

**General:**

- Id of document version: **27244574**
- Status of the document <ep-bulletin>: **Replacement of data for an application already published**
- Changed tag from previous publication of document <B002EP><ep-chgt-info>: **B475=N,20210806**
- Publication number of the document (EPO or WIPO) <B110>: **3500719**
- Kind of document <B130>: **B1**
- EPO Application number <B210>: **17842223.4**
- Application filing date <B220>: **2017.08.18**
- Date of refusal of application <B235>:
- Date of withdrawal of application <B235>:
- Date of application deemed withdrawn <B237>:
- Date of receipt of request for re-establishment of rights <B238EP>:
- Date of decision for re-establishment of rights <B238>:
- Date of making available to the public by printing or similar process of an unexamined patent document, on which no grant has taken place on or before the said date <B430>: **2019.06.26**
- Date of making available to the public by printing or similar process of a patent document on which grant has taken place on or before the said date <B450><date>: **2020.10.21**
- Number of the EPO Bulletin in which the mention of the grant is published. <B450><bnun>: **202043**
- Date of rejection of the opposition procedure <B787>:
- Date of termination of the opposition procedure <B788>:
- Due date for translation: **2021.01.21**
- Text when the inventor has agreed to waive his entitlement to designation. <B009EP><text[jj]>:
- Date of reception of document: **2021.09.10**
- Date of publication <B140>: **2021.09.08**

**Priority <B300>:**

| Number(s) assigned to priority application(s) <B310>: | Date(s) of filing of priority application(s) <B320>: | National property office allotting the priority application number or the organization allotting the regional priority application Number (WO for PCT) – country code <B330>: |
|---|--|---|
|   | 2016.08.18   | US  |

**Lapse <B472>:****No lapse.**

**Classification <B500>:**

|  |   |
|--|---|
| <b>IPC (8) as one fixed length field of 50 positions &lt;B510EP&gt;&lt;text&gt;:</b> | <b>Edition of IPC (IPC version) &lt;B516&gt;:</b> |
| E21B 33/00 20060101AFI20190925BHEP   | 8   |

**Title <B540>:**

No title.

**Division <B620> or <B620EP>:**

No division.

**EPO Customer <B710>&<B720>&<B730>&<B740>:**

|  |  |  |   |
|--|--|--|---|
| <b>Name &lt;snm&gt;:</b>                                   | COLPITT, Charles   | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 600 North Dairy Ashford<br>Houston, Texas 77079-1175<br>US |  |   |
| <b>Customer type:</b>                                      | Inventor   | <b>Status:</b>                                 | 0 |

|  |   |  |           |
|--|---|--|-----------|
| <b>Name &lt;snm&gt;:</b>                                   | ConocoPhillips Company                                | <b>EPO number of the customer &lt;iid&gt;:</b> | 101820027 |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 925 N. Eldridge Parkway<br>Houston, Texas 77079<br>US |  |           |
| <b>Customer type:</b>                                      | Grantees  | <b>Status:</b>                                 | 0         |

|  |   |  |  |
|--|---|--|--|
| <b>Name &lt;snm&gt;:</b>                                   | NANNEY, James G.                            | <b>EPO number of the customer &lt;iid&gt;:</b> |  |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 3120 Fairfield Lane<br>Midland, Texas 79705 |  |  |

|                       |          |                |   |
|-----------------------|----------|----------------|---|
|                       | US       |                |   |
| <b>Customer type:</b> | Inventor | <b>Status:</b> | 0 |

|  |   |  |           |
|--|---|--|-----------|
| <b>Name &lt;snm&gt;:</b>                                   | Simpson, Paul<br>Christopher  | <b>EPO number of the customer &lt;iid&gt;:</b> | 101746474 |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | ConocoPhillips (U.K.) Limited 20th Floor Angel Court<br>London EC2R 7HJ<br>GB |  |           |
| <b>Customer type:</b>                                      | Attorney / Agent  | <b>Status:</b>                                 | 0         |

|  |  |  |   |
|--|--|--|---|
| <b>Name &lt;snm&gt;:</b>                                   | WHITE, Matthew L.  | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 600 North Dairy Ashford<br>Houston, Texas 77079-1175<br>US |  |   |
| <b>Customer type:</b>                                      | Inventor   | <b>Status:</b>                                 | 0 |

|  |   |  |   |
|--|---|--|---|
| <b>Name &lt;snm&gt;:</b>                                   | ZBRANEK, Zachary<br>L.                                | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 5202 Stoneridge Court<br>Rosenberg, Texas 77471<br>US |  |   |
| <b>Customer type:</b>                                      | Inventor  | <b>Status:</b>                                 | 0 |

**Opposition <B780>:**  
No opposition.

**Designated countries <B840>:**

| <b>Kind of document &lt;B130&gt;:</b> | <b>Date of publication &lt;B140&gt;:</b> | <b>Country code &lt;B840&gt;&lt;ctry&gt;:</b> |
|---------------------------------------|--|---|
| B1                                    | 2021.09.08                               | NO  |

**PCT <B860>&<B870>:**

|  |              |   |            |
|--|--------------|---|------------|
| <b>Kind of document &lt;B130&gt;:</b>                        | B1           |   |            |
| <b>PCT Application number &lt;B861&gt;&lt;anum&gt;:</b>      | US2017047634 | <b>Date of filing &lt;B861&gt;&lt;date&gt;:</b>   | 2017.08.18 |
| <b>PCT Publication number &lt;B871&gt;&lt;pnum&gt;:</b>      | WO2018035472 | <b>Publication date &lt;B871&gt;&lt;date&gt;:</b> | 2018.02.22 |
| <b>Issue number of the Gazette &lt;B871&gt;&lt;bnum&gt;:</b> | 201808       | <b>Country code &lt;B862&gt;:</b>                 | en         |

**Citations <B560>:**

| <b>Kind of document &lt;B130&gt;:</b> | <b>Type &lt;B561&gt; or &lt;B562&gt;:</b> | <b>Text &lt;B561&gt;&lt;text&gt; or &lt;B562&gt;&lt;text&gt;:</b> |
|---------------------------------------|---|---|
| B1                                    | PT citation                               | WO-A1-2010/135019   |
| B1                                    | PT citation                               | US-A1- 2011 186 306   |
| B1                                    | PT citation                               | US-A1- 2012 181 032   |
| B1                                    | PT citation                               | US-A1- 2013 062 063   |
| B1                                    | PT citation                               | US-A1- 2014 190 685   |
| B1                                    | PT citation                               | US-A1- 2015 159 462   |
| B1                                    | PT citation                               | US-A1- 2016 047 199   |
| B1                                    | PT citation                               | US-A1- 2016 376 869   |
| B1                                    | PT citation                               | US-A1- 2017 175 487   |
| B1                                    | PT citation                               | US-B1- 6 561 270  |
| B1                                    | PT citation                               | US-B2- 7 472 753  |