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(71) Applicant (for all designated States except US): **BJ SERVICES COMPANY** [US/US]; 4601 Westway Park Blvd., Houston, TX 77041 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RAVENSBERGEN, John, Edward** [CA/CA]; RR1 S2 C34, DeWinton, Alberta

T0L 0X0 (CA). **LAMBERT, Mitch** [CA/CA]; 100 Deersaxon Ci SE, Calgary, Alberta T2J 6R5 (CA). **NORTHEAST, Chad** [CA/CA]; 87 Copperfield Hts. SE, Calgary, Alberta T2Z 4R5 (CA).

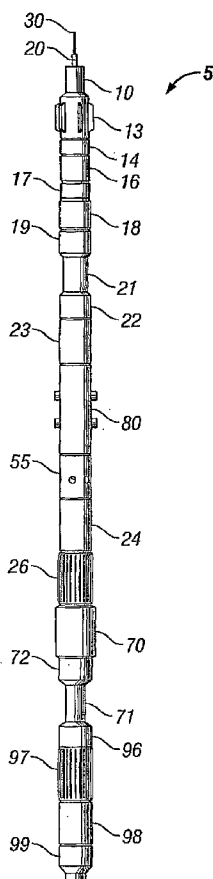
(74) Agent: **JOHNSON, Rexford, A.**; HOWREY LLP, 1111 Louisiana, 25th Floor, Houston, TX 77002 (US).

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[Continued on next page]

(54) Title: CONCENTRIC COILED TUBING ANNULAR FRACTURING STRING



(57) Abstract: A concentric coiled tubing annular fracturing string is disclosed having at least two fluid flow paths. An umbilical tube located inside of a coiled tubing string may provide one of the pathways, which may be used to isolate downhole elements, such as a packer, from harmful fluids. The annulus between the umbilical tube and the outer coiled tubing may provide the second flow pathway. The umbilical tube may contain an electric line, which may provide an electrical connection to a bottom hole assembly ("BHA"). The system may also provide for the measurement of down hole fracturing fluid pressure or be used to deliver a cross-linking agent to a specified portion of a well. The BHA may include an emergency packer deflation device to rapidly deflate a packer in the event the packer loses its ability to anchor against the casing.

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European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/048731

A. CLASSIFICATION OF SUBJECT MATTER
 INV. E21B17/20 E21B33/127 E21B43/26

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)
 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 practical, search terms used)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 394 184 B2 (TOLMAN RANDY C [US] ET AL) 28 May 2002 (2002-05-28) cited in the application column 21, line 49 - column 22, line 52 figures 8A-8B	1-4,8-21
A	----- WO 97/05361 A (NOWSCO WELL SERVICE INC [US]; NOWSCO WELL SERVICE LTD [CA]; DOWNHOLE S) 13 February 1997 (1997-02-13) the whole document	1,18
A	----- WO 99/34092 A (SHELL INT RESEARCH [NL]; SHELL CANADA LTD [CA]) 8 July 1999 (1999-07-08) the whole document ----- -/--	1,18

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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.</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 4 May 2007	Date of mailing of the international search report 06/08/2007
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Schouten, Adri
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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97/35093 A (BJ SERVICES COMPANY USA [US]; BJ SERVICE INTERNATIONAL INC [US]; MISSE) 25 September 1997 (1997-09-25) the whole document -----	1, 18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/048731

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see annex

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4,8-21

A coiled tubing annular fracturing string comprising an umbilical tube located within the coiled tubing string, wherein the umbilical may be used to inflate/deflate an inflatable packing element and to set/release an anchor within a wellbore.

2. claims: 22-31

A coiled tubing string, the coiled tubing string comprising a second fluid flow path within the coiled tubing string and means for requiring a (second) predetermined pressure within the second fluid flow path before the packing element begins to inflate.

3. claims: 5-7,32-34

An emergency deflation device for a coiled tubing string.

4. claims: 35-46,51,52

A method of fracturing a perforated zone of a wellbore with a coiled tubing string, the method comprising circulating wash fluid to the perforating zone through one or more fluid ports in the coiled tubing string.

5. claims: 47-50

A method of fracturing the formation of a perforated zone of a wellbore with a coiled tubing, the method comprising circulating fluid that includes a cross-linking agent to the perforating zone through one or more ports in the coiled tubing string while a fracturing fluid is pumped down the annulus.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/048731

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6394184	B2	US 2002092650 A1 US 2001050172 A1	18-07-2002 13-12-2001
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