505168382 10/31/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RYAN FALCONE HESS	08/21/2018
AVERY TED CASHION IV	06/05/2018
WILLIAM CORBIN	06/20/2018
SASHA EGAN	06/05/2018

RECEIVING PARTY DATA

Name:	NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC		
Street Address:	P.O. BOX 5800, MS-0161		
City:	ALBUQUERQUE		
State/Country:	NEW MEXICO		
Postal Code:	87185		

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15889118	

CORRESPONDENCE DATA

Fax Number: (505)844-9955

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 505-844-7283 Email: dcates@sandia.gov

SANDIA NATIONAL LABORATORIES Correspondent Name:

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Address Line 4: ALBUQUERQUE, NEW MEXICO 87185

ATTORNEY DOCKET NUMBER:	SD13939.1/S144811
NAME OF SUBMITTER:	DIANA SCHANNING
SIGNATURE:	/Diana Schanning/
DATE SIGNED:	10/31/2018

Total Attachments: 5

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PATENT REEL: 047368 FRAME: 0627 505168382

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PATENT REEL: 047368 FRAME: 0628

ASSIGNMENT

WHEREAS Grzegorz Cieslewski of Sandia Park, NM, Xuhua Gao of Stanford, CA, Ryan Falcone Hess, Avery T. Cashion, William Corbin, of Albuquerque, NM, Sasha Egan of Belen, NM, Roland N. Horne, of Stanford, CA (hereinafter "Inventor(s)") has(have) made an invention relating to SYSTEMS, METHODS AND TOOLS FOR SUBTERRANEAN ELECTROCHEMICAL CHARACTERIZATION AND ENTHALPY MEASUREMENT IN GEOTHERMAL RESERVOIRS in the course of the work authorized by Contract DENA0003525 between NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC ("NTESS") and the UNITED STATES DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION ("DOE/NNSA"), said invention being disclosed and claimed in Application Serial No. 15/889,188 for United States patent, filed February 5, 2018 and identified as DOE/NNSA Docket No: S-144811 duly executed by said inventor(s); and

WHEREAS Inventor(s), in consideration of employment by NTESS, has(have) assigned to NTESS, its successors and assigns, all of Inventor(s) rights to inventions, discoveries, or improvements made or conceived in the course of their employment; and

WHEREAS, title to the above-identified invention yests in the Government of the United States, as represented by DOE/NNSA, as governed by 42 U.S.C. 5908; and

WHEREAS, the Government of the United States, as represented by DOE/NNSA has granted a waiver of Government rights in the above-identified invention to NTESS; and

THEREFORE, Inventor(s) hereby sells, assigns, and transfers unto NTESS their entire right, title, and interest in and to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, and in and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, utilities, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said invention in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent, to the extent that Inventor(s) right, title, and interest in and to said invention has(have) not already been sold, assigned, or transferred to NTESS Corporation by Inventor(s) in consideration of Inventor(s) employment by NTESS. Inventor(s) hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to NTESS, for its interest as NTESS, its successors and assigns.

Inventor(s) covenants with NTESS that, except for the rights, if any, of the Government, his/her interest in the rights and property herein conveyed is free and clear of any encumbrance and that they

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have full right to convey the same as herein expressed. Inventor(s) agrees, at the request of NTESS, to make, execute, and deliver to NTESS, the Government, or other party prosecuting patent applications on this invention, any and all papers, documents, affidavits, applications, statements or other instruments relating to said invention, take all rightful oaths and do all acts as may reasonably be required of them in or incident to the prosecution of any or all U.S. and foreign applications on said invention or in the adjustment or settlement of any interferences or other actions or proceedings that said applications or patents thereon may encounter or in which they may become involved.

Signed at Albuquerque, New Mexico.

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William Corbin

Sasha Kgan

06/05/18

Date

06/30/

Date

06/05/18

Date

STATE OF NEW MEXICO

) ss:

COUNTY OF BERNALILLO)

On the above dates, personally appeared before me, Diana Schanning, Notary Public, Avery Ted Cashion IV, William Corbin and Sasha Egan, to me known to be the individual(s) described in and who executed the foregoing instrument, and who acknowledged to me that they executed the same.

Don Shotary Public



Approved and consented by:

Approved and consented by:

NATIONAL ENGINEERING

TECHNOLOGY SOLUTIONS

& OF

SANDIA, LLC

Date: <u>0/25//6</u>5

Kerry Kampschmidt

Chief IP Counsel

Legal Technology Transfer Center

STATE OF NEW MEXICO)

) ss:

COUNTY OF BERNALILLO)

On the above date, personally appeared before me, Diana Schanning, Notary Public, **Kerry Kampschmidt**, to me known to be the individual described in and who executed the foregoing instrument, and who acknowledged to me that he executed the same.

Notary Public

OFFICIAL SEA...
Diana Schanning
NOTARY PUBLIC
STATE OF NEW MEXICO

ASSIGNMENT

WHEREAS Grzegorz Cieslewski of Sandia Park, NM, Xuhua Gao of Stanford, CA, Ryan Falcone Hess, Avery T. Cashion, William Corbin, of Albuquerque, NM, Sasha Egan of Belen, NM, Roland N. Horne, of Stanford, CA (hereinafter "inventor(s)") has(have) made an invention relating to SYSTEMS, METHODS AND TOOLS FOR SUBTERRANEAN ELECTROCHEMICAL CHARACTERIZATION AND ENTHALPY MEASUREMENT IN GEOTHERMAL RESERVOIRS in the course of the work authorized by Contract DENA000352S between NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC ("NTESS") and the UNITED STATES DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION ("DOE/NNSA"), said invention being disclosed and claimed in Application Serial No. 15/889,188 for United States patent, filed February 5, 2018 and identified as DOE/NNSA Docket No. S-144811 duly executed by said inventor(s); and

WHEREAS Inventor(s), in consideration of employment by NTESS, has(have) assigned to NTESS, its successors and assigns, all of inventor(s) rights to inventions, discoveries, or improvements made or conceived in the course of their employment; and

WHEREAS, title to the above-identified invention vests in the Government of the United States, as represented by DOE/NNSA, as governed by 42 U.S.C. 5908; and

WHEREAS, the Government of the United States, as represented by DOE/NNSA has granted a waiver of Government rights in the above-identified invention to NTESS; and

THEREFORE, Inventor(s) hereby sells, assigns, and transfers unto NTESS their entire right, title, and interest in and to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, and in and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, utilities, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said invention in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent, to the extent that Inventor(s) right, title, and interest in and to said invention has(have) not already been sold, assigned, or transferred to NTESS Corporation by Inventor(s) in consideration of Inventor(s) employment by NTESS. Inventor(s) hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to NTESS, for its interest as NTESS, its successors and assigns.

Inventor(s) covenants with NTESS that, except for the rights, if any, of the Government, his/her interest in the rights and property herein conveyed is free and clear of any encumbrance and that they have full right to convey the same as herein expressed. Inventor(s) agrees, at the request of NTESS, to make, execute, and deliver to NTESS, the Government, or other party prosecuting patent applications on this invention, any and all papers, documents, affidavits, applications, statements or other instruments relating to said invention, take all rightful oaths and do all acts as may reasonably be required of them in or incident to the prosecution of any or all U.S. and foreign applications on said invention or in the adjustment or settlement of any interferences or other actions or proceedings that said applications or patents thereon may encounter or in which they may become involved.

Ryan Hess

3/21/2018

Approved and consented by:

Date: 8/2//4

NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC

Kerry Kampschmidt Chief IP Counsel

Legal Technology Transfer Center

STATE OF NEW MEXICO)
) ss:

COUNTY OF BERNALILLO)

On the above date, personally appeared before me, Diana Schanning, Notary Public, **Kerry Kampschmidt**, to me known to be the individual described in and who executed the foregoing instrument, and who acknowledged to me that he executed the same.

Diany Public



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