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- Application filing date <B220>: **2015.04.08**
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- Date of publication <B140>: **2022.11.23**

**Priority <B300>:**

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|-------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                       | 2014.04.09                                           | 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 21/00 20060101AFI20161008BHEP                                                   | 8                                                 |

**Title <B540>:**

No title.

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

No division.

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

|                                                            |                                                                            |                                                |           |
|------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------|-----------|
| <b>Name &lt;snm&gt;:</b>                                   | Docherty, Andrew John                                                      | <b>EPO number of the customer &lt;iid&gt;:</b> | 100767834 |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | Marks & Clerk LLP The Beacon 176 St Vincent Street<br>Glasgow G2 5SG<br>GB |                                                |           |
| <b>Customer type:</b>                                      | Attorney / Agent                                                           | <b>Status:</b>                                 | 0         |

|                                                            |                                                 |                                                |   |
|------------------------------------------------------------|-------------------------------------------------|------------------------------------------------|---|
| <b>Name &lt;snm&gt;:</b>                                   | KARIMI, Mojtaba                                 | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 2000 St. James Place<br>Houston, TX 77056<br>US |                                                |   |
| <b>Customer type:</b>                                      | Inventor                                        | <b>Status:</b>                                 | 0 |

|                                                            |                                                                     |                                                |   |
|------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|---|
| <b>Name &lt;snm&gt;:</b>                                   | MUTLU, Ovunc                                                        | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 6550 W. Sam Houston Parkway N. Suite 250<br>Houston, TX 77041<br>US |                                                |   |
| <b>Customer type:</b>                                      | Inventor                                                            | <b>Status:</b>                                 | 0 |

|                                                            |                                                       |                                                |   |
|------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------|---|
| <b>Name &lt;snm&gt;:</b>                                   | OAR, Trevor                                           | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 400 635-6th Avenue SW Office 108<br>Calgary, AB<br>CA |                                                |   |
| <b>Customer type:</b>                                      | Inventor                                              | <b>Status:</b>                                 | 0 |

|                                                            |                                                                     |                                                |   |
|------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|---|
| <b>Name &lt;snm&gt;:</b>                                   | SAFARIFOROSHANI, Mohammadreza                                       | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 6550 W. Sam Houston Parkway N. Suite 250<br>Houston, TX 77041<br>US |                                                |   |
| <b>Customer type:</b>                                      | Inventor                                                            | <b>Status:</b>                                 | 0 |

|                                                            |                                                                     |                                                |   |
|------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|---|
| <b>Name &lt;snm&gt;:</b>                                   | SHAHRI, Mojtaba P.                                                  | <b>EPO number of the customer &lt;iid&gt;:</b> |   |
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 6550 W. Sam Houston Parkway N. Suite 250<br>Houston, TX 77041<br>US |                                                |   |
| <b>Customer type:</b>                                      | Inventor                                                            | <b>Status:</b>                                 | 0 |

|                          |                                      |                                                |           |
|--------------------------|--------------------------------------|------------------------------------------------|-----------|
| <b>Name &lt;snm&gt;:</b> | Weatherford Technology Holdings, LLC | <b>EPO number of the customer &lt;iid&gt;:</b> | 101486497 |
|--------------------------|--------------------------------------|------------------------------------------------|-----------|

|                                                            |                                                  |                |   |
|------------------------------------------------------------|--------------------------------------------------|----------------|---|
| <b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b> | 2000, St. James Place<br>Houston, TX 77056<br>US |                |   |
| <b>Customer type:</b>                                      | Grantees                                         | <b>Status:</b> | 0 |

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

**Designated countries <B840>:**

|                                       |                                          |                                               |
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| B1                                    | 2022.11.23                               | NO                                            |

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

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| <b>PCT Publication number &lt;B871&gt;&lt;pnum&gt;:</b>      | WO2015157394 | <b>Publication date &lt;B871&gt;&lt;date&gt;:</b> | 2015.10.15 |
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**Citations <B560>:**

|                                       |                                           |                                                                   |
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|    |             |                     |
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| B1 | PT citation | WO-A1-2013/119685   |
| B1 | PT citation | US-A1- 2011 153 296 |