504138963 12/09/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ROBERT J. BRAUN	12/17/2015
ROBERT J. KEE	12/17/2015
SCOTT BARNETT	12/17/2015

RECEIVING PARTY DATA

Name:	COLORADO SCHOOL OF MINES
Street Address:	1500 ILLINOIS STREET
City:	GOLDEN
State/Country:	COLORADO
Postal Code:	80401

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	13544468
Application Number:	13432219

CORRESPONDENCE DATA

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Email: rreil@sheridanross.com **Correspondent Name:** SHERIDAN ROSS P.C.

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ATTORNEY DOCKET NUMBER: 4843-63; 4843-63-CIP NAME OF SUBMITTER: HIWOT M. COVELL **SIGNATURE:** /Hiwot M. Covell/ **DATE SIGNED:** 12/09/2016

Total Attachments: 3

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> **PATENT REEL: 040700 FRAME: 0993** 504138963

Atty. Docket No.: 4843-63-CIP 4843-63

Worldwide Assignment

WHEREAS, we, Robert J. Braun, Robert J. Kee and Scott Barnett, have made an invention entitled High-Efficiency, Reversible Flow Battery System for Energy Storage for which we have filed an application for Letters Patent of the United States on July 20, 2012, under Application No. 13/554,468 and an invention entitled High-Efficiency, Reversible Flow Battery System for Energy Storage for which we have filed an application for Letters Patent of the United States on March 28, 2012, under Application No. 13/432,219; and (collectively "applications")

WHEREAS, Colorado School of Mines ("ASSIGNEE"), a corporation or other business entity duly registered in the State of Colorado, whose postal address is 1500 Illinois Street, Golden, CO 80401, desires to acquire the entire right, title, and interest in and to the invention, the applications, and any Letters Patents to be granted for the invention in the United States and in all foreign countries;

NOW, THEREFORE, for and in consideration of certain good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, we have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto ASSIGNEE, its successors, legal representatives, and assigns, the entire right, title, and interest in and to the invention, the applications, all applications claiming benefit of the applications, including, but not limited to, all divisions and continuations of the applications, and all Letters Patent that may be granted thereon in the United States, Canada and in all foreign countries, and all reissues thereof, together with the right to claim priority under the International Convention in all member countries; and we authorize and request the Director of Patents and Trademarks to issue all Letters Patent for the invention to ASSIGNEE, its successors, legal representatives, and assigns in accordance with the terms of this Assignment;

AND we covenant and agree that we have the full right to convey the entire right, title, and interest herein assigned and that we have not executed and will not execute any assignment or other instrument in conflict with this Assignment;

AND we further covenant and agree that upon request by ASSIGNEE, its successors, legal representatives, and/or assigns, and without further consideration, we will do all lawful acts that may be necessary or desirable to assist ASSIGNEE, its successors, legal representatives, and/or assigns to obtain and enforce patent protection for the invention in the United States and in all foreign countries, including, but not limited to, communicate with ASSIGNEE, its successors, legal representatives, and/or assigns any facts known to us regarding the invention, testify in any legal proceeding, sign all lawful papers, execute and deliver all papers that may be necessary or desirable to perfect the title to the invention in ASSIGNEE, its successors, legal representatives, and/or assigns, execute all divisional, continuation, and reissue applications, and make all rightful oaths, it being understood that any expense incident to the rendering of such assistance will be borne by ASSIGNEE, its successors, legal representatives, and/or assigns;

AND we further hereby authorize ASSIGNEE, or its attorneys or agents, to insert the correct Application Numbers and filing dates into this Assignment, if none is indicated on that date of our execution of this agreement;

AND we have reviewed and understand the contents of the applications, including the claims thereof, which may have been amended by a preliminary amendment filed with the applications or which is contemplated; we affirm that the above-identified applications were made or authorized to be made by me; we acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior applications and the national or PCT international filing date of the continuation-in-part applications; and we hereby acknowledge that any willful false statement regarding inventorship of these applications is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Atty. Docket No.: 4843-63-CIP 4843-63

IN WITNESS WHEREOF, We have executed this Assignment on the date(s) indicated below.

Signature:	Signature:
Full Name: Robert J. Braun Address:	Full Name: Robert J. Kee Address:
Signature: Scott Barnett Address:	

Atty. Docket No.: 4843-63-CIP

4843-63

IN WITNESS WHEREOF, We have executed this Assignment on the date(s) indicated below.

Signature: Physica Date: 12/17/15 Full Name: Robert J. Braun Address: 8320 Coors 5-1 Arvada CO 80005	Signature: 12/17/15 Date: 12/17/15 Full Name: Robert J. Kee Address: 14527 W. 57 Place Avvada; (0 80002
Signature:	
Date:	
Full Name: Scott Barnett	
Address:	