

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5807017

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY AGREEMENT
CONVEYING PARTY DATA	
Name	Execution Date
APERGY ESP SYSTEMS, LLC	11/01/2019
APERGY BMCS ACQUISITION CORP.	11/01/2019
PCS FERGUSON, INC.	11/01/2019
QUARTZDYNE, INC.	11/01/2019
THETA OILFIELD SERVICES, INC.	11/01/2019
US SYNTHETIC CORPORATION	11/01/2019
WINDROCK, INC.	11/01/2019
RECEIVING PARTY DATA	
Name:	JPMORGAN CHASE BANK, N.A.
Street Address:	CIB DMO WLO, MAIL CODE NY1-C413, 4 CMC
City:	BROOKLYN
State/Country:	NEW YORK
Postal Code:	11245-0001
PROPERTY NUMBERS Total: 98	
Property Type	Number
Application Number:	15470503
Application Number:	15466253
Application Number:	16018645
Application Number:	29161710
Application Number:	29177071
Application Number:	29177084
Application Number:	12025465
Application Number:	12849496
Application Number:	15634738
Application Number:	16221843
Application Number:	15954804
Application Number:	12234068
Application Number:	11247717
Application Number:	13035645

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Property Type	Number
Application Number:	14067831
Application Number:	14614332
Application Number:	14197891
Application Number:	14244461
Application Number:	14267764
Application Number:	14486637
Application Number:	14494397
Application Number:	14517729
Application Number:	14546544
Application Number:	14588777
Application Number:	14621019
Application Number:	14627966
Application Number:	14740737
Application Number:	14811699
Application Number:	14848301
Application Number:	14956089
Application Number:	14987440
Application Number:	15135304
Application Number:	15181124
Application Number:	15250363
Application Number:	15356994
Application Number:	15402462
Application Number:	15480836
Application Number:	15950998
Application Number:	15972993
Application Number:	16008935
Application Number:	16017657
Application Number:	16020751
Application Number:	16034020
Application Number:	16039747
Application Number:	16084469
Application Number:	16133643
Application Number:	16144541
Application Number:	16159500
Application Number:	16175367
Application Number:	16175419
Application Number:	16211734
Application Number:	16221115

Property Type	Number
Application Number:	16238454
Application Number:	16240591
Application Number:	16254109
Application Number:	16263694
Application Number:	16269859
Application Number:	16291892
Application Number:	16358281
Application Number:	16374745
Application Number:	16376606
Application Number:	16385262
Application Number:	16390823
Application Number:	16393603
Application Number:	16406673
Application Number:	16414604
Application Number:	16430891
Application Number:	16445439
Application Number:	16513005
Application Number:	16518049
Application Number:	16526387
Application Number:	16527303
Application Number:	16527620
Application Number:	16529176
Application Number:	16536821
Application Number:	16550843
Application Number:	16551674
Application Number:	16552747
Application Number:	16566435
Application Number:	16571664
Application Number:	29626328
Application Number:	29660512
Application Number:	29676553
Application Number:	29695725
Application Number:	61948970
Application Number:	62002001
Application Number:	62157394
Application Number:	62687044
Application Number:	62713862
Application Number:	62730137

Property Type	Number
Application Number:	62788249
Application Number:	62804801
Application Number:	15835687
Application Number:	16008592
Application Number:	29645313
Application Number:	62703925
Application Number:	62738265
Application Number:	62806923

CORRESPONDENCE DATA

Fax Number: (800)914-4240

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: 800-713-0755

Email: Michael.Violet@wolterskluwer.com, ECarrera@cahill.com

Correspondent Name: CT CORPORATION

Address Line 1: 4400 EASTON COMMONS WAY

Address Line 2: SUITE 125

Address Line 4: COLUMBUS, OHIO 43219

NAME OF SUBMITTER:	ELAINE CARRERA
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SIGNATURE:	/Elaine Carrera/
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DATE SIGNED:	11/06/2019
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Total Attachments: 12

source=Apergy - Patent Security Agreement (2019)#page1.tif
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RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Apergy ESP Systems, LLC

Additional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) November 1, 2019

☐ Assignment

☐ Merger

☒ Security Agreement

☐ Change of Name

☐ Joint Research Agreement

☐ Government Interest Assignment

☐ Executive Order 9424, Confirmatory License

☐ Other _____

2. Name and address of receiving party(ies)

Name: JPMorgan Chase Bank, N.A.

Internal Address: _____

Street Address: CIB DMO WLO, Mail Code NY1-C413, 4 CMC

City: Brooklyn

State: NY

Country: USA Zip: 11245-0001

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

☐ This document serves as an Oath/Declaration (37 CFR 1.63).

A. Patent Application No.(s)

B. Patent No.(s)

See Schedule I

See Schedule I

Additional numbers attached? ☒ Yes ☐ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Elaine Carrera, Senior Paralegal

Internal Address: _____

Street Address: c/o Cahill Gordon & Reindel LLP,
80 Pine Street

City: New York

State: NY Zip: 10005

Phone Number: (212) 701-3365

Docket Number: _____

Email Address: ecarrera@cahill.com

6. Total number of applications and patents involved: 99

7. Total fee (37 CFR 1.21(h) & 3.41) \$ _____

☐ Authorized to be charged to deposit account

☐ Enclosed

☐ None required (government interest not affecting title)

8. Payment Information

Deposit Account Number _____

Authorized UserName _____

9. Signature:

Elaine Carrera
Signature

November 6, 2019

Date

Elaine Carrera

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

12

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Addendum to Cover Page of Patents Form Cover Sheet

1. Name of conveying party(ies)

Apergy BMCS Acquisition Corp.

PCS Ferguson, Inc.

Quartzdyne, Inc.

Theta Oilfield Services, Inc.

US Synthetic Corporation

Windrock, Inc.

PATENT SECURITY AGREEMENT dated as of November 1, 2019 (this "*Agreement*"), between APERGY ESP SYSTEMS, LLC, APERGY BMCS ACQUISITION CORP., PCS FERGUSON, INC., QUARTZDYNE, INC., THETA OILFIELD SERVICES, INC., US SYNTHETIC CORPORATION and WINDROCK, INC. (the "*Grantors*") and JPMorgan Chase Bank, N.A. ("*JPMCB*"), as Administrative Agent.

Reference is made to (a) the Credit Agreement dated as of May 9, 2018 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "*Credit Agreement*"), among Apergy Corporation, as the Borrower, the Lenders and Issuing Banks from time to time party thereto and JPMCB, as Administrative Agent, and (b) the Guarantee and Collateral Agreement dated as of May 9, 2018 (as supplemented by Supplement No. 1 to the Guarantee and Collateral Agreement, dated as of the date hereof, and as further amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "*Collateral Agreement*"), among the Borrower, the Grantors from time to time party thereto and JPMCB, as Administrative Agent. The Lenders and the Issuing Banks have extended, and have agreed to extend, credit to the Borrower subject to the terms and conditions set forth in the Credit Agreement. The Grantors are Affiliates of the Borrower, will derive substantial benefits from the extension of credit to the Borrower under the Credit Agreement and are willing to execute and deliver this Agreement in order to induce the Lenders and the Issuing Banks to extend such credit. Accordingly, the parties hereto agree as follows:

SECTION 1. Terms. Each capitalized term used but not otherwise defined herein shall have the meaning specified in the Credit Agreement or the Collateral Agreement, as applicable. The rules of construction specified in Section 1.03 of the Credit Agreement also apply to this Agreement, mutatis mutandis.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Obligations, each Grantor, pursuant to the Collateral Agreement, did and hereby does grant to the Administrative Agent and its permitted successors and assigns, for the benefit of the Secured Parties, a security interest in all of such Grantor's right, title and interest in, to and under the portion of the Article 9 Collateral constituting Patents (including those listed on Schedule I hereto), subject to the exclusions set forth in Section 4.01(d) of the Collateral Agreement (collectively, the "*Patent Collateral*").

SECTION 3. Collateral Agreement. This Agreement has been executed and delivered by the Grantors for the purpose of recording the grant of security interest herein with the United States Patent and Trademark Office. The security interest granted hereby has been granted to the Administrative Agent for the benefit of the Lenders in connection with the Collateral Agreement and is expressly subject to the terms and conditions thereof. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Patent Collateral are more fully set forth in the Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Collateral Agreement, the terms of the Collateral Agreement shall govern.

SECTION 4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or other electronic imaging shall be effective as delivery of a manually executed counterpart of this Agreement.

SECTION 5. CHOICE OF LAW. THIS AGREEMENT AND ANY CLAIM, CONTROVERSY, DISPUTE OR CAUSE OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS AGREEMENT SHALL BE

GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF
NEW YORK.

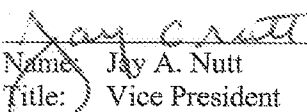
[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.


APERGY ESP SYSTEMS, LLC,
as Grantor

By: 
Name: Paul Mahoney
Title: President


APERGY BMCS ACQUISITION CORP.,
as Grantor

By: 
Name: Jay A. Nutt
Title: Vice President

PCS FERGUSON, INC.,
as Grantor

By: 
Name: Paul Mahoney
Title: President

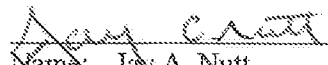
QUARTZDYNE, INC.,
as Grantor

By: 
Name: Syed Raza
Title: President

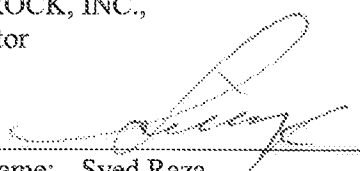
THETA OILFIELD SERVICES, INC.,
as Grantor

By: 
Name: Paul Mahoney
Title: President


US SYNTHETIC CORPORATION,
as Grantor

By: 
Name: Jay A. Nutt
Title: Vice President

WINDROCK, INC.,
as Grantor

By: 
Name: Syed Raza
Title: President and General Manager

JPMORGAN CHASE BANK, N.A.,
as Administrative Agent

By: 
Name: Travis Watson
Title: Vice President

[Signature Page to Patent Security Agreement]

PATENT
REEL: 050941 FRAME: 0705

SCHEDULE I

U.S. Patents and Applications:

	Owner	Patent Title	Appl. No.	Patent No.
1.	Apergy ESP Systems, LLC	ESP system surface controls enclosure	15470503	
2.	Apergy BMCS Acquisition Corp.	Rotational drill bits and drilling apparatuses including the same	15466253	
3.	Apergy BMCS Acquisition Corp.	Ripping and scraping cutter tool assemblies, systems, and methods for a tunnel boring machine	16018645	10337327
4.	Dover BMCS Acquisition Corp. ¹	Over-reamer drill tool for pilot bit	29161710	D487753
5.	Dover BMCS Acquisition Corp.	Over-reamer drilling tool for pilot bit	29177071	D483382
6.	Dover BMCS Acquisition Corp.	Over-reamer drilling tool for pilot bit	29177084	D483042
7.	PCS Ferguson, Inc.	Apparatus, assembly and process for injecting fluid into a subterranean well	12025465	7766085
8.	PCS Ferguson, Inc.	Apparatus, assembly and process for injecting fluid into a subterranean well	12849496	8413726
9.	PCS Ferguson, Inc.	Downhole oil well jet pump device with memory production logging tool and related methods of use	15634738	
10.	Quartzdyne, Inc.	Distributed sensor arrays for measuring one or more of pressure and temperature and related methods and assemblies	16221843	
11.	Quartzdyne, Inc.	Pass-throughs for use with sensor assemblies, sensor assemblies including at least one pass-through and related methods	15954804	10330551
12.	Theta Oilfield Services, Inc.	Software method to select, evaluate, and recommend optimal rod pumping system design used in the extraction of fluids from a downhole well	12234068	8037012
13.	US Synthetic Corporation	Bearing apparatuses, systems including same, and related methods	11247717	7559695
14.	US Synthetic Corporation and Brigham Young University	Thin layer chromatography plates and related methods	13035645	9283541
15.	US Synthetic Corporation	Superabrasive elements, methods of manufacturing, and drill bits including same	14067831	9951566
16.	US Synthetic Corporation	Superabrasive elements, methods of manufacturing, and drill bits including same	14614332	
17.	US Synthetic Corporation	(unpublished application)	14197891	
18.	US Synthetic Corporation	(unpublished application)	14244461	

¹ Dover BMCS Acquisition Corp. is the former name of Apergy BMCS Acquisition Corp. All patents owned in the name of Dover BMCS Acquisition Corp. are owned by Apergy BMCS Acquisition Corp.

	Owner	Patent Title	Appl. No.	Patent No.
19.	US Synthetic Corporation	High pressure press with tensioning assembly and related methods	14267764	
20.	US Synthetic Corporation	Reinforced press base, strengthening ring, and method of reinforcing a press base	14486637	10220586
21.	US Synthetic Corporation	High pressure press and method of making the same	14494397	10150270
22.	US Synthetic Corporation	Methods of altering the color of a diamond by irradiation and high-pressure/high-temperature processing	14517729	10370252
23.	US Synthetic Corporation	Reinforced press base, piston cavity sleeve, and method of reinforcing a press base	14546544	10414113
24.	US Synthetic Corporation	Superabrasive elements including coatings and methods for removing interstitial materials from superabrasive elements	14588777	10105820
25.	US Synthetic Corporation	(unpublished application)	14614332	
26.	US Synthetic Corporation	Methods of manufacturing a polycrystalline diamond compact including a polycrystalline diamond table containing aluminum carbide therein	14621019	10155301
27.	US Synthetic Corporation	(unpublished application)	14627966	
28.	Apergy BMCS Acquisition Corporation	Rotational drill bits and drilling apparatuses including the same	14740737	9975210
29.	US Synthetic Corporation	Material-removal systems, cutting tools therefor, and related methods	14811699	10408057
30.	US Synthetic Corporation	Protective leaching cups, leaching trays, and methods for processing superabrasive elements using protective leaching cups and leaching trays	14848301	10265673
31.	US Synthetic Corporation	Protective leaching mask assemblies and methods of use	14956089	10391613
32.	US Synthetic Corporation	Polycrystalline diamond compact including substantially single-phase polycrystalline diamond body and applications therefor	14987440	10119334
33.	US Synthetic Corporation	(unpublished application)	15135304	
34.	US Synthetic Corporation	Polycrystalline diamond compacts including a polycrystalline diamond table having a modified region exhibiting porosity	15181124	10145181
35.	US Synthetic Corporation	Methods of fabricating a polycrystalline diamond compact	15250363	10099346
36.	US Synthetic Corporation	Bearing assemblies including integrated lubrication, bearing apparatuses, and methods of use	15356994	10233971
37.	US Synthetic Corporation	Apparatus for brazing radial bearings and related methods	15402462	10220462
38.	US Synthetic Corporation	Proximity heating cell assembly for use in a high-pressure cubic press	15480836	10252233
39.	Apergy BMCS Acquisition Corporation	Rotational drill bits and apparatuses including the same	15950998	10392866
40.	Apergy BMCS Acquisition Corporation	Rotational drill bits and drilling apparatuses including the same	15972993	10352102

	Owner	Patent Title	Appl. No.	Patent No.
41.	US Synthetic Corporation	(unpublished application)	16008935	
42.	US Synthetic Corporation	(unpublished application)	16017657	
43.	US Synthetic Corporation	Leached superabrasive elements and systems, methods and assemblies for processing superabrasive materials	16020751	
44.	US Synthetic Corporation	Methods of fabricating a polycrystalline diamond compact	16034020	
45.	US Synthetic Corporation	Bearing apparatus including tilting pads	16039747	
46.	US Synthetic Corporation	Energy machined polycrystalline diamond compact and related methods	16084469	
47.	US Synthetic Corporation	Polycrystalline diamond elements and systems and methods for fabricating the same	16133643	
48.	US Synthetic Corporation	(unpublished application)	16144541	
49.	US Synthetic Corporation	(unpublished application)	16159500	
50.	US Synthetic Corporation	(unpublished application)	16175367	
51.	US Synthetic Corporation	(unpublished application)	16175419	
52.	US Synthetic Corporation	(unpublished application)	16211734	
53.	US Synthetic Corporation	Polycrystalline diamond compact, drill bit incorporating same, and methods of manufacture	16221115	
54.	US Synthetic Corporation	(unpublished application)	16238454	
55.	US Synthetic Corporation	(unpublished application)	16240591	
56.	US Synthetic Corporation	(unpublished application)	16254109	
57.	US Synthetic Corporation	(unpublished application)	16263694	
58.	US Synthetic Corporation	Bearing apparatus including a bearing assembly having a continuous bearing element and a tilting pad bearing assembly	16269859	
59.	US Synthetic Corporation	Compact bearing assemblies including superhard bearing surfaces, bearing apparatuses, and methods of use	16291892	
60.	US Synthetic Corporation	Polycrystalline diamond compact	16358281	
61.	US Synthetic Corporation	(unpublished application)	16374745	
62.	US Synthetic Corporation	Tilting pad bearing assemblies; bearing apparatuses and methods of using the same	16376606	
63.	US Synthetic Corporation	Polycrystalline diamond compacts	16385262	
64.	US Synthetic Corporation	(unpublished application)	16390823	
65.	Apergy BMCS Acquisition Corporation	Pick including polycrystalline diamond compact	16393603	
66.	US Synthetic Corporation	Shear cutter pick milling system	16406673	

	Owner	Patent Title	Appl. No.	Patent No.
67.	US Synthetic Corporation	Attack inserts with differing surface finishes, assemblies, systems including same, and related methods	16414604	
68.	US Synthetic Corporation	(unpublished application)	16430891	
69.	US Synthetic Corporation	(unpublished application)	16445439	
70.	US Synthetic Corporation	(unpublished application)	16513005	
71.	US Synthetic Corporation	(unpublished application)	16518049	
72.	US Synthetic Corporation	(unpublished application)	16526387	
73.	US Synthetic Corporation	Turbine assembly including at least one superhard bearing	16527303	
74.	US Synthetic Corporation	(unpublished application)	16527620	
75.	US Synthetic Corporation	(unpublished application)	16529176	
76.	US Synthetic Corporation	(unpublished application)	16536821	
77.	US Synthetic Corporation	(unpublished application)	16550843	
78.	US Synthetic Corporation	Bearing assemblies and apparatuses including superhard bearing elements	16551674	
79.	US Synthetic Corporation	(unpublished application)	16552747	
80.	US Synthetic Corporation	(unpublished application)	16566435	
81.	US Synthetic Corporation	(unpublished application)	16571664	
82.	US Synthetic Corporation	(unpublished application)	29626328	
83.	US Synthetic Corporation	Cutting tool	29660512	D860275
84.	US Synthetic Corporation	(unpublished application)	29676553	
85.	US Synthetic Corporation	Substrate, compact including the same, and drill bit including the same	29695725	
86.	US Synthetic Corporation	(unpublished application)	61948970	
87.	US Synthetic Corporation	(unpublished application)	62002001	
88.	US Synthetic Corporation	(unpublished application)	62157394	
89.	US Synthetic Corporation	(unpublished application)	62687044	
90.	US Synthetic Corporation	(unpublished application)	62713862	
91.	US Synthetic Corporation	(unpublished application)	62730137	
92.	US Synthetic Corporation	(unpublished application)	62788249	
93.	US Synthetic Corporation	(unpublished application)	62804801	

	Owner	Patent Title	Appl. No.	Patent No.
94.	Windrock, Inc.	Reciprocating Compressor Monitoring System	15835687	
95.	Windrock, Inc.	Reciprocating Compressor Monitoring System With Local Power Generation	16008592	
96.	Windrock, Inc.	Machine Performance Monitoring Device	29645313	
97.	Windrock, Inc.	Method and apparatus to identify operating load step and to detect faults in reciprocating compressor unlading systems	62703925	
98.	Windrock, Inc.	Remote monitoring engine performance using accelerometers	62738265	
99.	Windrock, Inc.	Method and apparatus for graphical display of engine cylinder health	62806923	