Quest Rare Minerals Ltd.

QUEST RARE MINERALS CRACKS THE B-ZONE METALLURGICAL CODE, REPORTS REE RECOVERIES OF BETWEEN 77% AND 93%

Highlights:

- *Hazen Research successfully brings rare earths into solution from all grade categories of B-Zone mineralization without the need for a pre-concentration phase*
- *Strong REE recoveries of between 77% and 93% were obtained for all of the rare earths detected in the deposit*
- *The flow-sheet developed by Hazen uses an Acid-Bake procedure on the ground whole-ore which was found to greatly enhance the metal extractions obtained from the various metallurgical experiments*
- *Future work on the ore will focus on process optimization by reducing grind requirements, adjusting acid consumption and exposure time in the leach tanks and by exploring any potential benefits from a traditional concentration step*
- *Optimization work will result in developing the most cost-effective and efficient processing method for the B-Zone mineralization*

Toronto, August 12, 2010 - Quest Rare Minerals Ltd. (TSX-V : QRM) is pleased to announce that it has successfully developed a metallurgical process to bring the rare earths oxides and exotic metals from B-Zone deposit into solution at its Strange Lake project, Québec (*see* Figure 1, 2). Hazen Research, Inc. reports that the extraction of rare earths from the B-Zone, **between 77% and 93%**, are generally in excess of the extraction to solution reported for previous metallurgical work conducted by the Iron Ore Company of Canada (IOC, 1985) and Mitsui Mining & Smelting (1996) on the historical Main Zone deposit to the southeast. The ultimate process flow-sheet developed from Hazen Research's work will be applied to pilot mill studies on a 20-50 tonne bulk sample to be collected from the B-Zone this summer.

"We are most satisfied with the success that Hazen has had in liberating the rare earths from B-Zone mineralization," stated Peter J. Cashin, President & CEO of Quest. "The flow-sheet appears to be equally successful in processing all grades of mineralization that Quest provided for this metallurgical test. Equally encouraging is the fact that the mineralization can be processed without the need of expensive concentrator technology in the ultimate mill design for the deposit. Hazen will now look at optimizing the process flow-sheet in order to reduce grinding requirements on the mineralization, reduce sulphuric acid addition to the mill feed in the leach phase and to increase leach times in an effort to further improve REE recoveries and ultimately, optimize recovery costs."

Metallurgical Test Results

Table 1 below is a compilation of experiments conducted on the various grades of mineralization recorded for the B-Zone. Variations of acid concentration, grind size and ore grade were tested to observe their effect on rare earth and rare metal recovery from the mineralized samples. In general, un-reacted zircon in the leach residues, including the acid bake residues, is believed to have accounted for the majority of the unrecovered rare earths and rare metals in the metallurgical test. A detailed listing of metal recoveries by

the various experiments is listed in Table 2. The best recoveries were obtained from the whole-ore acid-bake experiments without the need of pre-concentration methods at the finest grind (experiment 3316-47) which **recorded recoveries of 92% for neodymium (Nd), 87% for yttrium (Y), 89% cerium (Ce), 93% gadolinium and europium (Gd, Eu), 92% terbium (Tb), 90% dysprosium (Dy), 88% for holmium (Ho), 78% for thulium (Tm), 83% erbium (Er) and 77% for ytterbium and lutetium (Yb, Lu).**

"The Hazen work has pointed out a pathway to open up the exotic metal-bearing minerals observed in the B-Zone and it appears that the acid bake procedure effectively cracks the high grade, medium-grade and low-grade of mineralization used in the Hazen test work," said Joseph M. Keane, P.Eng., Quest's consulting metallurgical engineer. "Down the road, procedures for separating the dissolved metals to produce marketable products will need to be addressed. Optimization studies directed to grind size, acid addition regime, acid consumption and heat requirements are indicated for future investigation."

Metallurgical Test Procedure

In January 2010, Hazen Research, Inc. received a one-tonne bulk sample obtained from core-drilling representative of the surface exposure of the B-Zone REE deposit discovered by Quest (*see* Press Release : November 19, 2009). The sample was separated into three mineralization types, designated high-grade, low-grade (mid-grade) and altered (low-grade) and treated separately by Hazen. Following crushing and grinding, the high-grade sample was subjected to several benefication (pre-concentration) methods. The sample was evaluated using gravity (heavy-liquid) separation, froth floatation, shaking table, centrifugal separation and magnetic separation. The magnetic separation method was the only procedure that eliminated mass (45%) with minimal rare earth losses (4-6%). The REE losses for the remaining pre-concentration methods outlined above were deemed unacceptable. An additional a series of experiments on the high-grade mineralization revealed that the REE could be effectively liberated by acid leaching of the whole-ore without the need of pre-concentration. In addition, the discovery that the REE recoveries could be further improved by applying an acid-bake step to the leach experiments was subsequently made. The acid-bake procedure is explained below.

In an acid bake process (*see* Figure 3), pulverized feed material (ore or concentrate) is mixed usually at room temperature with concentrated sulfuric acid. The mixing must be prompt and intimate so that all of the solid particles are wetted by the sulfuric acid. The resulting mass has the appearance of a moist cake or it can be a paste. The test flow-sheet requires that a 25-50 g sample of material be finely ground (minus 13, 74 and 149 microns), then prepared and sent to a Teflon leach flask containing 350 kg of sulphuric acid (H_2SO_4) per tonne of mineralization equivalent and heated to 80^0C. Once in solution, the leached material is exposed to an acid-bake procedure in an open vessel at high acid concentrations and heated to 225^0C for one hour. This step was immediately followed by a two-hour leach at 80^0 C and 5% H_2SO_4. The leach liquor is sent for analyses of rare earths as well as zirconium (Zr), hafnium (Hf), niobium (Nb), thorium (Th) and beryllium (Be). In addition, once cooled, the leach residues are exposed to mild H_2SO_4 at 10% solids at 80^0C and then dried. The residue solids are then recorded for mass and sent for chemical analyses.

Future avenues of investigation by Hazen are to review and test mill throughput with the application of magnetic separation pre-concentration of rare earths from the B-Zone, to reduce acid consumption in the metallurgical practice, increase the grind size of the subsequent samples tested and to improve recoveries of Zr as a means of improving REE recovery in the test work.

Quality Control

Mr. Peter Cashin, P. Geo., is the qualified person on the Strange Lake Project under National Instrument 43-101 and was responsible for this news release and has approved the disclosure of the technical information contained herein.

Joseph M. Keane, P.Eng, of Keane Mineral Engineering LLC, Tucson, Arizona, is the qualified metallurgical engineer for the project and has reviewed and approved the metallurgical disclosures presented in this release.

About Quest Rare Minerals

Quest Rare Minerals Ltd. is a Canadian-based, exploration company focused on the identification and discovery of new world-class Rare Earth deposit opportunities. The Corporation is publicly-listed on the TSX Venture Exchange as "QRM" and is led by a highly-respected management and technical team with a proven mine-finding track record. Quest is currently advancing several high-potential projects in Canada's premier exploration areas: the Strange Lake and Misery Lake areas of northeastern Québec, the Kenora area of northwestern Ontario and the Plaster Rock area of northwestern New Brunswick. Quest's 2009 exploration led to the discovery of a significant new Rare Earth metal deposit, the B-Zone, on its Strange Lake property in northeastern Québec. The Corporation recently filed a 43-101 Inferred Resource Estimate on the B-Zone deposit and is awaiting the results of a Preliminary Economic Assessment (PEA) for the B-Zone deposit from Wardrop, A Tetra Tech Company, of Toronto, Ontario. In addition, Quest announced the discovery of an important new area of REE mineralization on its Misery Lake project, approximately 120 km south of Strange Lake project. Quest continues to pursue high-value project opportunities throughout North America.

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Figure 1 – Property Location Map, Quest Rare Earth Projects, Québec and Labrador

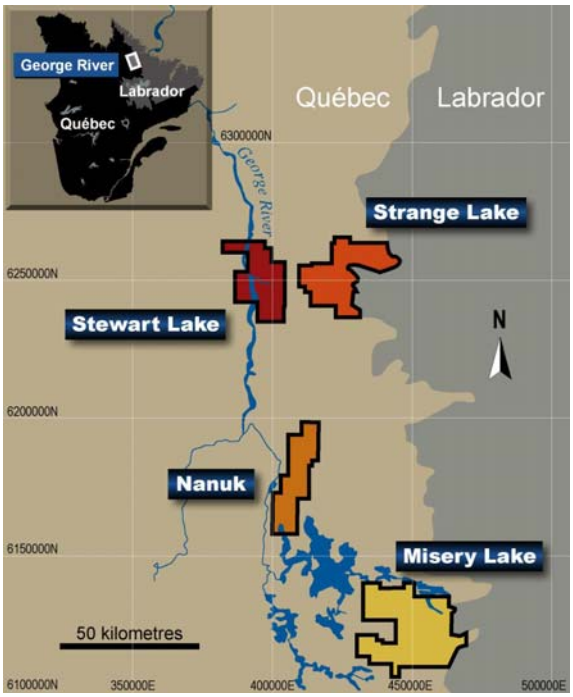

Figure 2 – Claim Location Map, Strange Lake Project, Québec and Labrador

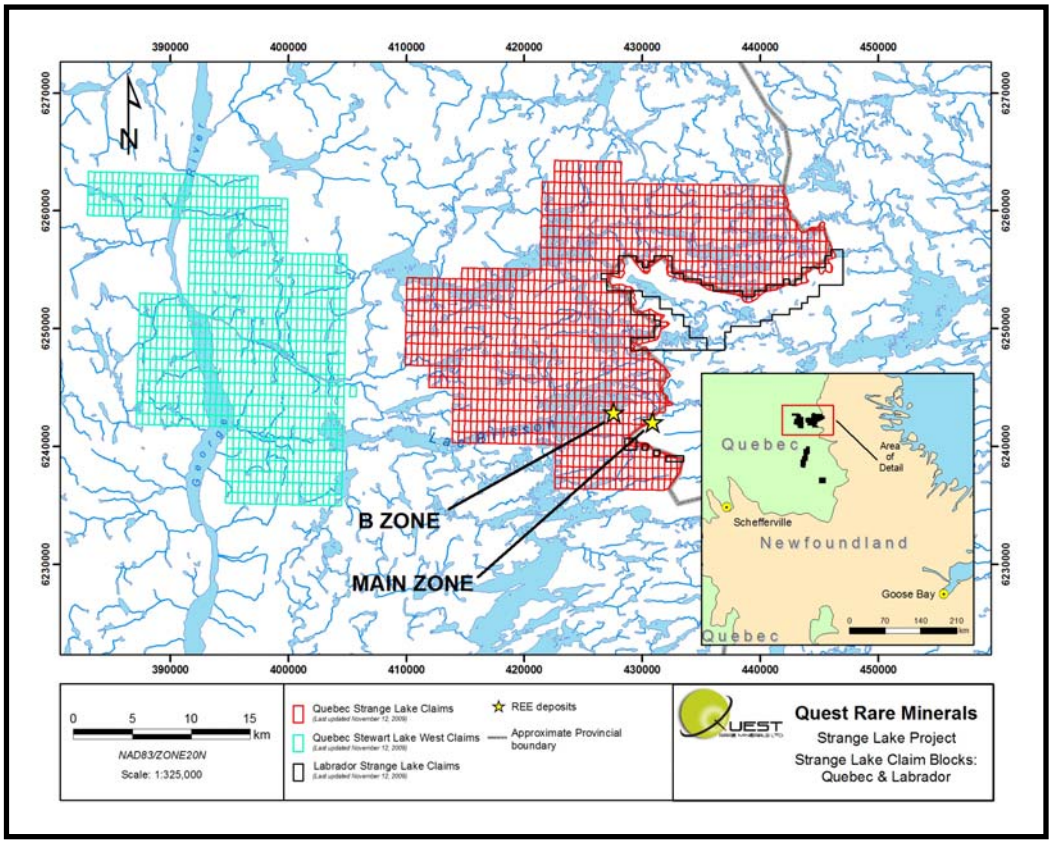

Figure 3 – B-Zone Metallurgical Flow-Sheet, Hazen Research, Inc.

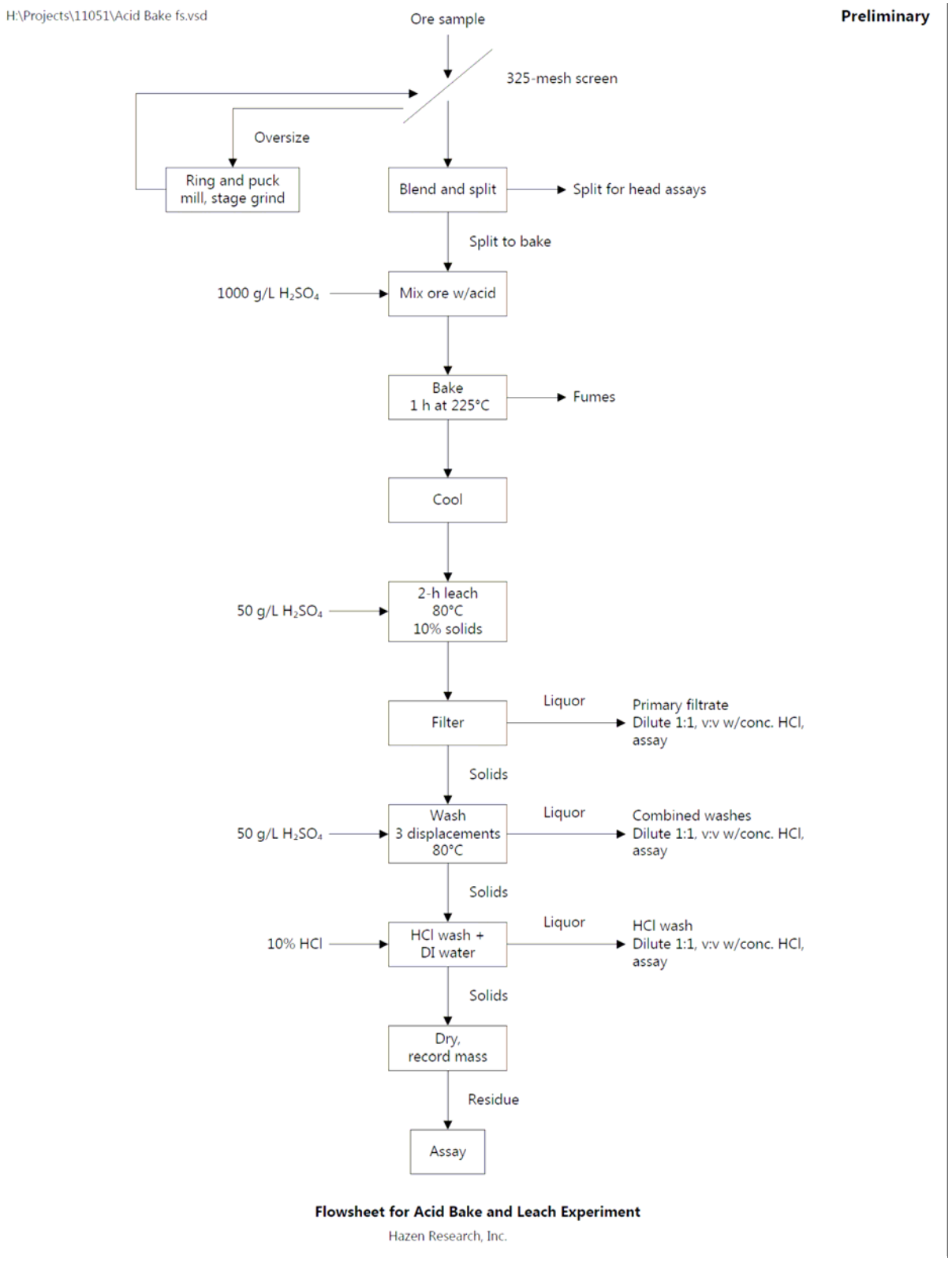

Table 1 – Compilation of Test Parameters and Selected Recovery Results, B-Zone Metallurgical Test, Hazen Research, Inc.

Rare Earth Acid Bake–Leach Summary
Project 11051

Notebook Number	Feed		H_2SO_4 Added, kg/t feed	Particle Size	12-h PF, mg/L					12-h Acid Washes, mg/L					Residue, %					Recoveries (solids basis), %				
	ID	Description			Y	Ce	Zr	Th	Be	Y	Ce	Zr	Th	Be	Y	Ce	Zr	Th	Be	Y	Ce	Zr	Th	Be
220°C, 1-h acid bake (after fumes started) with 350 kg/t H_2SO_4, followed by 2-h dilute H_2SO_4 leach																								
3316-33	HRI 52326-1	High-grade ore	866	P_{95} = 13 µm	432	310	1488	72	58	100	50	238	11	9	0.109	0.0574	1.39	0.0013	0.0201	**83**	**84**	53	98	76
3316-47	HRI 52326-1	High-grade ore	756	P_{95} = 13 µm	636	436	2260	98	80	92	50	218	10	7	0.084	0.0396	1.22	0.0012	0.0188	**87**	**89**	59	98	78
3316-56	HRI 52326-1	High-grade ore	707	P_{100} = 74 µm	536	352	1782	118	70	68	42	174	12	7	0.172	0.133	1.88	0.0027	0.0262	**72**	**62**	33	96	68
3316-62	3234-50-1	High-grade ore	752	P_{100} = 149 µm	590	352	1804	64	70	42	22	86	3	3	0.081	0.0356	1.12	0.0008	0.0165	**79**	**84**	38	98	68
3316-59	HRI 52327-1	Low-grade ore	749	P_{95} = 23 µm	240	332	1416	52	34	48	54	170	8	4	0.069	0.0259	1.10	0.0007	0.0035	**73**	**90**	41	98	88
3316-53	HRI 52328-1	Altered ore	783	P_{95} = 24 µm	162	310	1264	36	28	34	42	132	6	2	0.049	0.0357	0.63	0.0007	0.0021	**73**	**87**	53	98	91

HRI 52326-1 (high-grade crude ore): 0.5160% Y, 0.293% Ce, 2.385% Zr, 0.0563% Th, 0.069% Be

3234-50-1: HRI 52326-1 (high-grade crude ore) ground to minus 149 µm

HRI 52327-1 (low-grade ore): 0.2428% Y, 0.242% Ce, 1.744% Zr, 0.0351% Th, 0.0264% Be

HRI 52328-1 (altered ore): 0.1589% Y, 0.238% Ce, 1.183% Zr, 0.0290% Th, 0.0206% Be

Table 2 – Detailed REE Recovery Summary of B-Zone Metallurgical Test Results, Hazen Research, Inc.

Rare Earth Acid Bake–Leach Summary

Project 11051

Notebook Number	Feed		H_2SO_4 Added, kg/t feed	Particle Size	% Recoveries (solids basis)																
	ID	Description			Y	Ce	La	Sm	Nd	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Zr	Th	Be	Nb
220°C, 1-h acid bake (after fumes started) with 350 kg/t H_2SO_4, followed by 2-h dilute H_2SO_4 leach																						
3316-33	HRI 52326-1	High-grade ore	866	P_{95} = 13 µm	83	84	Not Analysed	Not Analysed	90	92	91	91	88	85	79	75	72	73	53	98	76	NA
3316-47	**HRI 52326-1**	**High-grade ore**	**756**	**P_{95} = 13 µm**	**87**	**89**			**92**	**93**	**93**	**92**	**90**	**88**	**83**	**78**	**77**	**77**	59	98	78	89
3316-56	HRI 52326-1	High-grade ore	707	P_{100} = 74 µm	72	62			71	81	79	78	76	70	61	55	50	52	33	96	68	52
3316-62	3234-50-1	High-grade ore	752	P_{100} = 149 µm	79	84			85	88	85	84	81	75	68	60	55	54	38	98	68	89
3316-59	HRI 52327-1	Low-grade ore	749	P_{95} = 23 µm	73	90			92	85	86	83	79	74	67	57	53	57	41	98	88	87
3316-53	HRI 52328-1	Altered ore	783	P_{95} = 24 µm	73	87			90	86	85	86	82	78	72	67	65	70	53	98	91	73

Crude Ore Head Grades:

HRI 52326-1 (high-grade crude ore): 0.5160% Y, 0.293% Ce, 2.385% Zr, 0.056% Th, 0.069% Be, 0.002% Eu, 0.041% Gd, 0.010% Tb, 0.078% Dy, 0.018% Ho, 0.06% Er, 0.010% Tm, 0.070% Yb, 0.011% Lu, 0.119% Nd, 0.317% Nb

HRI 52327-1 (low-grade ore): 0.243% Y, 0.242% Ce, 1.744% Zr, 0.035% Th, 0.026% Be, 0.001% Eu, 0.023% Gd, 0.005% Tb, 0.040% Dy, 0.010% Ho, 0.032% Er, 0.005% Tm, 0.035% Tb, 0.006% Lu, 0.100% Nd, 0.206% Nb

HRI 52328-1 (altered ore): 0.159% Y, 0.238% Ce, 1.183% Zr, 0.029% Th, 0.021% Be, 0.001% Eu, 0.021% Gd, 0.004% Tb, 0.030% Dy, 0.007% Ho, 0.020% Er, 0.003% Tm, 0.019% Yb, 0.003% Lu, 0.106% Nd, 0.106% Nb