	14.0
-0.106	35.42	14.0		
Total	253.68	100.0		
Wt Loss	0.25	0.10		
Printed	10/04/13	Comments:		
Job No.	N5532CO13	d95 = 0.691 mm		
Technician	WW	d80 = 0.416 mm		
Test Date	02/04/13	d50 = 0.210 mm		
File ref	AR4	d10 < 0.106 mm		
		Version 5a		



SIZE DISTRIBUTION

Test No	5			
Sample Tested	Alarm River 5			
SCREEN SIZING				
Sample Weight	251.51 g			
Screen Aperture	Weight Retained		Cumulative Weight	
mm	g	%	% Retained	% Passing
1.180	4.46	1.8	1.8	98.2
0.850	6.74	2.7	4.5	95.5
0.600	21.86	8.7	13.2	86.8
0.425	75.66	30.1	43.3	56.7
0.300	83.12	33.1	76.3	23.7
0.212	33.32	13.3	89.6	10.4
0.106	20.20	8.0	97.6	2.4
-0.106	6.00	2.4		
Total	251.36	100.0		
Wt Loss	0.15	0.06		
Printed	10/04/13	Comments:		
Job No.	N5532CO13	d95 = 0.820 mm		
Technician	WW	d80 = 0.535 mm		
Test Date	02/04/13	d50 = 0.394 mm		
File ref	AR5	d10 = 0.207 mm		
		Version 5a		

