



- (51) International Patent Classification:
F42D 1/02 (2006.01) *G01S 19/14* (2010.01)
- (21) International Application Number:
PCT/ZA2015/000034
- (22) International Filing Date:
12 May 2015 (12.05.2015)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2014/03506 15 May 2014 (15.05.2014) ZA
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- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,

BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

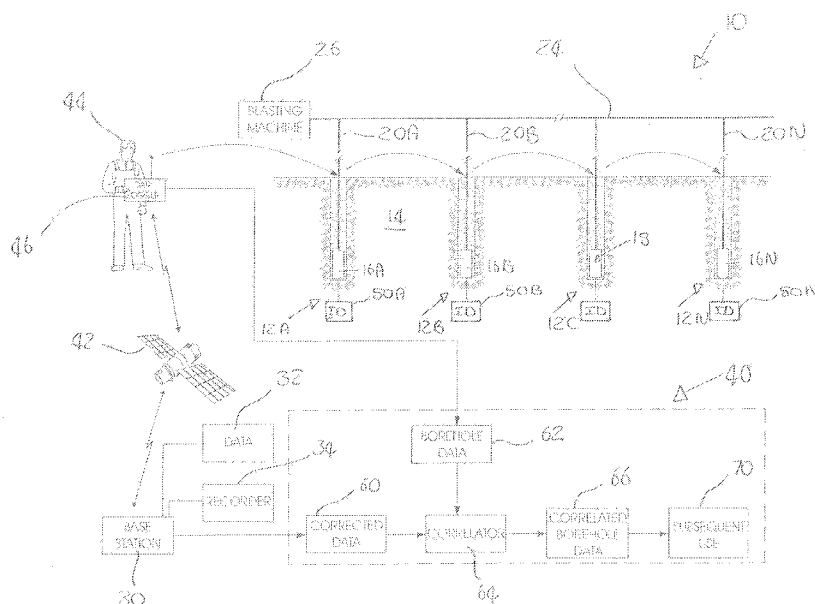
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

- (88) Date of publication of the international search report:
7 January 2016

(54) Title: BOREHOLE LOCATION IDENTIFICATION



(57) Abstract: in a blasting system positional data for a borehole or detonator generated by the use of a remote reference source is corrected by applying thereto a correction factor, determined by comparing absolute positional information of a reference location to positional information of the reference location generated by the use of the remote reference source.

INTERNATIONAL SEARCH REPORT

International application No
PCT/ZA2015/000034

A. CLASSIFICATION OF SUBJECT MATTER
INV. F42D1/02 G01S19/14
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)
F42D F42C G01S

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, 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 2004/225431 A1 (AEBI WALTER [CH] ET AL) 11 November 2004 (2004-11-11) paragraphs [0006], [0008], [0034]; claims 1,5 -----	1-5
X	US 6 079 333 A (MANNING CHARLES DAVID HOPE [NZ]) 27 June 2000 (2000-06-27) column 3, line 57 - column 4, line 13 -----	1-5
X	WO 2008/139413 A1 (AFRICAN EXPLOSIVES LTD [ZA]; VON LENGELING HORST WOLFGANG FRIEDRICH [Z]) 20 November 2008 (2008-11-20) page 12, line 31 - page 13, line 2 -----	1-5



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

9 November 2015

Date of mailing of the international search report

17/11/2015

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Beaufumé, Cédric

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/ZA2015/000034

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004225431	A1	11-11-2004	AU 785008 B2 24-08-2006
			AU 6587901 A 20-11-2001
			CA 2407950 A1 04-11-2002
			US 2004225431 A1 11-11-2004
			WO 0186323 A2 15-11-2001

US 6079333	A	27-06-2000	NONE

WO 2008139413	A1	20-11-2008	AP 2506 A 12-11-2012
			AR 066560 A1 26-08-2009
			AT 551585 T 15-04-2012
			AU 2008249616 A1 20-11-2008
			BR PI0811855 A2 18-11-2014
			CA 2684654 A1 20-11-2008
			DK 2147277 T3 25-06-2012
			EP 2147277 A1 27-01-2010
			ES 2384590 T3 09-07-2012
			PE 02552009 A1 17-03-2009
			PT 2147277 E 15-06-2012
			US 2012024181 A1 02-02-2012
			WO 2008139413 A1 20-11-2008
			ZA 200907578 A 25-08-2010
