

1 September 2017 (01-09-2017)

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Application No. : **2,940,953**
Owner : SUNCOR ENERGY INC.
Title : **SYSTEMS AND METHODS FOR CONTROLLING PRODUCTION
OF HYDROCARBONS**
Classification : E21B 43/12 (2006.01)
Your File No. : **192807-485494**
Examiner : Colin Watts

YOU ARE HEREBY NOTIFIED OF A REQUISITION BY THE EXAMINER IN ACCORDANCE WITH SUBSECTION 30(2) OF THE *PATENT RULES*. CONSISTENT WITH THE OBJECTIVES OF SECTION 28 OF THE *PATENT RULES*, IN ORDER TO AVOID ABANDONMENT UNDER PARAGRAPH 73(1)(a) OF THE *PATENT ACT*, A WRITTEN REPLY MUST BE RECEIVED WITHIN **THREE (3)** MONTHS AFTER THE ABOVE DATE.

The applicant's letter of 7 July 2017 (07-07-2017) has been received and the application has been examined having regard to the applicant's arguments. However, the examiner considers that the application still does not comply with the *Patent Act* or *Patent Rules*.

The number of claims in this application is 41.

Document Cited:

D1: CA 2871354 Dyck 21 January 2015 (21-01-2015)

The examiner has identified the following defects in the application:

Claims 1 to 10, 13 to 16, 21, 23, 28, 31 to 34, 39, and 40 encompass subject-matter that was disclosed in D1 before the claim date and do not comply with paragraph 28.2(1)(b) of the *Patent Act*.

D1 discloses a method and apparatus for controlling the flow of fluids into wellbore tubulars, as seen in figures 1 to 9, including a system for production of fluid from a hydrocarbon-containing reservoir, comprising a production conduit for producing fluids from a hydrocarbon-containing reservoir, a flow-control device for regulating the flow of fluid from the hydrocarbon-containing reservoir to the production conduit, including an inlet for receiving reservoir fluid from the hydrocarbon reservoir, a device-traversing fluid passage extending from the inlet to the

production conduit, for conducting the received reservoir fluid, the device-traversing fluid passage including an upstream fluid conducting passage and a downstream fluid-conducting passage, wherein at least a portion of the downstream fluid conducting passage has a cross-sectional flow area that is greater than the cross-sectional flow area of the upstream fluid passage, wherein at least a portion of the downstream fluid conducting passage has a cross-sectional flow area that is greater than the cross-sectional flow area of the upstream fluid passage (e.g. fig 3C). The entirety of the downstream fluid conducting passage can have a cross-sectional area that is greater than the cross-sectional flow area of the upstream fluid conducting passage (e.g. figs. 3C, 9B). D1 provides that the device can be used in a method of producing heavy oil from an oil sands reservoir that includes injecting steam into the reservoir to mobilize the heavy oil, including a SAGD process (e.g. para. 040). The flow control device can comprise a transition passage with a smooth transition from a smaller to a larger cross-sectional area (e.g. fig. 3C) or a step increase in cross-sectional area (e.g. fig. 9B).

Claims 6 to 9, 11, 12, 17 to 20, 22, 24 to 27, 29, 30, 35 to 38, and 41 do not comply with section 28.3 of the *Patent Act*. These claims are directed to subject-matter that would have been obvious at the claim date to a person skilled in the art or science to which it pertains having regard to D1.

D1 discloses a system and method for production of fluid from a hydrocarbon reservoir, as discussed above, but does not explicitly disclose claimed details such as ratios of 2:1 or 3:1, or a length of the second fluid conducting passage of at least 10 or 20 to 50 times greater than the first cross-sectional diameter, or a first cross-sectional diameter of 3mm., or between 2 and 5mm. Such details are, however, considered to be within the purview of the person skilled in the art as they involve selecting preferred dimensions to fit the conditions of a given well.

In accordance with subsection 28(2) of the *Patent Rules*, this application will no longer qualify for advanced examination requested by the applicant if the application is deemed to be abandoned in accordance with subsection 73(1) of the *Patent Act* or if an extension of time under subsection 26(1) of the *Patent Rules* is granted.

In view of the foregoing defects, the applicant is requisitioned, under subsection 30(2) of the *Patent Rules*, to amend the application in order to comply with the *Patent Act* and the *Patent Rules* or to provide arguments as to why the application does comply.

Under section 34 of the *Patent Rules*, any amendment made in response to this requisition must be accompanied by a statement explaining the nature thereof, and how it corrects each of the above identified defects.

Colin Watts
Patent Examiner
819-639-7669

As per CIPO Client Service Standards, a response to a telephone enquiry or voice mail should be provided by the end of the next business day. In the event that attempts to reach the examiner are unsuccessful, the examiner's Section Head, Andrew Davidson, can be reached at 819-639-7790.

For general inquiries: 1-866-997-1936 or for more options see
<http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr00006.html>.

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<http://ic.sondages-surveys.ca/s/SCB-OPS/langeng>.

The Examination Search Report is provided for reference only and is not part of any requisition made by the examiner in accordance with the *Patent Act* or *Rules*. The applicant is not required to respond to the information contained in the Examination Search Report.

Examination Search Report

Box I: General Information

Application No.	2,940,953	Search Report Date	2017-08-29
Title	SYSTEMS AND METHODS FOR CONTROLLING PRODUCTION OF HYDROCARBONS		
Examiner	Colin Watts	Search Conducted?	Yes

Box II: Family Prosecution

Family Member	File Wrapper Reviewed	Status of Prosecution
CA2902548A1	2017-04-25	In Progress
US2017058655A1	2017-04-25	In Progress

Box III: Search History

Claims Searched	All	Date of Search	2017-08-29
<u>Type of Search Conducted (select all that apply):</u>			
Canadian first to file search	☒	Supplemental/top up search	☐
Inventor/applicant search	☐	Non laid open search	☐
Comprehensive search	☐	In-house searcher	☐

Search History from Databases Consulted:

CANADIAN PATENT DATABASE/INTELLECT

First to File: Intellect

Premier déposant : Intellect

(filing-date <= 2017-08-30 <AND> filing-date > 1000-01-01) <AND> (filing-date >=2011-08-30) <AND> ((E21B 43/12 <OR> E21B 43/24) <IN> ipc)
1,077

((filing-date <= 2017-08-30 <AND> filing-date > 1000-01-01) <AND> (filing-date >=2011-08-30) <AND> ((E21B 43/12 <OR> E21B 43/24) <IN> ipc)) <AND> (flow<NEAR> control)
798

((((filing-date <= 2017-08-30 <AND> filing-date > 1000-01-01) <AND> (filing-date >=2011-08-30) <AND> ((E21B 43/12 <OR> E21B 43/24) <IN> ipc)) <AND> (flow<NEAR> control)) <AND> (passage<OR> conduit)
450

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>=2011-08-30) <AND> ((E21B 43/12 <OR> E21B 43/24) <IN> ipc) ) <AND> (flow<NEAR> control))  
<AND> (passage<OR> conduit)) <AND> (venturi<OR> restriction<OR> restricting<OR>  
divergent<OR> divergent)  
231
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