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- (71) Applicant and
(72) Inventor: SMITH, David, R. [US/US]; 3100 Regent Dr.,
Kilgore, TX 75662 (US).
- (74) Agents: DICKINSON, David, B. et al.; Lundeen & Dick-
inson, LLP, P.o. Box 131144, Houston, Texas 77219-1144
(US).

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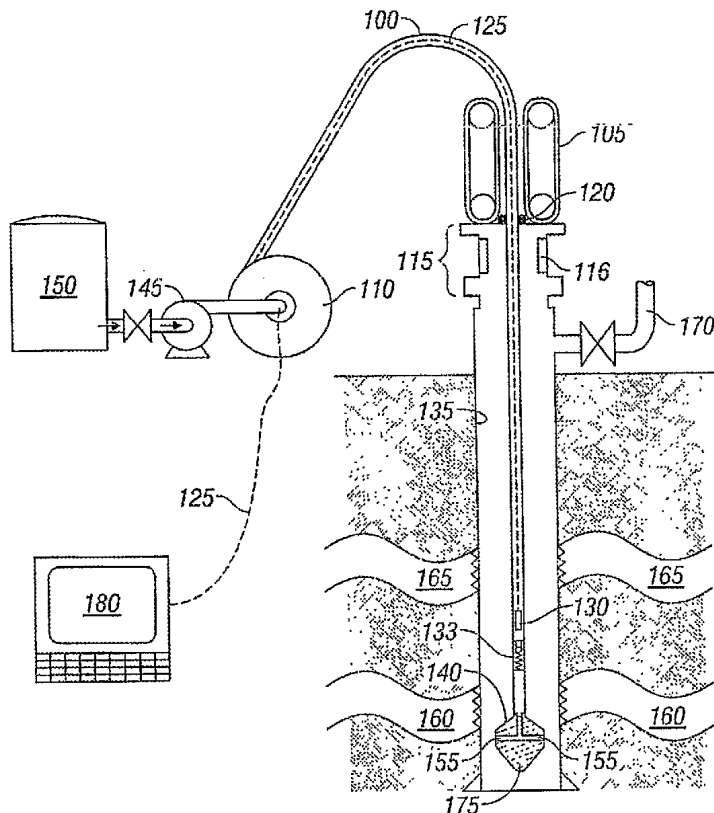
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(54) Title: METHOD AND APPARATUS TO DELIVER ENERGY IN A WELL SYSTEM



(57) Abstract: The disclosure relates to an apparatus for insertion of a conduit into a well system bore to introduce a reactant fluid over a subterranean catalyst to initiate decomposition of the reactant fluid which resultant energy release may be utilized to perform work or perform heating of the subterranean environment. The reaction may be further accelerated by the addition of a fuel down into the reaction chamber or blended with the reactant fluid at a surface location. Reaction products can be jetted from a reaction chamber orifice against the proximal surface of the well system bore which may be either a production zone for the purpose of stimulating production or against a casing to perforate the casing and expose the production zone adjacent such perforation. The energy released from said catalytic reaction and subsequent combustion of fuels may also be used for cutting, welding, powering pumps, compressors, turbines, generators, or to heat well system fluids, pipes, subterranean reservoir fluids, subterranean solids, and completion devices in the well system.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/44544

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **E21B 43/24(2007.01)**

USPC: 166/260,299,58,305.1
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 166/58,169,260-262,299,279,305.1,250.11,263,298,311,372

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)
 East : (releas\$3 with energ\$3 with (wells wellbore\$1 subterranean borehole\$1 downhole))

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,372,386 A (RHOADES et al.) 08 February 1983 (08.02.1983), see entire document, especially Figs. 1-6 and claims.	1-125
A	US 4,453,597 A (BROWN et al.) 12 June 1984 (12.06.1984), see entire document, especially Figs. 1-3 and claims.	1-125

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

* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier application or patent published on or after the international filing date	"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
"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)	"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
"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	"&" document member of the same patent family

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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 <i>D. W. Bates</i> Zakiya W. Bates Telephone No. (571) 272-5150
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