

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference P59904WO	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2018/071677	International filing date ( <i>day/month/year</i> ) 9 August 2018 (09-08-2018)	(Earliest) Priority Date ( <i>day/month/year</i> ) 10 August 2017 (10-08-2017)
Applicant  BP EXPLORATION OPERATING COMPANY LIMITED		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- the international application in the language in which it was filed  
 a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b.  This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2.  **Certain claims were found unsearchable** (See Box No. II)

3.  **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant  
 the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant  
 the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1  
 as suggested by the applicant  
 as selected by this Authority, because the applicant failed to suggest a figure  
 as selected by this Authority, because this figure better characterizes the invention
- b.  none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2018/071677

A. CLASSIFICATION OF SUBJECT MATTER  
INV. C02F1/44 E21B43/20  
ADD.  
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED  
Minimum documentation searched (classification system followed by classification symbols)  
C02F E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2007/138327 A1 (NATCO UK LTD [GB]; BP EXPLORATION OPERATING [GB]; WESTON ROBERT [GB];) 6 December 2007 (2007-12-06)	1-4,8-35
A	page 1, line 1 - page 2, line 3	5-7
A	page 6, line 14 - page 15, line 3; figure 1 ----- US 2015/083656 A1 (WILLIAMS JOHN DALE [GB]) 26 March 2015 (2015-03-26) the whole document -----	1-35

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  
8 October 2018

Date of mailing of the international search report  
15/10/2018

Name and mailing address of the ISA/  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer  
Dekker, Derk

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2018/071677

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007138327	A1	06-12-2007	NONE
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US 2015083656	A1	26-03-2015	AU 2011206433 A1 19-07-2012
			BR 112012017561 A2 16-08-2016
			CA 2786348 A1 21-07-2011
			CN 102803148 A 28-11-2012
			EA 201201005 A1 28-02-2013
			EP 2523908 A1 21-11-2012
			MX 347833 B 12-05-2017
			US 2012261340 A1 18-10-2012
			US 2015083656 A1 26-03-2015
			WO 2011086346 A1 21-07-2011
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