

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 13-234824- -12	FECHA: 2015-12-21 11:58:29
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 378 FASE NACIONAL INCLUIDO CAPITULO I
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 6
ACT: 519 TRASLADOINFORME	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
JUANITA ACOSTA GÓMEZ

Asunto: Radicación: 13-234824- -12
 Trámite: 11
 Evento: 378
 Actuación: 519
 Oficio: 15464
 Folios: 6

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional					
Vía PCT (Fase Nacional)	X	Capítulo I	X	Capítulo II	
No. Solicitud Internacional	PCT/US2012/032044				
Fecha de Presentación Internacional	04/04/2012				

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción	Rad. N° 13-234824-00000-0000	03 de octubre de 2013
Reivindicaciones:	Rad. N° 13-234824-00008-0000	26 de febrero de 2015
Dibujos:	Rad. N° 13-234824-00000-0000	03 de octubre de 2013
Prioridad:	US 61/473,669	08 de abril de 2011

2. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 20.

Título de la solicitud: “Método y aparato para el control de flujo de fluido en una válvula autónoma utilizando un interruptor de adhesión”.

El problema planteado en esta solicitud consiste en proporcionar un sistema de control de flujo en pozos subterráneos para extracción de crudo, donde el control del flujo de

entrada sea confiable para una variedad de condiciones de dicho flujo y que además opere en forma autónoma.

Para resolver este problema técnico, la solicitud en estudio plantea un aparato y método para controlar en forma autónoma el flujo del fluido en un elemento tubular posicionado en una perforación de pozo que se extiende a través de una formación subterránea que produce hidrocarburos, haciendo que el fluido sea pasado a través de un pasaje de entrada hacia un mecanismo de desviación.

El objeto de la presente Solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): E 21 B 34/14, 34/16.

3. De la solicitud de patente

Reivindicaciones (Art 30 D 486)

La reivindicaciones 1, 5, 7, 8, 9, 10, 11, 12, 13, 15, 17, 19, no son clara porque:

- Reclaman un método que se está definiendo por características de un mecanismo, lo cual no son características que deban ser definidas en una reivindicación que reclama un método.

En la reivindicación 1 se reclama *"...una primera pared lateral (152) que se extiende desde el pasaje de entrada (130) a un primer ángulo y una segunda pared lateral (154) que se extiende desde al pasaje de entrada (130) a un segundo ángulo diferente del primer ángulo tal que un ángulo de ensanchamiento (α) es definido..."*.

- En la reivindicación 5 se reclama *"...el primer ángulo (5) de salida es menos pronunciado que el segundo ángulo de salida (3)"*.

- En la reivindicación 7 se reclama *"...el mecanismo de desviación (140) incluye un elemento de contorno (200) a lo largo de un lado del mecanismo de desviación (140)..."*

- En la reivindicación 8 se reclama *"...cada elemento de contorno (200) comprende una cavidad que se extiende lateralmente...."*

- En la reivindicación 9 se reclama *"...cada elemento de contorno (200) incluye una sección sustancialmente cilíndrica..."*.

- En la reivindicación 10 se reclama *"...el mecanismo de desviación (140) incluye una primera sección que tiene un primer tamaño de sección transversal y una segunda sección adyacente que tiene un segundo tamaño de sección transversal, diferente del primer tamaño de sección transversal..."*.

- En la reivindicación 11 se reclama *"...el mecanismo de desviación (140) incluye uno o más diodos formados a lo largo de la pared del mecanismo de desviación (140)..."*.

- En la reivindicación 12 se reclama *"...el mecanismo de desviación (140) incluye un deflector (214) definido en el mecanismo de desviación (140)..."*

- En la reivindicación 13 se reclama *"...el deflector (214) incluye una pluralidad de obstrucciones al flujo en un primer y segundo lados del mecanismo de desviación (140)..."*

- En la reivindicación 15 se reclama “...*el montaje de resistencia al flujo variable (50) incluye un montaje de válvula autónoma...*”
- En la reivindicación 17 se reclama “...*un pasaje de flujo que tiene un puerto de entrada coincidente con el puerto de salida del pasaje de entrada (130)...*”
- En la reivindicación 19 se reclama “...*un montaje de vórtice (180)...*”

Las características reivindicadas del método reclamado en las anteriores reivindicaciones mencionadas y que definen a los elementos que componen el sistema, no son características que definan el método reclamado, por lo tanto no son comparables con lo perteneciente al estado de la técnica.

- En la reivindicación 1 también se reclama: “...*cambiar la Resistencia de flujo de fluido del montaje de Resistencia variable de flujo (50) en respuesta al paso de...*”, lo cual es un resultado a alcanzar debido a que es la respuesta o la reacción del fluido a una etapa previa.
- Por otra parte se encuentra que no es claro el paso definido como “...*desviar el mecanismo (140) en respuesta a un cambio en la característica del fluido*”, debido a que en la descripción no se enseña la forma de realizar una desviación al mecanismo (140). La falta de claridad en este paso hace que no sea factible compararlo con lo perteneciente al estado de la técnica.
- El término “sustancialmente” utilizado en la reivindicación 9 es relativo por lo cual no permite distinguir la invención del estado de la técnica. Se sugiere sustituirlo por un término o rango concreto.

4. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de prioridad de la solicitud, es decir 08 de abril de 2011, y se encontraron los siguientes documentos que anticipa el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación*
D3	US 2011/0042092	“Alternating flow resistance increases and decreases for propagating pressure pulses in a subterranean well”	24 de febrero de 2011

El documento D3¹ un método de propagar el fluido de una composición a través de un sistema de resistencias variables, que incluye una cámara de vórtice con al menos una entrada y una salida. El vórtice está creando para conducir la composición en espiral alrededor de la salida, generando una resistencia al flujo de la composición alternativamente creciente y decreciente. (Resumen).

5. Examen de Patentabilidad (Art 14 D486)

Novedad (Art 16 D486)

¹<https://www.google.es/patents/US20110042092?dq=US+2011/0042092&hl=es&sa=X&ved=0ahUKewjnpuWmvt7JAhVKWj4KHd2VABMQ6AEIHDA>

La reivindicación 1 consiste en “*Un método para el control de flujo del fluido en una perforación de pozo que se extiende:...* ” (Ver página 30 del radicado No 13-234824-00008-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D3
Hacer fluir el fluido a través del pasaje de entrada (130)	Hacer fluir el fluido a través del pasaje de entrada. (Pág. 1, Párr. 0005)
Establecer una primera distribución de flujo del fluido a través de un puerto de salida del mecanismo de desviación de flujo.	Establecer una primera distribución de flujo del fluido a través de un puerto de salida del mecanismo de desviación de flujo. (Pág. 1, Párr. 0006).
Alterar la primera distribución de flujo del fluido hasta una segunda distribución del flujo a través del puerto de salida.	Alterar la primera distribución de flujo hasta una segunda distribución del flujo a través del puerto de salida. (Pág. 1, Párr. 0007).
Hacer fluir el flujo de fluido desde el pasaje de entrada (130) a través de un pasaje de mecanismo de desviación divergente.	Hacer fluir el flujo de fluido desde un pasaje de entrada a través de un pasaje de mecanismo de desviación divergente. (Pág. 8, Párr. 0124).
Alterar la distribución del flujo desde la salida del mecanismo de desviación de flujo (140).	Alterar la distribución del flujo desde la salida del mecanismo de desviación de flujo. (Pág. 8, Párr. 0123).
Hacer fluir el fluido a través de una sección curvada (222) de un pasaje de mecanismo de desviación (141).	Hacer fluir el fluido a través de una sección curvada (78) de un pasaje de mecanismo de desviación. (Pág. 3, Párr. 0056).

De acuerdo a lo anterior, las fases y las características del método descrito en la reivindicación 1 se encuentran anticipadas por el documento D3, por lo tanto, la reivindicación 1 no es nueva.

Las reivindicaciones dependientes se encuentran afectadas de la siguiente manera:

- Reivindicación 2. Hacer fluir el fluido desde la formación a la superficie. (D3: Pág. 1, Párr. 0008).
- Reivindicación 3: Establecer un primer patrón de flujo en el montaje de resistencia de flujo variable hasta un segundo patrón de flujo a través de un puerto de salida: (D3: Pág. 1, Párr. 0006).
- Reivindicación 4. Porque el fluido cambia su velocidad, densidad y tasas de flujo a través del tiempo. (D3: Pág. 2, Párr. 0029).
- Reivindicación 6. Una primera distribución del flujo simétrica. (D3: Fig. 7).
- Reivindicación 14. Comprende la etapa de hacer fluir el fluido a través de una sección curva (78) de un pasaje del mecanismo de desviación. (D3: Pág. 3, Párr. 0056).
- Reivindicación 16. Hacer fluir el fluido a través de un interruptor de fluidos. (D3: Pág. 1, Párr. 0019).
- Reivindicación 18. Aumentar la resistencia al flujo. (D3: Pág. 1, Párr. 0021).

6. Conclusión

Los requisitos de Patentabilidad de la presente solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D3	US 2011/0042092	1, 2, 3, 4, 6,14,16,18	Novedad/Nivel Inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-12-29

Elaboró: Jesus Alejandro Velasquez Salgado
Revisó: Rachid Ponce Vergel

jesusvelasquez

Search history

Search 1: PN=(WO2013119507) (Results 1)

Search 2: [SP]: 1. a method of fracturing a subterranean formation comprising introducing a proppant stage into the subterranean formation, wherein the proppant stage comprises a fine textured foam containing: (i) a viscosified aqueous fluid having ultra lightweight (ulw) proppant suspended in the viscosified aqueous fluid and (ii) a gaseous fluid, wherein the gaseous fluid constitutes at least about 85 volume percent of the combination of gaseous fluid and aqueous fluid in the fine textured foam wherein the diameter of at least 70 percent gas volume of the bubbles of the fine textured foam is less than or equal to 0.18 mm and further wherein the proppant stage is introduced into the subterranean formation at a pressure sufficient to create or enlarge a fracture. 2. the method of claim 1, wherein the diameter of the bubbles of the fine textured foam is between from about 0.01 to about 0.10 mm. 3. the method of claim 1, wherein the diameter of at least 80 percent gas volume of the bubbles of the fine textured foam is less than or equal to 0.18 mm. 4. the method of claim 3, wherein the diameter of the bubbles of the fine textured foam is between from about 0.01 to about 0.10 mm. 5. the method of claim 3, wherein the diameter of at least 90 percent gas volume of the bubbles of the fine textured foam is less than or equal to 0.18 mm. 6. the method of claim 5, wherein the diameter of the bubbles of the fine textured foam is between from about 0.01 to about 0.10 mm. 7. the method of claim 1, wherein the amount of proppant suspended in the viscosified aqueous fluid is that sufficient to create a partial monolayer of proppant in the fracture. 8. the method of claim 1, wherein the apparent specific gravity of the ulw proppant is less than or equal to 2.25. 9. the method of claim 8, wherein the apparent specific gravity of the ulw proppant is less than or equal to 1.75. 10. the method of claim 9, wherein the apparent specific gravity of the ulw proppant is less than or equal to 1.25. 11. the method of claim 1, wherein the viscosified aqueous fluid contains a viscoelastic surfactant. 12. the method of claim 1, wherein the gaseous fluid is nitrogen, carbon dioxide or a combination thereof. 13. a method of fracturing a subterranean formation comprising: (a) pumping into the formation a proppant stage comprising a fine textured foam, the fine textured foam prepared by: (i) suspending an ultra lightweight (ulw) proppant in a viscosified aqueous fluid and then (ii) combining the viscosified aqueous fluid with a gaseous fluid wherein the gaseous fluid constitutes at least about 85 volume percent of the combination of gaseous fluid and aqueous fluid in the fine textured foam and (b) creating or enlarging a fracture in the subterranean formation. 14. the method of claim 13, wherein the viscosified aqueous fluid comprises between from about 6 to about 55 weight percent of ultra lightweight (ulw) proppant having an apparent specific gravity less than or equal to 2.25, 15. the method of claim 13, further comprising, prior to pumping the proppant stage into the subterranean formation, pumping a pad fluid comprising a gaseous fluid into the formation at a pressure sufficient to initiate a fracture. 16. the method of claim 15, wherein the pad fluid further contains a proppant. 17. the method of claim 16, wherein the pad fluid comprises a gaseous fluid and an aqueous fluid. 18. the method of claim 13, wherein the amount of proppant suspended in the viscosified aqueous fluid is that sufficient to create a partial monolayer of proppant in the fracture. 19. the method of claim 13, wherein the diameter of at least 70 percent gas volume of the bubbles of the fine textured foam is less than or equal to 0.18 mm. 20. the method of claim 19, wherein the diameter of at least 90 percent gas volume of the bubbles of the fine textured foam is less than or equal to 0.18 mm. 21. the method of claim 13, wherein the diameter of between about 70 to about 90 percent gas volume of the bubbles is from about 0.01 to about 0.10 mm. 22. the method of claim 13, wherein the viscosified aqueous fluid is added to the gaseous fluid in step (a) (ii). 23. the method of claim 13, wherein the gaseous fluid is added to the viscosified aqueous fluid in step (a) (ii). 24. a method of fracturing a subterranean formation comprising introducing a proppant stage into the fracture, wherein the proppant stage is a fine textured foam comprising a gaseous fluid and an ultra lightweight (ulw) proppant having an apparent specific gravity (asg) less than or equal to 2.25 suspended in a viscosified aqueous system and further wherein the gaseous fluid of the proppant stage is greater than 90 volume percent of the fluid in the proppant stage. 25. the method of claim 24, wherein the diameter of between about 50 to about 90 percent gas volume of the bubbles is from about 0.01 to about 0.10 mm. 26. the method of claim 24, wherein the gaseous fluid comprises at least 95 volume percent of the fluid in the proppant stage. (Results 537)

Search 3: TAC=(Vacuum and relief and device and for and fluid) (Results 1074)

Search 4: TAC=(Vacuum and relief and device and for and fluid) and EC=(F04B 49/00) (Results 0)

Search 5: TAC=(Vacuum and relief and device and for and fluid) and EC=(F04B) (Results 40)

Search 6: TAC=(Vacuum and relief and device and for and fluid) and EC=(F04B49) (Results 10)

Search 7: TAC=(ENDODONTIC and DENTAL and IMPLANT) (Results 47)

Search 8: TAC=(ENDODONTIC and DENTAL and IMPLANT) and EC=(a61c 5/08) (Results 0)

Search 9: TAC=(ENDODONTIC and DENTAL and IMPLANT) and EC=(a61c) (Results 25)

Search 10: TAC=(alternating and flow and resistance and increases and decreases) and EC=(a61c) (Results 1)

Search 11: TAC=(alternating and flow and resistance and increases and decreases) (Results 621)

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Search 17: TAC=(alternating and flow and resistance and increases and decreases) and EC=(a61c) (Results 1)

Search 18: TAC=(alternating and flow and resistance and increases and decreases) and EC=(e21b) (Results 17)

Title: Drilling apparatus

Abstract: Source: US2388720A 1. Drilling apparatus comprising a hollow casing, a drill unit including a drill motor mounted in said casing for movement lengthwise thereof, a shaft connected with the motor drive shaft for conjoint rotation therewith and extending outside the casing, a drill bit on the end of the drill shaft, a roller chain secured to said casing longitudinally thereof and a pair of sprockets mounted for conjoint rotation on said unit and engaging said chain, said chain and said sprockets being so constructed and arranged that the said sprockets upon rotation **alternately** reach their positions of full engagement with the rollers of said chain, a high torque motor for driving said sprockets and mounted on said unit with the drill motor for conjoint movement lengthwise of the casing, a reversing switch carried on said unit, a stop member adjacent each end of the casing in the path of the reversing switch for limiting the range of travel of said unit, a circuit inclusive of the reversing switch, the drill motor and the high torque motor, and means extending into the casing for connecting said circuit with a source of electric energy.

Classifications:

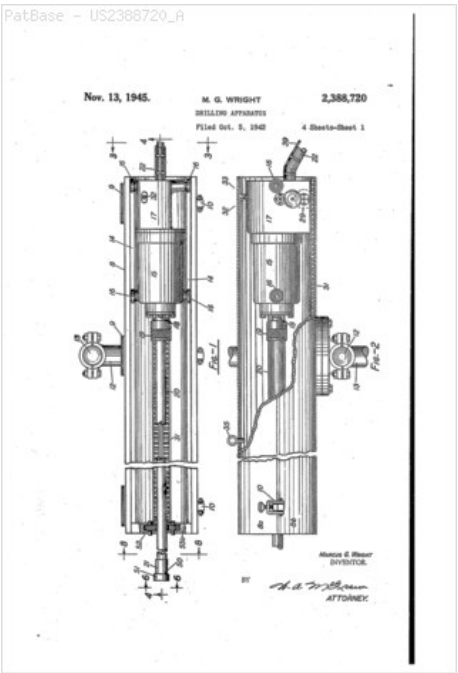
International (IPC 8-9): E21B19/083 (Advanced/Invention);
E21B19/00 (Core/Invention)

International (IPC 1-7): E21C1/10 E21C5/10

CPC: E21B19/083

European: E21B19/083

US: 173/147 173/19 173/3 173/5 173/79 175/207 175/38 175/405.1 175/51



Family:

Publication number	Publication date	Application number	Application date
US2388720 A	19451113	US19420460828	19421005

Priority:

US19420460828 19421005

Probable Assignee: MYRON OWEN W

Assignee(s): (std): MYRON OWEN W ; THOMAS P CAMPBELL

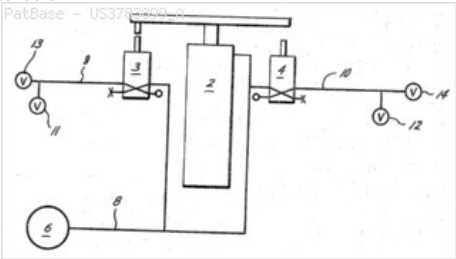
Assignee(s): W MYRON OWEN

Inventor(s): (std): WRIGHT MARCUS G

Title: VALVE OPERATOR

Abstract: Source: US3783899A A pilot control system for selectively activating a plurality of hydraulically operated devices with power supplied from a remote source through a single conduit. The control system comprises a sequencing unit with a case enclosing a rotating and reciprocating stem. Attached to the end of the stem is an actuating plate which on rotation of the stem registers with various control devices and on reciprocating movement of the stem engages one or more of these control devices to permit pressure from the power source to activate one or more of the hydraulically operated devices. To impart rotational and reciprocal motion to the stem an annular piston is nonrotatingly and slidingly received in an annular space between the stem and case. This annular space is connected to the single conduit from the power source. The stem is provided with a continuous slot traversing its circumference and having upper and lower extremities connected by inclined channels to give a sawtooth-like appearance. The annular piston has a projection thereon which engages the stem slot. By applying pressure to the annular piston, which is spring biased against movement, the piston may be reciprocally moved causing the stem to rotate due to the slot configuration and the engaging piston projection. The stem, which is also spring biased against reciprocal motion, may then be reciprocally moved by a further increase in pressure since the piston projection lies at one extremity of the saw-tooth-like slot. **Alternate increases and decreases** in pressure will cause complete rotation of the stem due to the slot configuration. If it is not desired to actuate a particular control device by reciprocal movement of the stem, intermediate pressure only is used to re-register the plate engaging device, the higher pressure step, which initiates reciprocal motion, being eliminated. As previously stated, all control devices, hydraulically operated devices, and the sequencing unit are supplied with power from the remote power source through a single conduit.

Classifications:
International (IPC 8-9): E21B33/035 F15B13/07 F15B15/02 (Advanced/Invention); E21B33/03 F15B13/00 F15B15/00 (Core/Invention)
International (IPC 1-7): F15B11/20 G05B19/06
CPC: F15B15/02 E21B33/0355 F15B13/07 Y10T74/18296 Y10T137/86461 Y10T137/86911 Y10T137/87048
European: E21B33/035C F15B13/07 F15B15/02
US: 137/62.4.2 137/624.2 137/627 137/635 239/66 74/55



Family:

Publication number	Publication date	Application number	Application date
US3783899 A	19740108	US19720229229	19720224

Priority:
US19680705876 19680103 US19700072838 19700916 US19720229229 19720224

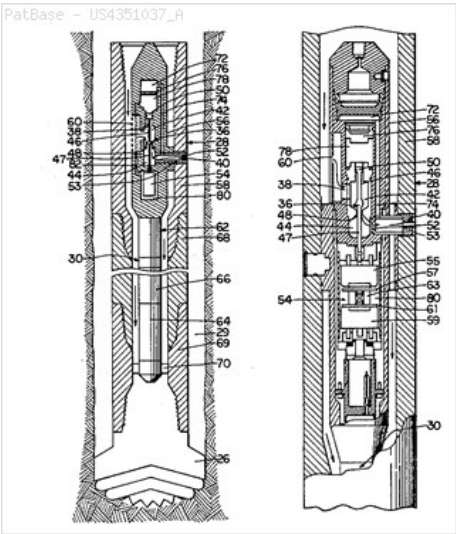
Probable Assignee: CAMERON IRON WORKS USA INC
Assignee(s): (std): ROCKWELL INT CORP ; ROCKWELL INTERNATIONAL CORP
Assignee(s): SMITH INT INC A CORP OF CA ; SMITH INT ; ROCKWELL INT CORP US ; CAMERON IRON WORKS USA INC ; COOPER IND ; COOPER IND INC
Inventor(s): (std): FOWLER J ; JOHNSON C
Inventor(s): JOHNSON C US ; FOWLER J US

Title: SYSTEMS, APPARATUS AND METHODS FOR MEASURING WHILE DRILLING

Abstract: Source: US4351037A A method and apparatus for continuously logging while drilling a well bore with a rotary drilling rig comprising a drill string, a jet type drill bit, and mud pump means for circulating fluid under pressure. The apparatus generally includes means for sensing one or more downhole parameters near the drill bit, means for generating a sequence of electrical pulses representative of said parameter, and means for generating negative mud pressure pulses in the drilling fluid ("drilling mud") within the drill string in response to said electrical pulses. Receiving means at the earth's surface detect the negative mud pressure pulses and utilize the sequence of these pulses to produce signals representative of said parameter. The receiving means employ means to substantially eliminate the effects of the pressure pulsations generated by the mud pump and to extract the negative mud pressure pulses the sequence of which represent the downhole parameter. The means for generating the negative mud pressure pulses involves utilization of the existing energy on the high pressure side of the drill bit through a bypass to the low pressure side of the drill bit controlled by a valve mechanism and arrangement. The design of the valve mechanism and arrangement is such that the valve can be powered for actuation as necessary over a requisite time period by self-contained downhole power source, and is not subject to unacceptable wear.

Classifications:

International (IPC 8-9): C04B28/02 E21B41/00 E21B44/00 E21B45/00 E21B47/00 E21B47/01 E21B47/06 E21B47/12 E21B47/18 E21B47/24 E21B49/00 E21C39/00 F21S8/00 F21V7/16 G01V1/28 G01V1/40 H01M10/50 H01M2/10 H01M6/36 H05B37/02 (Advanced/Invention); E21B45/00 H01M2/10 H01M6/36 (Advanced/Non-invention); E21B41/00 E21B45/00 E21B47/00 E21B47/06 E21B47/12 E21B49/00 F21S8/00 F21V7/00 G01V1/28 G01V1/40 H01M10/42 H05B37/02 (Core/Invention); H01M2/10 H01M6/30 (Core/Non-invention)
International (IPC 1-7): C04B14/10 C04B24/08 C04B28/02 E21B21/08 E21B21/10 E21B41/00 E21B45/00 E21B47/00 E21B47/02 E21B47/06 E21B47/12 E21B49/00 E21B7/00 E21C39/00 F16K15/18 F21P5/00 F21V17/02 G01D5/46 G01J1/22 G01J1/40 G01J3/34 G01S1/06 G01V1/00 G01V1/02 G01V1/28 G01V1/36 G01V1/40 G01V3/18 G01V5/00 G05D16/20 G08C23/00 H01M2/10 H01M6/36 H04B13/02
CPC: E21B47/187 E21B47/12 Y10S362/802 H05B37/029 F21V7/16 F21W2131/406 H01M10/39 E21B41/0085 E21B47/011 E21B47/18 H01M2/10 H01M6/36 H01M10/615 H01M10/6571 H01M10/658 H01M10/62 H01M10/637 E21B47/185
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US: 175/40 175/48 175/50 33/307 340/853 362/267 362/268 362/276 362/278 362/285 362/307 362/319 362/320 362/321 362/351 362/451 362/802 362/96 367/43 367/81 367/83 367/85 429/112 73/151 73/152.47



Family:

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Probable Assignee: SCHERBATSKOY S A

Assignee(s): (std):	GEARHART OWEN INDUSTRIES ; SCHERBATSKOY SERGE ALEXANDER ; SCHERBATSKOY S A ; SCHERBATSKOY S ; SCHERBATSKOY SERGE ; SCHERBATSKOY SERGE A ; CALLAHAN M ; CALLAHAN MICHAEL ; GEARHART IND INC ; GEARHART OWEN IND ; SERGE A SCHERBATSKOM ; SERGE ALEXANDER SCHERBATSKOY TE FORT WORTH TEXAS V ; SERGE A SCHERBATSKOY
Assignee(s):	SCHERBATSKOY TIMOTHY D CO TRUSTEES OF SCHERBATSKOY ; SERGE ALEXANDER SCHERBATSKOY TE FORT WORTH TEXAS VER ST V AM ; SCHERBATSKOY TIMOTHY D CO TRUSTEES OF SCHERBATSKOY FAMILY TRUST AS ; SCHERBATSKOY TIMOTHY D CO TRUSTEES OF SCHERBATSKOY FAMILY TRUST ; SCHERBATSKOY TIMOTHY D ; GEARHART OWEN IND INC ; GEARHART INDUSTRIES INC ; SCHERBATSKOY JR ; SCHERBATSKOY FAMILY TRUST PO BOX ; MICHAEL CALLAHAN ; SCHERBATSKOY SA ; GEARHART OWEN INDUSTRIES INC ; SCHERBATSKOY SERGE ALEXANDER FORT WORTH TEX ; SCHERBATSKOY FAMILY TRUST ; SCHERBATSKOY JR SERGE A AND ; SCHERBATSKOY SERGE ALEXANDER FORT WORTH TEX US
Inventor(s): (std):	SCHERBATSKOM SERGE A ; SCHERBATSKOY S ; SCHERBATSKOY SERGE A ; SCHERBATSKOY SERGE ALEXANDER ; SERGE A SCHERBATSKOM ; SERGE ALEXANDER SCHERBATSKOY ; SERGE A SCHERBATSKOY ; CALLAHAN MICHAEL
Inventor(s):	SCHERBATSKOY SERGE ALEXANDER FORT WORTH TEX ; ALEXANDER SCHERBATSKOY SERGE ; MICHAEL CALLAHAN

Title: Formation-tailored method and apparatus for uniformly heating long subterranean intervals at high temperature

Abstract: Source: US4570715A Long intervals of subterranean earth formations are heated at high temperatures for long times with an electrical heater containing spoolable, steel sheathed, mineral insulated cables which have high electrical conductivities, enabling them to heat the earth formations at a substantially uniform rate of more than about 100 watts per foot at temperatures between about 600 DEG and 1000 DEG C., with a pattern of localized electrical **resistances** which are correlated with the heat conductivities of the earth formations and the heat stabilities of materials providing power and support for the heater.

Classifications:

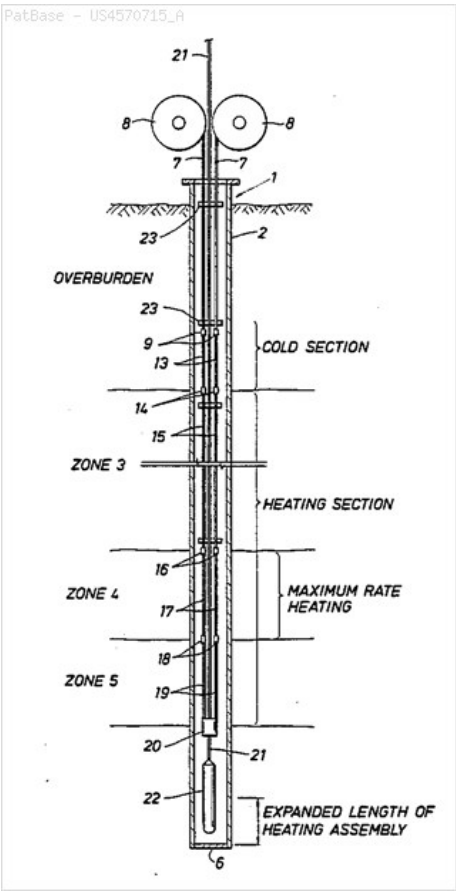
International (IPC 8-9): E21B19/22 E21B23/14 E21B36/04 (Advanced/Invention); E21B19/00 E21B23/00 E21B36/00 (Core/Invention)

International (IPC 1-7): E21B23/00 E21B36/00 E21B36/04 E21B43/24

CPC: E21B19/22 E21B23/14 E21B36/04

European: E21B19/22 E21B23/14 E21B36/04

US: 166/302 166/385 166/60 166/65.1 166/651 166/72 219/415 392/301 392/305



Family:

Publication number	Publication date	Application number	Application date
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Priority:

US19840597764 19840406 AU19850050059 19851119

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL INT RESEARCH ; SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; SHELL INT RESEARCH MIJ BV ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V

Inventor(s): (std): EGMOND CORNELIS FRANCISCUS HEN ; VAN EGMOND COR F ; VAN MEURS PETER ; VANMEURS PETER

Inventor(s): VAN EGMOND CORNELIS FRANCISCUS HENRICUS ; PETER VANMEURS ; CORNELIS FRANCISCUS HENRICUS VAN EGMOND ; CORNELIS FRANCISCUS HENRRICUS VAN EGMOND

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD

Title: BOREHOLE LIQUID ACOUSTIC WAVE TRANSDUCER

Abstract: Source: US5283768A A transducer is described especially designed for use in providing acoustic transmission in a borehole. The transducer includes a multiple number of magnetic circuit gaps and electrical windings that have been found to provide the power necessary for acoustic operation in a borehole while still meeting the stringent dimensional criteria necessitated by boreholes. Various embodiments conforming to the design are described. Moreover, the invention includes transition and reflector sections, as well as a directional coupler and resonator arrangement particularly adapted for borehole acoustic communication.

Classifications:

International (IPC 8-9): E21B47/10 E21B47/12 E21B47/14 E21B47/16 E21B47/18 G01V3/34 G08C23/00 G08C23/02 H04R11/00 (Advanced/Invention); E21B47/10 E21B47/12 G01V3/18 G08C23/00 (Core/Invention)

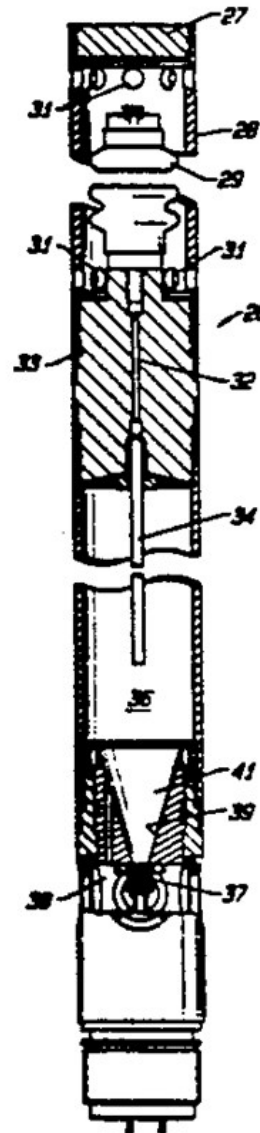
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European: E21B47/10D E21B47/12C4 E21B47/16 E21B47/18 E21B47/18C E21B47/18P G08C23/00 G08C23/02 S08C201/510

US: 181/105 340/854.3 340/854.4 340/856.4 367/35 367/57 367/83 367/912 73/726

PatBase - US5283768_A



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Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): BAKER HUGHES INC ; GIBBONS FRANK L ; PATEL ASHOK NMI ; OWENS STEVEN C ; LEGGETT JAMES V III ; RORDEN LOUIS H

Assignee(s): GIBBONS FRANK LINDSAY ; BAKER HUGHES INC A CORP OF DELAWARE ; DEVELCO INC ; DEVELCO INC A CORP OF CA

Inventor(s): (std): ASHOK PATEL ; GIBBONS FRANK L ; GIBBONS FRANK LINDSAY ; LEGGETT III ; LEGGETT III JAMES V ; LEGGETT III JAMES V RORDEN LOU ; OWENS STEVEN C ; OWENS STEVEN CRATUS ; PATEL ASHOK ; PATEL ASHOK NMI ; RORDEN LOUIS H ; RORDEN LOUIS HAROLD ; LEGGETT JAMES V ; LEGGETT JAMES V III ; LINDSAY GIBBONS FRANK

Inventor(s): LOUIS H RORDEN ; STEVEN CRATUS OWENS ; LEGGETT III JAMES V RORDEN LOUIS H ; JAMES V LEGGETT III ; FRANK LINDSAY GIBBONS ; LEGGETT III JAMES VRORDEN LOUIS H

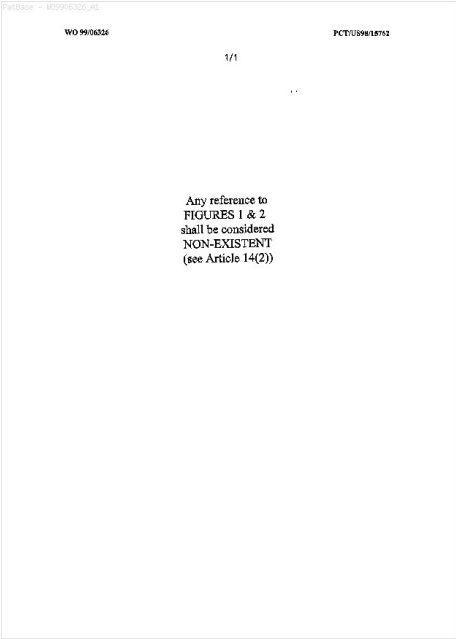
Agent(s): GOWLING LAFLEUR HENDERSON LLP

Title: METHOD FOR REDUCING HYDROGEN SULFIDE LEVEL IN WATER CONTAINING SULFATE-REDUCING BACTERIA AND HYDROGEN SULFIDE-METABOLIZING BACTERIA

Abstract: Source: US6309597B A method for reducing the level of hydrogen sulfide in water containing sulfur-reducing bacteria and hydrogen sulfide-metabolizing bacteria by addition of an aqueous solution of metallic nitrogen oxides and small particles of water-insoluble polycyclic quinones.

Classifications:

International (IPC 8-9): A01N31/06 A01N35/06 C02F1/50 C02F1/68 C02F3/28 C02F3/34 C07C50/18 C09K8/52 C09K8/54 C12N9/99 C23F15/00 E21B41/02 (Advanced/Invention); A01N31/00 A01N35/00 C02F1/50 C02F1/68 C02F3/28 C02F3/34 C07C50/00 C09K8/52 C09K8/54 C12N9/99 C23F15/00 E21B41/00 (Core/Invention)
International (IPC 1-7): A01N35/06 C02F C02F1/50 C02F1/68 C02F3/28 C02F3/34 C07C50/18 C12N9/99 C23F11/12 E21B41/02
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US: 210/764 422/14 422/28



Family:

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Probable Assignee: ARKION LIFE SCIENCES

Assignee(s): (std): ARKION LIFE SCIENCES ; ARKION LIFE SCIENCES LLC ; DVC INC ; DCV INC

Assignee(s): BURGER EDWARD DANIEL ; BRISTOL MYERS SQUIBB COMPANY ; KIMBERLY CLARK LIMITED ; ARKION LIFE SCIENCES
QUILLEN BUILDING ; BIO TECHNICAL RESOURCES LP

Inventor(s): (std): EDWARD DANIEL BURGER ; HELLER D ; HELLER J ; HELLER JOHNATHAN D ; HELLER KENNETH J ; JOHNATHAN D HELLER ;
KENNETH E BALLINGER JR ; KENNETH J HELLER ; KNAUER ROBERT F ; BALLINGER E ; BALLINGER JR KENNETH E ;
BALLINGER KENNETH E JR ; BURGER E D ; BURGER EDWARD D ; E D BURGER ; BURGER EDWARD DANIEL

Inventor(s): BALLINGER KENNETH E ; EDWARD D BURGER ; ROBERT F KNAUER

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; GOODMAN'S LLP; ALVARO CORREA ORDONEZ

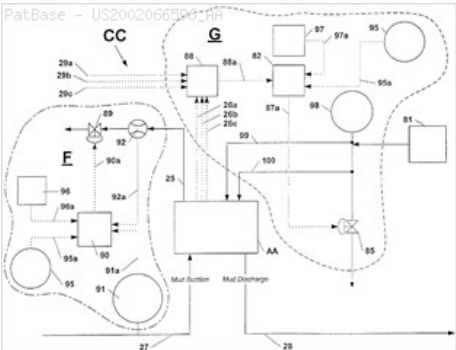
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NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Title: SUBSEA MUD PUMP AND CONTROL SYSTEM

Abstract: Source: US2002066596A The invention is a subsea pump that includes pumping elements, each pumping element including a pressure vessel with a first and a second chamber therein and a separating member disposed between the first and second chambers. The first and second chambers are hydraulically connected to receive and discharge a hydraulic fluid and a drilling fluid, respectively. The separating member moves within the pressure vessel in response to a pressure differential between the first and second chambers. A hydraulic power supply is arranged to pump the hydraulic fluid to the first chamber of each of the pumping elements. A valve assembly is hydraulically coupled to the first chambers of the plurality of pumping elements and to the hydraulic power supply. Volume measurement devices are arranged to measure volumes of each of the first chambers and the second chambers. A valve controller is connected to the valve assembly and to the volume measurement devices, and the valve controller is arranged to control a rate and timing of a **flow** of the hydraulic fluid into the first chambers and a rate and timing of a **flow** of the hydraulic fluid out of the first chambers in response to the volume measurements. The valve controller is configured to maintain at least one of a substantially constant pump inlet pressure, a substantially constant pump discharge pressure, and a substantially constant total volume of the first chambers.

Classifications:

International (IPC 8-9): E21B15/02 E21B17/00 E21B21/00 E21B21/01 E21B21/08 E21B33/08 E21B43/36 E21B7/128 F04B17/00 F04B19/00 F04B19/20 F04B43/06 F04B43/10 (Advanced/Invention); E21B17/00 E21B21/00 E21B33/02 E21B43/34 E21B7/12 F04B19/00 F04B43/06 (Core/Invention)
International (IPC 1-7): C09K7/00 E21B E21B1/00 E21B15/02 E21B17/00 E21B19/09 E21B21/00 E21B21/06 E21B21/10 E21B33/08 E21B7/12 E21B7/128 F04B17/00 F04B19/20 F04B35/02 F04B43/073 F04B43/10 F04B9/117
CPC: Y10T137/87217 Y10T137/86027 Y10T137/86059 E21B21/08 E21B21/001 E21B21/01 E21B33/085 E21B43/36 E21B2021/006 F04B19/003 F04B43/06
European: E21B21/00A E21B21/01 E21B21/08 E21B33/08B E21B43/36 F04B19/00F F04B43/06 P21B21/00U
US: 137/565.16 137/565.19 137/596.17 138/31 166/350 166/359 166/367 166/374 166/84.4 166/84.5 166/845 175/206 175/207 175/207S 175/213 175/214 175/216 175/217 175/218 175/5 175/7 175/70 220/721 251/129.07 251/282 251/324 251/331 417/390 417/392 417/395 417/521 417/533



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Publication number	Publication date	Application number	Application date
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EP1082515 B1	20050309	EP19990915060	19990326
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Priority:

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Probable Assignee: HYDRIL USA MFG LLC

Assignee(s): (std): HYDRIL CO ; PETERMAN CHARLES P ; HYDRIL USA MFG LLC

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Agent(s): BORDEN LADNER GERVAIS LLP; OSHA AND MAY LLP

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZA ZW

Title: ROTARY DRILL BIT DESIGN METHOD

Abstract: Source: US2002033077A A method for use in designing rotary drill bits comprises determining locations in which cutters are to be provided, determining likely wear rates for cutters positioned at those locations, and using the likely wear rates to chose between relatively high and relatively low wear rate cutters for each location. The cutters all have substantially the same impact toughness.

Classifications:

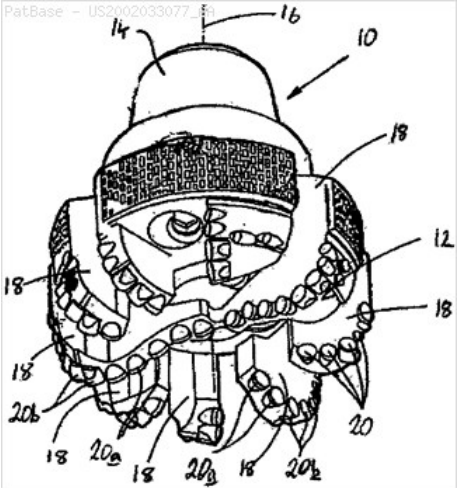
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International (IPC 1-7): B01J3/06 B05D1/40 B05D3/04 B21K5/04 B22F7/06 B23B B23B B23B27/14 B23B27/20 B23H9/00 B32B15/00 B32B15/04 B32B27/14 B32B9/00 C03C27/04 C04B35/32 C04B35/52 C04B37/02 C04B41/53 C04B41/88 C04B41/91 C23C16/26 E21B10/00 E21B10/36 E21B10/42 E21B10/46 E21B10/50 E21B10/56 E21B10/60 E21B34/08 E21B4/00 E21B4/02 E21B7/04 E21B7/06 E21B7/08 F16C33/04 **CPC:** C04B2235/75 C04B35/6303 C04B2235/5436 C04B2235/5481 C04B2235/425 C04B2235/616 C04B2235/5472 C04B37/026 C04B2237/704 C04B2237/61 C04B2237/765 C04B2235/656 C04B2235/6562 C04B2235/6587 C04B2237/123 C04B2237/40 C04B2237/52 C04B2237/55 C04B2237/582 C04B2237/586 C04B2237/76 E21B10/567 C04B35/645 C04B2235/3206 C04B2235/3208 C04B2235/3213 C04B2235/3215 C04B2235/405 C04B2235/427 C04B2235/442 C04B2237/401 F16C33/043 B22F2003/244 C04B37/021 E21B10/006 E21B10/43 E21B10/5673 E21B10/5676 E21B10/5735 E21B10/602 C04B41/91 B22F7/06 B22F2005/001 B22F2998/00 B22F2999/00 C04B35/52 C04B41/459 C04B41/53 C04B41/81 E21B21/10 E21B2010/566 F16C33/04 F16K25/005 C04B41/009 B23B27/145 C04B2237/363 F16C2206/04 Y10T407/27 Y10T428/12493 Y10T428/12625 Y10T428/24942 Y10T428/26 Y10T428/265 Y10T428/30 C04B37/001 C04B2237/36

European: B22F7/06 B23B27/14B4 C04B35/52 C04B37/02B C04B41/00V C04B41/45T C04B41/53 C04B41/81 C04B41/91 E21B10/00S E21B10/42D E21B10/43 E21B10/54B E21B10/567B E21B10/567D E21B10/56B E21B10/56B3 E21B10/56B5 E21B10/56B7B E21B10/573B E21B10/60B E21B21/10 E21B7/18 F16C33/04 F16C33/04C F16K25/00B L22F3/24C4 L22F5/00C L22F998/00 L22F999/00 P21B10/56B9 **US:** 166/317 175/107 175/327 175/374 175/420.2 175/420.2005 175/425 175/426 175/428 175/431 175/433 175/434 175/45 175/73 175/73S 175/74 205/181 216/100 216/56 216/96 219/69.17 219/69.170P 407/119 407/119S 423/446 423/446P 427/247.7 427/249.1 427/250 427/331 427/331S 427/337 427/343 428/212 428/332 428/332P 428/332S 428/336 428/336P 428/408 428/408P 428/408S 428/469 428/469S 428/472 428/472S 428/615 428/615S 428/634 428/634P 428/698 428/698S 51/295 51/307 51/309 75/743 75/753 76/108.1 76/108.100S 76/108.2 76/108.200P 76/108.4 76/108.400S

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Priority:

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Assignee(s): (std): CAMCO INT UK LIMITED ; CAMCO INT UK LTD ; CAMCO INTERNAT U K LTD ; CAMCO INTERNAT UK LTD ; CAMCO

INTERNAT UK LIMITED ; CAMCO INT U K LTD ; GRIFFIN NIGEL DENNIS ; HUGHES PETER RAYMOND ; GRANT PRIDECO L P ; GRANT PRIDECO LP ; KAMKO INTERNESHNL JUK LTD ; SCHLUMBERGER HOLDINGS ; SCHLUMBERGER CA LTD ; SCHLUMBERGER SERVICES PETROL ; REEDHYCALOG UK LTD ; REEDHYOALOG UK LTD ; SCHLUMBERGER WCP LTD

Assignee(s): SCHLUMBERGER CANADA LIMITED ; SCHLUMBERGER HOLDINGS LIMITED ; REEDHYCALOG UK LIMITED ; REEDHYOALOG UK LIMITED ; SCHLUMBERGER HOLDINGS LTD ; REEDHYCALOG LTD ; REEDHYOALOG LTD ; SCHLUMBERGER CANADA LTD ; SERVICES PETROLIERS SCHLUMBERGER ; CAMGO INT UK LTD ; COLEBROOK MARK ; GRIFFITH NIGEL DENNIS ; DEUTSCHE BANK TRUST CO ; REED HYCALOG OPERATING LP ; KAMKO INTERNESHNL JUK LIMITED ; COLEBROOK MARK A ; GRIFFIN NIGEL D ; HUGHES PETER R ; DEUTSCHE BANK TRUST CO AMERICAS ; MATTHIAS TERRY R ; CAMGO INT (UK) LTD ; CAMGO INTIONAL ; KAMKO INTERNESHNL LTD ; CAMCO INT ; CAMCO INT (UK) LTD ; CAMCO INT LTD ; CAMCO INTIONAL ; CAMGO INT ; CAMCO INT UK LTD STONEHOUSE ; CAMCO INTERNATIONAL UK LTD ; CAMCO INTERNATIONAL UK LIMITED ; CAMCO INTERNATIONAL UK LIMITED ; CAMCO INTERNATIONAL U K LIMITED ; CAMCO INTERNATIONAL UK LTD STONEHOUSE

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Agent(s): GRIFFITH HACK; MARKS AND CLERK; BAILEY RICHARD ALAN; REINHOLD COHN AND PARTNERS; JEFFREY E DALY GRANT PRIDECO LP; JEFFERY E

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

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Priority:

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Probable Assignee: SHELL OIL CO

Assignee(s): (std): KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; CRANE STEVEN DEXTER ; DE ROUFFIGNAC ERIC PIERRE ; MESSIER MARGARET ANN ; ROBERTS BRUCE EDMUNDS ; SUMNU DINDORUK MELIHA DENIZ ; SHELL OIL CO ; VINEGAR HAROLD J ;

SHELL INT RESEARCH ; SHELOIL COMPANY ; SHELL OIL CO SHELL CANADA LTD ; SHELL CANADA LTD ; SHELL INTERNAT RES CO LTD ; SHELL INT RESEARCH CO LTD ; SHELOIL CO ; WELLINGTON SCOTT LEE

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Inventor(s): VINEGAR HAROLD ; VAN KHARDEVEL'D ROBERT MARTIJN ; VAN ROBERT C ; STONE FRANCIS M ; SCOTT LEE WELLINGTON ; ROUFFIGNAC ERIC PD ; RONNIE WADE WATKINS ; ROBERT CHARLES RYAN ; ROBERT MARTIJN VAN HARDEVELD ; RAJAN ROBERT CHARL'Z ; PRATT KRISTOFER ARNOL'D ; PALFREJMAN BRJUS DONAL'D ; KOULZ DZHON MEHT'JU ; LANNY GENE SCHOELING ; KERS JOHN MICHAEL ; KEVIN ALBERT MAHER ; JOHN MICHAEL WARD ; DEMARTINA DAVID CHARL'Z ; JAMES L MELODY ; HAROLD J VINEGAR ; FREDERICK J G KARL ; FREDERICK JG KARL ; GEORGE LEO STEGEMEIER ; ERIC PIERRE DE ROUFFIGNAC ; DE RUFFIN'JAK EHRIK P'ER ; DE ROUFFIGNAC ERIC PIERREUS ; BLUS GH ; BRUCE DONALD PALFREYMAN ; BILLY JOHN MCKINZIE ; CRISTOPH AP ; DANNIE ANTOINE AYMOND ; BERCHENKO ILIJA EHMIL' ; AJAY MADHAV MADGAVKAR ; BASS RONALD ; ANTONY TK

Agent(s): SPRUSON AND FERGUSON; SMART AND BIGGAR; REINHOLD COHN AND PARTNERS; DELCHRISTENSEN, SHELL OIL COMPANY; SHELL OIL COMPANY; SHELL OIL CO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Title: IN SITU THERMAL PROCESSING OF A HEAVY OIL DIATOMITE FORMATION

Abstract: Source: US2003173082A An in situ process for treating a diatomite formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

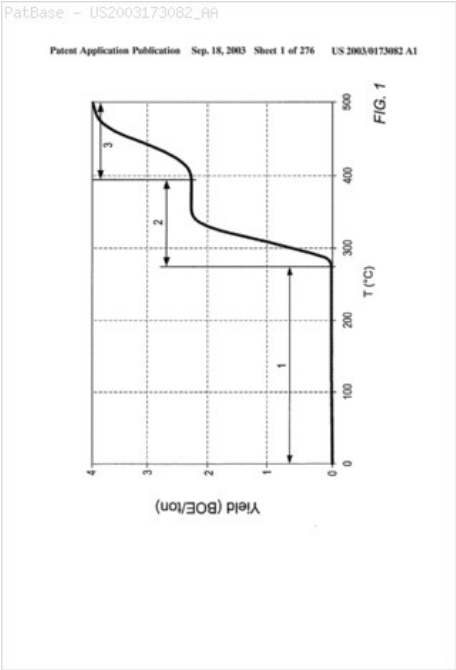
International (IPC 8-9): E21B43/24 E21B43/243 E21B43/30 E21B47/00 (Advanced/Invention); E21B43/00 E21B43/16 E21B47/00 (Core/Invention)

International (IPC 1-7): E21B43/24

CPC: E21B43/243

European: E21B43/243

US: 166/245 166/250.01 166/272.1 166/272.2 166/302 166/308.1



Family:

Publication number	Publication date	Application number	Application date
US2003173082 AA	20030918	US20020279293	20021024
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Priority:

US20010337476P 20011024 US20010338788P 20011024 US20020375011P 20020424
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Probable Assignee: SHELL OIL CO

Assignee(s): (std): BERCHENKO ILYA EMIL ; KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE ; SHAHIN GORDON THOMAS ; SHELL OIL CO ; VINEGAR HAROLD J ; STEGEMEIER GEORGE LEO ; WELLINGTON SCOTT LEE

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): KARANIKAS JOHN MICHAEL ; MAHER KEVIN ALBERT ; ROUFFIGNAC ERIC PIERRE DE ; SHAHIN GORDON THOMAS ; SHAHIN JR GORDON THOMAS ; STEGEMEIER GEORGE LEO ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; BERCHENKO ILYA EMIL ; DE ROUFFIGNAC ERIC PIERRE

Inventor(s): JR GORDON THOMAS ; SHAHIN

Title: IN SITU THERMAL PROCESSING OF AN OIL RESERVOIR FORMATION

Abstract: Source: US2003173081A An in situ process for treating an oil containing formation is provided. The process may include providing heat from one or more heaters to at least a portion of the formation. The heat may be allowed to transfer from the one or more heaters to a part of the formation such that heat from the one or more heat sources pyrolyzes at least some hydrocarbons within the part. Hydrocarbons may be produced from the formation.

Classifications:

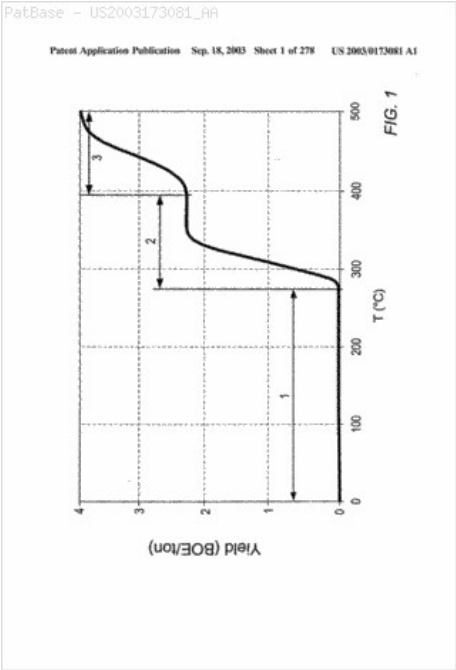
International (IPC 8-9): E21B43/24 E21B43/243 E21B43/40 E21B47/00 (Advanced/Invention); E21B43/16 E21B43/34 E21B47/00 (Core/Invention)

International (IPC 1-7): E21B43/24

CPC: E21B43/243

European: E21B43/243

US: 166/245 166/250.01 166/263 166/266 166/267 166/272.1 166/272.3 166/272.6 166/272.7 166/302 166/303 166/50



Family:

Publication number	Publication date	Application number	Application date
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US7077199 BB	20060718	US20020279230	20021024

Priority:

US20010338625P 20011024 US20010338695P 20011024 US20020374939P 20020424
US20020279230 20021024 US20020374998P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): BERCHENKO ILYA EMIL ; DE ROUFFIGNAC ERIC P ; FOWLER THOMAS DAVID ; RYAN ROBERT CHARLES ; SHELL OIL CO ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; ZHANG ETUAN

Assignee(s): SHELL OIL COMPANY

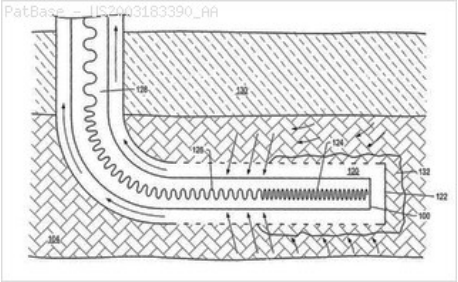
Inventor(s): (std): BERCHENKO ILYA EMIL ; DE ROUFFIGNAC ERIC P ; FOWLER THOMAS DAVID ; RYAN ROBERT CHARLES ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; ZHANG ETUAN

Title: METHODS AND SYSTEMS FOR HEATING A HYDROCARBON CONTAINING FORMATION IN SITU WITH AN OPENING CONTACTING THE EARTH'S SURFACE AT TWO LOCATIONS

Abstract: Source: US2003183390A In an embodiment, a method for heating a hydrocarbon containing formation may include providing heat from one or more heaters to an opening in the formation. A first end of the opening may contact the earth's surface at a first location and a second end of the opening may contact the earth's surface at a second location. The heat may be allowed to transfer from the opening to at least a part of the formation. The transferred heat may pyrolyze at least some hydrocarbons in the formation. In certain embodiments, providing the heat to the opening may include providing heat, heated materials, and/or oxidation products from at least one heater to the opening.

Classifications:

International (IPC 8-9): B09C1/02 B09C1/06 C10G45/00 C10G9/24 E21B17/02 E21B36/00 E21B36/02 E21B43/16 E21B43/24 E21B43/243 E21B43/30 E21B44/00 E21B47/02 E21B47/022 E21B47/10 E21B7/04 G01V3/26 (Advanced/Invention)
International (IPC 1-7): E21B36/00
CPC: E21B43/2401 Y10T137/0391 E21B43/305 B09C1/02 B09C1/06 B09C2101/00 C10G9/24 C10G45/00 E21B17/028 E21B43/168 E21B43/24 E21B43/243 E21B47/02208 G01V3/26 Y10S210/901 Y02P30/30 Y02P30/44
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US: 166/250.01 166/272.7 166/302 166/313 166/384 166/50 166/59 175/45 175/53 175/61 175/62 405/154.1 405/184 405/184.1



Family:

Publication number	Publication date	Application number	Application date
US2003183390 AA	20031002	US20020279292	20021024
US7063145 BB	20060620	US20020279292	20021024

Priority:

US20010334568P 20011024 US20010337136P 20011024 US20020279292 20021024
US20020374970P 20020424 US20020374995P 20020424

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL OIL CO

Assignee(s): SHELL OIL COMPANY ; VEENSTRA PETER ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE ; DE ROUFFIGNAC ERIC PIERREUS ; KARANIKAS JOHN MICHAEL

Inventor(s): (std): DE ROUFFIGNAC ERIC PIERRE ; DE ROUFFIGNAC ERIC PIERREUS ; KARANIKAS JOHN MICHAEL ; VEENSTRA PETER ; VINEGAR HAROLD J ; WELLINGTON SCOTT LEE

Title: STAGED AND/OR PATTERNED HEATING DURING IN SITU THERMAL PROCESSING OF A HYDROCARBON CONTAINING FORMATION

Abstract: Source: US2004140095A A method for treating a hydrocarbon containing formation is described. The method for treating a hydrocarbon containing formation may include heating a first volume of the formation using a first set of heaters. A second volume of the formation may be heated using a second set of heaters. The first volume may be spaced apart from the second volume by a third volume of the formation. The first volume, second volume, and/or third volume may be sized, shaped, and/or located to inhibit deformation of subsurface equipment caused by geomechanical motion of the formation during heating.

Classifications:

International (IPC 8-9): E21B36/00 E21B36/02 E21B36/04 E21B43/00 E21B43/16 E21B43/18 E21B43/24 E21B43/243 E21B43/30 E21B47/00 E21B47/06

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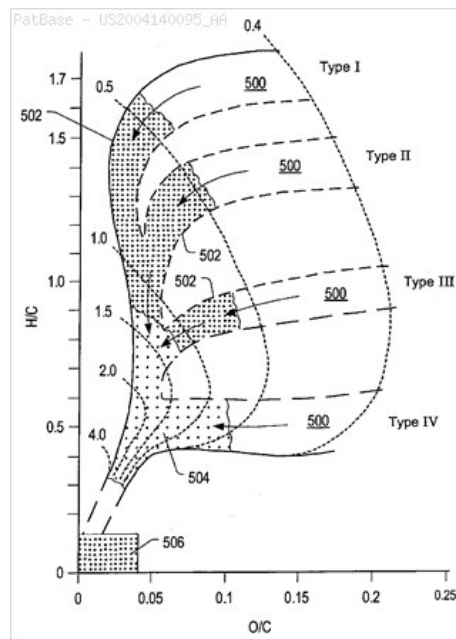
E21B36/00 E21B43/00 E21B43/16 E21B47/06 (Core/Invention)

International (IPC 1-7): E21B36/00 E21B36/02 E21B36/04 E21B43/00 E21B43/24 E21B43/30 E21B7/04 E21B7/15 G01V1/00 H05B3/02

CPC: H05B2214/03 E21B36/008 E21B47/00 E21B47/06 E21B47/065 E21B36/00 E21B36/001 E21B43/006 E21B43/243 E21B36/02 E21B36/04 E21B43/24 E21B43/2401

European: E21B36/00 E21B36/00B E21B36/00M E21B36/02 E21B36/04 E21B43/00M E21B43/24 E21B43/243 E21B43/24B

US: 166/245 166/250.01 166/252.1 166/252.100P 166/256 166/266 166/268 166/285 166/292 166/302 166/305.1 166/369 166/57 166/57S 166/59 166/6 166/60 166/60S 166/65.1 166/65.100S 166/66 175/45 175/61 367/37 392/301 392/301P 392/469 405/129.35 405/52



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Assignee(s): SON JAIME SANTOR ; SHEL OIL CO ; SHELL OIL COMPANY ; SHELL INT RESEARCH MIJ BV ; CARL FREDRICK GORDON ; CARL FREDERICK GORDON JR ; RAMBOW FREDERICK HENRY KREISLER

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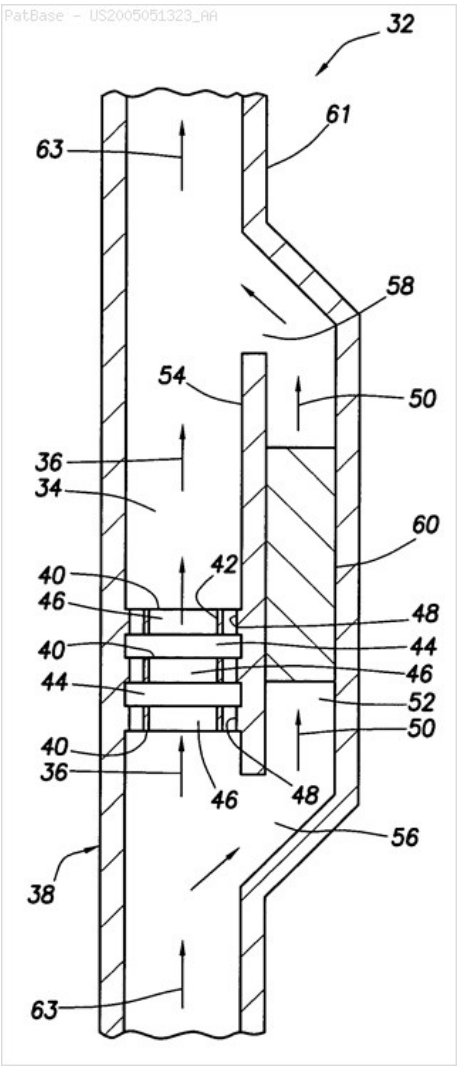
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DAVIES COLLISON CAVE; SMART AND BIGGAR; REINHOLD COHN AND PARTNERS; DEL CHRISTENSEN SHELL OIL CO;
SHELL OIL COMPANY; SHELL OIL CO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE
EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA
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Title: BOREHOLE DISCONTINUITIES FOR ENHANCED POWER GENERATION

Abstract: Source: US2005051323A An enhanced electrical power generating system. In a described embodiment, an electrical power generating system for use in a subterranean well includes a flow passage formed through a tubular string in the well, a flow region in communication with, and laterally offset relative to, the flow passage, an electrical power generator operative in response to flow of fluid through the flow region and multiple flow restrictors in the flow passage. The flow restrictors are operative to influence at least a portion of the fluid to flow from the flow passage through the flow region.

Classifications:
International (IPC 8-9): E21B41/00 E21B43/00 (Advanced/Invention); E21B41/00 (Core/Invention)
International (IPC 1-7): E21B41/00 E21B43/00 E21B43/012 F03B13/00 F03B13/10
CPC: E21B41/0085 E21B41/00 E21B43/00
European: E21B41/00 E21B41/00R E21B43/00
US: 166/65.1 290/54



Family:

Publication number	Publication date	Application number	Application date
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AU2004208727 BB	20100617	AU20040208727	20040906
BRPI0403840 A	20050503	BR2004PI03840	20040901
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US2005051323 AA	20050310	US20030658899	20030910
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Priority:

US20030658899 20030910 CA20042480540 20040902

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Assignee(s): HALLIBURTON ENERGY SERVICE INC ; VANSCHOOR MARTHINUS

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Inventor(s): SCHULTZ ROGER ; JOHN RODGERS ; ROGER LYNN SCHULTZ ; FRIPP MICHAEL

Agent(s): CALLINANS ; FISHER ADAMS KELLY CALLINANS ; OGILVY RENAULT LLP SENCRL SRL ; KONNEKER AND SMITH P C ; MARLIN R

Title: START-UP OF TEMPERATURE LIMITED HEATERS USING DIRECT CURRENT (DC)

Abstract: Source: US2005269077A Certain embodiments provide a method for heating a subsurface formation. The method includes applying direct electrical current (DC) to a heater section below a first selected temperature to provide an electrically resistive heat output. The heater section includes one or more electrical conductors electrically coupled to the electrical power supply. The heater section is configured to be placed in an opening in the formation. At least one of the electrical conductors includes ferromagnetic material. Time-varying current is applied to the heater section when a temperature of the heater section approaches or is above the selected temperature. Heat is allowed to transfer from the heater section to a part of the subsurface formation.

Classifications:

International (IPC 8-9): E21B29/00 E21B36/00 E21B36/04 E21B43/00 E21B43/12 E21B43/24 E21B43/263 E21B43/30 E21B43/34 E21B43/38 E21B49/00 E21B7/15 H05B3/00 H05B3/10 H05B3/12 H05B3/14 H05B3/40 H05B6/10

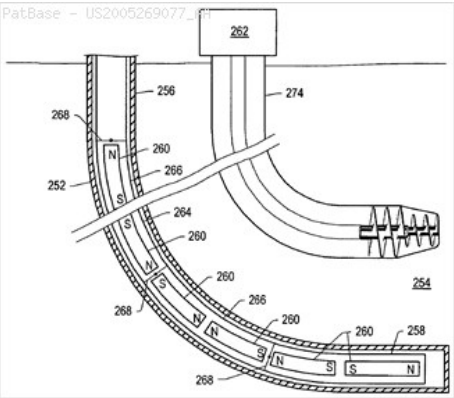
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E21B H05B (Subclass/Invention)

International (IPC 1-7): E21B29/00 E21B36/04 E21B43/00 E21B43/12 E21B43/24 E21B43/30 E21B43/38 H05B3/10 H05B3/14 H05B6/10

CPC: E21B36/04 E21B43/12 E21B43/122 E21B43/24 E21B43/2401 E21B43/2405 E21B43/38 H05B3/141

European: E21B36/04 E21B43/12 E21B43/12B2 E21B43/24 E21B43/24B E21B43/24K E21B43/38 H05B3/14C

US: 166/105 166/106 166/242.1 166/248 166/249 166/250.02 166/250.08 166/254.1 166/265 166/272.1 166/272.2 166/297 166/299 166/302 166/308.1 166/369 166/371 166/372 166/57 166/60 166/62 166/63 192/301 219/542 219/552 219/772 392/301 392/301S 392/306



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Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: SHELL OIL CO

Assignee(s): (std): BAI TAI XU ; FAIRBANKS MICHAEL D ; FAIRBANKS MICHAEL DAVID ; HARRIS CHRISTOPHER K ; HARRIS CHRISTOPHER KELVIN ; SANDBERG CHESTER L ; SHELL INT RESEARCH ; KREISLER RAMBOW FREDERICK H ; KIM DONG S ; PASTOR SANZ GUILLERMO ; RAMBOW FREDERICK HENRY KREISLE ; KIM DONG SUB ; SANDBERG CHESTER LEDLIE ; SHELL OIL CO ; VINEGAR HAROLD J ; SHELL INTERNAT RES CO LTD ; SHELL INT RESEARCH CO LTD

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: FLOW PATH CONTROL BASED ON FLUID CHARACTERISTICS TO THEREBY VARIABLY RESIST FLOW IN A SUBTERRANEAN WELL

Abstract: Source: US2011042091A A system for variably resisting flow of a fluid composition can include a flow passage and a set of one or more branch passages which intersect the flow passage, whereby a proportion of the fluid composition diverted from the passage to the set of branch passages varies based on at least one of a) viscosity of the fluid composition, and b) velocity of the fluid composition in the flow passage. Another variable flow resistance system can include a flow path selection device that selects which of multiple flow paths a majority of fluid flows through from the device, based on a ratio of desired fluid to undesired fluid in the fluid composition. Yet another variable flow resistance system can include a flow chamber, with a majority of the fluid composition entering the chamber in a direction which changes based on a ratio of desired fluid to undesired fluid in the fluid composition.

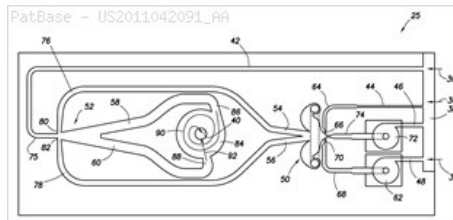
Classifications:

International (IPC 8-9): E21B21/08 E21B34/06 E21B34/08 E21B34/10 E21B43/00 E21B43/08 E21B43/12 E21B43/14 E21B43/16 E21B43/32 F15C1/00 F15C1/08 F15C1/16 F16L55/027 (Advanced/Invention)

CPC: E12B34/06 E21B43/12 E21B43/14 E21B43/32 F15C1/16 E21B43/08 Y10T137/2098 Y10T137/2104 Y10T137/2125 Y10T137/2245 E21B34/08 E21B34/06 Y10T137/2065 Y10T137/2076 Y10T137/2087 Y10T137/212

European: E21B34/08 E21B43/08 E21B43/12 E21B43/14 E21B43/32

US: 137/804 137/806 137/808 137/810 137/811 137/814 137/815 137/837 138/40 138/40S 166/205 166/205S 166/305.1 166/316 166/316S 166/319 166/320 166/373 166/386



Family:

Publication number	Publication date	Application number	Application date
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AU2010284478 BB	20130207	AU20100284478	20100804
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Priority:

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Assignee(s): HALLIBURTON ENERGY SERVICE INC

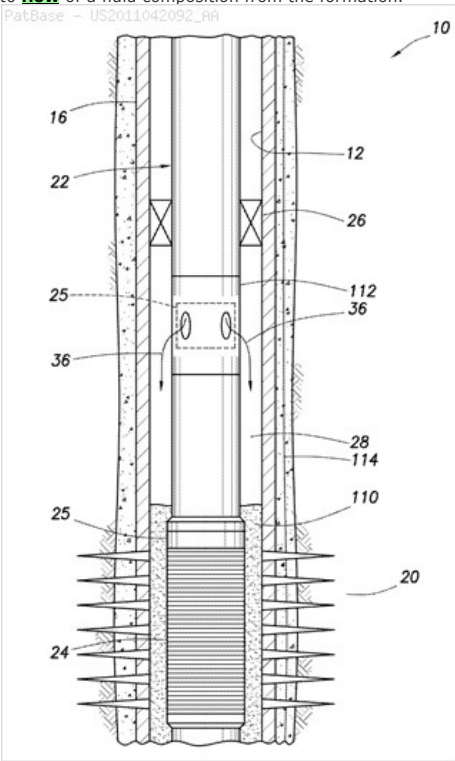
Inventor(s): (std): DAJKSTRA DZHEJSON D ; DE JESUS ORLANDO ; DYKSTRA JASON D ; FRIPP MAJKL L ; FRIPP MICHAEL L ; HAMID SYED ; KHAMID SIED ; LINLEY FRIPP MICHAEL ; LUKE HOLDERMAN ; ORLANDO DEJESUS ; SYED HAMID ; HOLDERMAN LUKE ;

	Inventor(s): GANO JOHN C ; FRIPP MICHAEL LINLEY ; DEJESUS ORLANDO Agent(s): MICHAEL L FRIPP ; MICHAEL LINLEY FRIPP ; ORLANDO DE JESUS ; JASON D DYKSTRA ; JOHN C GANO Designated states: CALLINANS; FISHER ADAMS KELLY CALLINANS; NORTON ROSE CANADA SENCRL SLL RLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; LUZ HELENA ADARVE GOMEZ; BENNETT ADRIAN ROBERT J; DREW AND NAPIER LLC; SMITH IP SERVICES PC; BOOTH ALBANESI SCHROEDER LLC; SCOTT; SMITH MARLIN R; SCHROEDER PETER V
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Title: **ALTERNATING FLOW RESISTANCE INCREASES** AND **DECREASES** FOR PROPAGATING PRESSURE PULSES IN A SUBTERRANEAN WELL

Abstract: Source: US2011042092A A method of propagating pressure pulses in a well can include **flowing** a fluid composition through a variable **flow resistance** system which includes a vortex chamber having at least one inlet and an outlet, a vortex being created when the fluid composition spirals about the outlet, and a **resistance to flow** of the fluid composition **alternately** increasing and decreasing. The vortex can be **alternately** created and dissipated in response to **flowing** the fluid composition through the system. A well system can include a variable **flow resistance** system which propagates pressure pulses into a formation in response to **flow** of a fluid composition from the formation.

Classifications:
International (IPC 8-9): E21B21/08 E21B34/06 E21B34/08 E21B43/12 F16L55/027 (Advanced/Invention)
CPC: Y10T137/2087 E21B34/08
European: E21B34/08
US: 137/808 138/42 138/42S 166/319 166/373 166/373S



Family:

Publication number	Publication date	Application number	Application date
US2011042092 AA	20110224	US20100792095	20100602
US8893804 BB	20141125	US20100792095	20100602
WO11022211 A2	20110224	WO2010US44421	20100804
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Priority:
US20090542695 20090818 US20100700685 20100204 US20100792095 20100602

Probable Assignee: HALLIBURTON ENERGY SERVICES INC
Assignee(s): (std): DYKSTRA JASON D ; FRIPP MICHAEL L ; HALLIBURTON ENERGY SERV INC
Assignee(s): HALLIBURTON ENERGY SERVICES INC
Inventor(s): (std): DYKSTRA JASON D ; FRIPP MICHAEL L
Agent(s): SMITH IP SERVICES PC; SMITH MARLIN R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW