

2 Documents

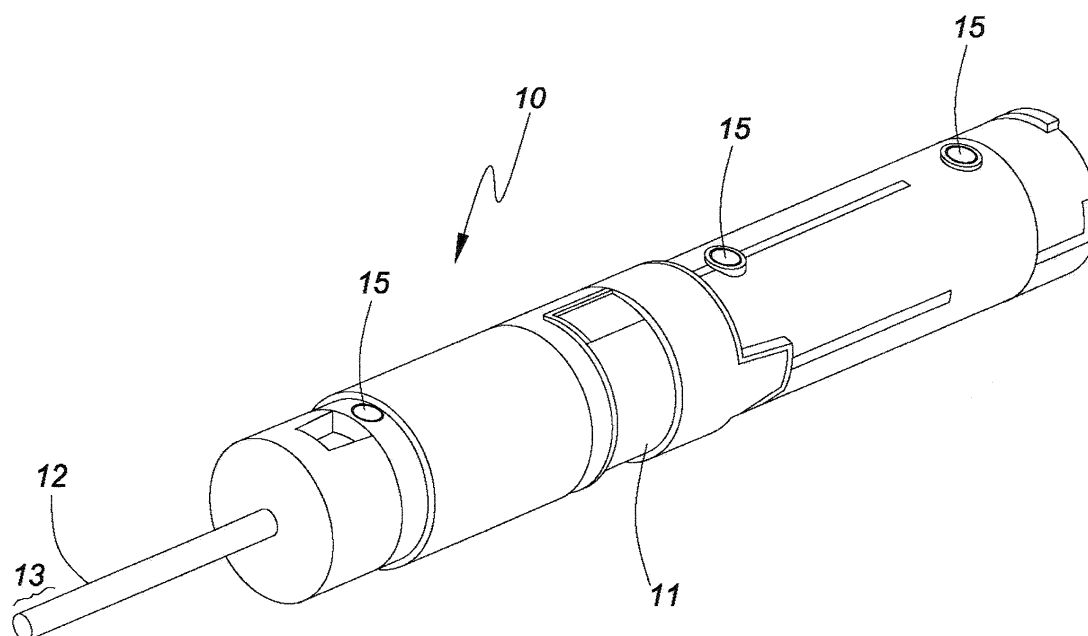
Publication numbers	Title	Current assignees
CA2834390 A1	Wireless detonators with state sensing, and their use	ORICA
US5369579 A	Electronic blast control system for downhole well operations	ANDERSON; OTIS R.

Family 1/2 - FAMPAT - ©Questel

Title

(EP2702349)

Wireless detonators with state sensing, and their use

Images**Publication data including kind & date**

CA2834390	A1	2012-11-01	CA2834390
WO2012149277	A2	2012-11-01	WO2012149277
WO2012149277	A3	2013-03-21	WO2012149277
AU2012249562	A1	2013-11-14	AU2012249562
SG194664	A1	2013-12-30	SG-194664
BR112013027605	A1	2014-01-07	BR112013027605
US2014053750	A1	2014-02-27	US20140053750
EP2702349	A2	2014-03-05	EP2702349
KR20140063523	A	2014-05-27	KR20140063523
JP2014517240	A	2014-07-17	JP2014517240
EP2702349	A4	2014-10-29	EP2702349
PE17792014	A1	2014-11-19	PE201401779
RU2013152738	A	2015-06-10	RU2013152738
EP2702349	B1	2015-11-25	EP2702349
ES2563827	T3	2016-03-16	ES2563827
AU2012249562	B2	2016-10-06	AU2012249562
RU2608745	C2	2017-01-24	RU2608745
BR112013027605	A2	2017-03-14	BR112013027605
JP6109814	B2	2017-04-05	JP6109814

**Abstract**

(EP2702349)

Wireless detonator systems present opportunities for controlled blasting of rock without the encumbrances of physical wired connections at the blast site. Disclosed herein are wireless detonator assemblies, which sense the state of environmental condition(s) of their immediate vicinity, and which are active to receive and / or process a command signal to FIRE only if the environmental condition(s) are deemed suitable or appropriate according to predetermined

parameters. Also disclosed are improved methods of blasting involving such wireless detonator assemblies, as well as corresponding wireless electronic primers.

Inventors

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Latest standardized assignees - inventors removed

ORICA

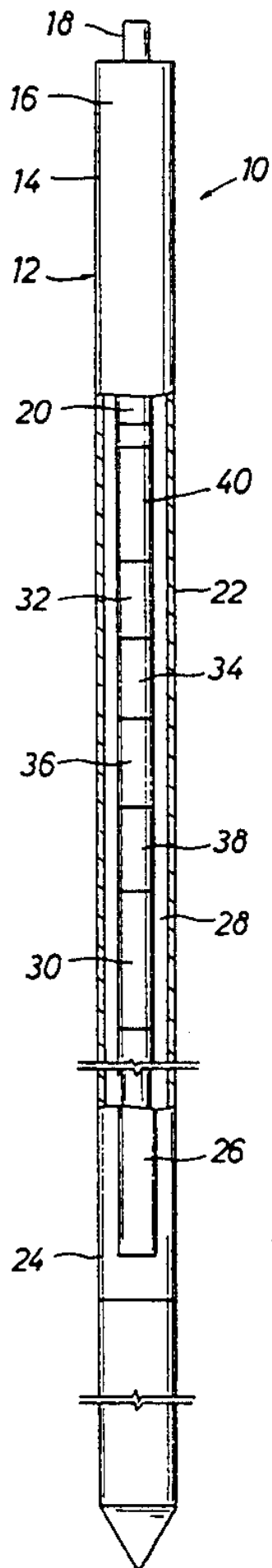
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Title

(US5369579)

Electronic blast control system for downhole well operations

Images



Publication data including kind & date

US5369579	A	1994-11-29	US5369579
CA2133161	A1	1995-07-25	CA2133161
CA2133161	C	1999-07-13	CA2133161

**Abstract**

(US5369579)

A method and apparatus for safely controlling detonation of a downhole explosive energized device which ensures that the explosive can be detonated in a well bore only when downhole hydrostatic pressure and well fluid temperature are within limits reflecting location of the explosive energized device at designed depth for accurate positioning relative to a selected formation. The apparatus further employs a clock/timer circuit and a motion sensor circuit to ensure firing of the explosive device only within a predetermined time period and only after having remained stationary within the well casing for a predetermined period of time. The apparatus further includes a memory circuit which receives and stores pressure and temperature data sets correlated with time which reflect well conditions before and after firing of the explosive device. After the tool has been retrieved from the well, this data is copied from the tool memory to a computer memory for subsequent computer processing and display.

Inventors

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