



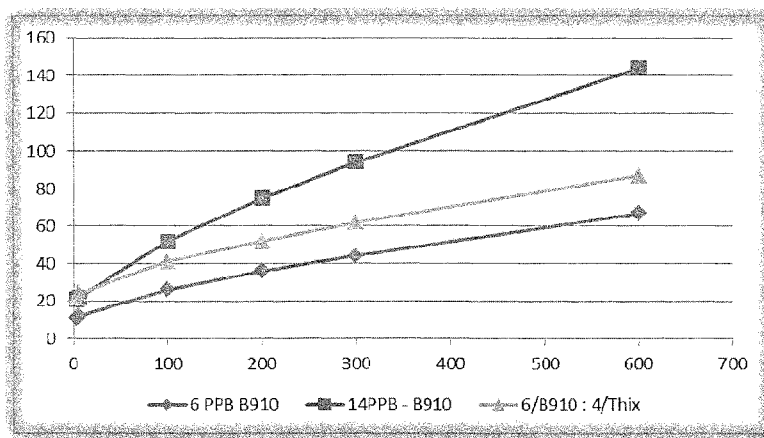
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(54) Title: NON-AQUEOUS DRILLING ADDITIVE USEFUL TO IMPROVE LOW SHEAR RATE VISCOSITY

FIG. 1



(57) Abstract: A method to control viscosity with respect to shear rate for an oil based drilling fluid by adding a polyamide drilling fluid additive to the oil based drilling fluid. In some embodiments, a polyamide drilling fluid additive includes a reaction product of (i) a carboxylic acid with a single carboxylic moiety or two carboxylic moieties, and (ii) a polyamine having an amine functionality of two or more; and placing the oil based drilling fluid into the subterranean formation.

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INTERNATIONAL SEARCH REPORT

International application No.

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<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - E21B 21/00 (2013.01) USPC - 507/203,267;166/358 According to International Patent Classification (IPC) or to both national classification and IPC</p>																		
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC E21B 21/00 (2013.01) USPC 507/203,267;166/358</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC 507/203,267;166/358 (Keyword limited, terms below)</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PatBase, Google patents, Google Scholar (NPL); Keywords: NON-AQUEOUS DRILLING ADDITIVE LOW SHEAR RATE VISCOSITY Polyamide polyamine carboxylic acid oil based</p>																		
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X — Y</td> <td>US 2009/0163386 A1 (Dino) 25 June 2009 (25.06.2009) para [0002], [0029], [0030], [0047], [0048], [0049], [0055], [0084], [0071], [0087], [0096]</td> <td>1, 7-13, 15-19, 25-26 ----- 2-6, 14, 20-24</td> </tr> <tr> <td>Y</td> <td>US 2011/0306523 A1 (Yu et al.) 15 December 2011 (15.12.2011) para [0001], [0021], [0024], [0036]</td> <td>2-6, 20-24</td> </tr> <tr> <td>Y</td> <td>US 4508628 A (Walker et al.) 02 April 1985 (02.04.1985) col 5, ln 5-10; col 5, ln 21-28; col 8, ln 61-62</td> <td>14</td> </tr> </tbody> </table> <p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/></p> <p>* 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</p> <table border="1"> <tr> <td>Date of the actual completion of the international search 20 December 2013 (20.12.2013)</td> <td>Date of mailing of the international search report 10 JAN 2014</td> </tr> <tr> <td>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</td> <td>Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</td> </tr> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X — Y	US 2009/0163386 A1 (Dino) 25 June 2009 (25.06.2009) para [0002], [0029], [0030], [0047], [0048], [0049], [0055], [0084], [0071], [0087], [0096]	1, 7-13, 15-19, 25-26 ----- 2-6, 14, 20-24	Y	US 2011/0306523 A1 (Yu et al.) 15 December 2011 (15.12.2011) para [0001], [0021], [0024], [0036]	2-6, 20-24	Y	US 4508628 A (Walker et al.) 02 April 1985 (02.04.1985) col 5, ln 5-10; col 5, ln 21-28; col 8, ln 61-62	14	Date of the actual completion of the international search 20 December 2013 (20.12.2013)	Date of mailing of the international search report 10 JAN 2014	Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
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