



New connection on: : 05-09-2018 : 06:36:11 - Last disconnection on: : 05-09-2018 : 03:40:15

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi

Select a database: ..FI EPODOC

 Database: EPODOC

[EPODOC: SS 1] connect+ and seal+

Results in EPODOC 775.635

[SS 2] oil and well

Results in EPODOC 111.460

[SS 3] 1 and 2

Results in EPODOC 9.068

[SS 4] tub 5d casing 5d string

Only 2 operands can be combined with the <n>D, XOR, NOT, NOTS, NOTP, NOTL, NOTF operators. *ERROR*
(-50001)

[SS 4] casing 5d string

Results in EPODOC 5.059

[SS 5] 4 and 5

Non-existent or invalid SS number(s).
- Check with the command ..HI. When searching for numbers, use quotes e.g. "4" W WHEEL? *ERROR*
(-100803)

[SS 5] 3 and 5

Non-existent or invalid SS number(s).
- Check with the command ..HI. When searching for numbers, use quotes e.g. "4" W WHEEL? *ERROR*
(-100803)

[SS 5] 3 and 4

Results in EPODOC **113**

[SS 6] slip+

Results in EPODOC **342.229**

[SS 7] 5 and 6

Results in EPODOC **8**

[SS 8] ..v

[EPODOC: SS 8] ..li



1/8 © EPODOC / EPO

PN - [CN104975820](#) A 20151014

PNFP - CN104975820B B 20170711

PR - CN20151356111 20150625

AP - CN20151356111 20150625

DT - I

CT - || STSE (A)

[US3716101](#) A 19730213 [A] (MCGOWEN H, et al)

[A] 1-9

* 全文 *;

[US4393929](#) A 19830719 [A] (AKKERMAN NEIL H)

[A] 1-9

* 全文 *;

[CN2145861Y](#) Y 19931110 [A] (INST OF DRILLING AND EXTRACTIN [CN])

[A] 1-9

* 全文 *;

[CN2360594Y](#) Y 20000126 [A] (DRILLING AND EXTRACTION TECH I [CN])

[A] 1-9

* 全文 *;

[CN201057016Y](#) Y 20080507 [A] (DAGANG OILFIELD GROUP CO LTD [CN])

[A] 1-9

* 全文 *;

[CN201106434Y](#) Y 20080827 [A] (DAGANG OILFIELD GROUP CO LTD [CN])

[A] 1-9

* 全文 *;

[CN101942981](#) A 20110112 [A] (JINGZHOU SUNRISE ENERGY TECHNOLOGY CO LTD)

[A] 1-9

* 全文 *;

[CN202249918U](#) U 20120530 [A] (CHINA NAT PETROLEUM CORP, et al)

[A] 1-9

* 全文 *;

[US2012160523](#) A1 20120628 [A] (BURGOS HORACIO DANIEL [AR])

[A] 1-9

* 全文 *;
[CN202483505U](#) U 20121010 [A] (TIANJIN RENYUAN PETROLEUM TECHNOLOGY SERVICE CO LTD)
 [A] 1-9
 * 全文 *;
[CN102900394](#) A 20130130 [A] (CHINA NAT PETROLEUM CORP, et al)
 [A] 1-9
 * 全文 *;
[RU2483191](#) C1 20130527 [A] (TATNEFT IM V D SHASHINA AOOT [RU])
 [A] 1-9
 * 全文 *;
[CN203347735U](#) U 20131218 [A] (PUYANG DONGHAO MECHANICAL & ELECTRONIC CO LTD)
 [A] 1-9
 * 全文 *;
[CN104295261](#) A 20150121 [A] (PETROCHINA CO LTD)
 [A] 1-9
 * 全文 *;
[CN204716187U](#) U 20151021 [R] (SUNRISE ENERGY TECHNOLOGY CO LTD, et al)
 [R] 1-9
 * 权利要求1-9 *

PA - (A)
 SUNRISE ENERGY TECHNOLOGY CO LTD; BAZHOU BOTONG PETROLEUM TECHNOLOGY SERVICE CO LTD

TI - (A)
 Self-~~seal~~-examining **slip** packer

AB - (A)
 The invention relates to a self-~~seal~~-examining **slip** packer, and belongs to the field of oil-gas **well** operation downhole tools. The packer is composed of an inner center tube, an outer center tube, a **slip** and a **slip** sheath; an upper **connector** is installed at one end of the inner center tube through threads, a lower **connector** is installed at the other end of the inner center tube through threads, an inner piston sleeve, a releasing claw and the outer center tube are sequentially installed on the portion, between the upper **connector** and the lower **connector**, of the inner center tube, a balance **connector** is installed at one end of the inner piston sleeve through threads, an upper lining and a lower lining are sequentially installed on the portion, at the other end of the balance **connector**, of the inner piston sleeve, and a bypass **connector** is arranged between the upper lining and the lower lining; an upper guide ring is installed on the portion, at one side of the bypass **connector**, of the upper lining. Double packer element **sealing** is adopted in the packer in the setting process, **sealing** performance in the setting process is ensured, and the self-~~seal~~-examining **slip** packer is safer and more reliable, has the advantages of being easy and fast to operate and meets the requirement for blocking and partitioning an oil-string casing in oil field production.

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PN - [RU2473781](#) C1 20130127

PR - RU20110141366 20111012

AP - RU20110141366 20111012

DT - I

CT - || STSE (C1)

[RU2101461](#) C1 19980110 [] (NAGUMANOV MIRSAT MIRSALIMOVICH, et al);
[RU2265118](#) C2 20051127 [];
[RU2289012](#) C2 20061210 [] (SHARIFOV MAKHIR ZAFAR OGLY [RU], et al);
[US2002195253](#) A1 20021226 [] (HILL LEO E [US], et al)

- CTNP - || STSE (C1)
 [] - АБУБАКИРОВ В.Ф. и др. Буровое оборудование: Справочник: в 2-х т., т.2. Буровой инструмент. - М.: ОАО "Издательство "Недра", 2003, 494 с., рис.11.18, с. 458.
- PA - GAZTEKHNLOGIJA AOZT [RU]
- TI - TECHNOLOGICAL PACKER
- AB - FIELD: **oil** and gas industry.SUBSTANCE: technological packer contains: stem, shoe with anchor **slips**, expanding cone, movable support with retaining rings, **sealing** element. Packer is equipped with shank with internal thread, annular pocket and groove in axial channel **connected** to the stem in the place of end contact near projections and depressions, in stem axial channel there is thread and collet with heads that go into shank groove, inside collet heads there is a bush with saddle in top part and external bore mounted with tight contact with shank and **connected** to the stem via sheared element, the stem has a rod with head on top part and conical adapter at the bottom part mounted in bore of expanding cone and equipped with annular groove, movable support is equipped with bottom box and extension element with projection and mounted with the possibility of forming movable tight **connection** with the rod, the shank is equipped with stop nut installed between bottom box and rod head. At stem external surface there is an annular groove equipped with split spring-ring installed with the possibility to interact with annular groove of conical adapter and annular gap between rod and stem is **sealed** by **sealing** rings in head and conical adapter.EFFECT: creation of safe tight contact of **sealing** element with **casing string** tube wall during the whole operation cycle of the packer with keeping holding capacity of anchor **slips**, packer extraction from the **well**.
 4 dwg

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- PN - [CN202810763U](#) U 20130320
- PR - CN20122447770U 20120904
- AP - CN20122447770U 20120904
- DT - I
- PA - CNPC GREATWALL DRILLING CO
- TI - High-temperature-resistant pre-stress casing head
- AB - The utility model relates to a completion tool of an **oil** thermal production **well**, in particular to a high-temperature-resistant pre-stress casing head. A regulating ring and a conversion flange of the tool are in threaded **connection**; a soft metal high-temperature-resistant wedge-shaped **sealing** ring is arranged between the conversion flange and an **oil string casing**, pressed against a pressing ring and tightly compressed; the pressing ring is arranged on a top plane of a casing hanger and **connected** with the casing hanger through a screw; a **slip** is arranged in an upper conical hole of the casing hanger and **connected** by a shear pin; the **slip** and the casing hanger are tightly **sealed** by a jackscrew; the upper part of the **slip** is arranged in a through hole in the pressing ring; **sealing** rubber which resists high temperature of 350 DEG C and a soft metal complex are arranged in the casing hanger and **connected** through a bolt; the casing hanger is positioned on a step of a flange body; and the conversion flange and the flange body are **connected** through a bolt. The high-temperature-resistant pre-stress casing head resists high temperature

and high pressure, can be reliably **sealed**, and meets requirements of casing lift pre-stress.

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- PN - [CN102808594](#) A 20121205
- PNFP - CN102808594B B 20141029
- PR - CN20121295917 20120817
- AP - CN20121295917 20120817
- DT - I
- CT - || STSE (A)
[US2011168409](#) A1 20110714 [A] (GETTE NICHOLAS [US])
[A]
[CN2893141Y](#) Y 20070425 [A] (ZHUANGXI OIL PRODUCTION FACTOR [CN])
[A]
[CN2391985Y](#) Y 20000816 [A] (QIANDA OIL PRODN PLANT JILIN P [CN])
[A]
[US4836288](#) A 19890606 [A] (WESTER RANDY J [US])
[A]
- PA - (A)
CHINA NAT OFFSHORE OIL CORP; CNOOC ENERGY TECHNOLOGY CO LTD
- TI - (A)
Device and method for multi-stage layering sand prevention and **well** completion by one-step pipe column
- AB - (A)
The invention discloses a device and a method for multi-stage layering sand prevention and **well** completion by one-step pipe column. The device comprises an **oil-string casing** inserted into a first **oil** layer, a second **oil** layer and a third **oil** layer in sequence, wherein a blind pipe is arranged in the **oil-string casing**; a pipe column which integrates setting **seal** and examining **seal** is arranged inside the blind pipe; release suspension packers, first safety **connectors**, first sand prevention pipe columns, first isolation packers, second safety **connectors**, second sand prevention pipe columns, second isolation packers, third sand prevention pipe columns and supporting **slips** are arranged on the outer side of the blind pipe from the top down in a sleeving way; the upper part of the pipe column which integrates the setting **seal** and the examining **seal** is **connected** with a standard **oil** pipe; the lower part thereof and the release suspension packers are integrally **connected** to be a whole; the first sand prevention pipe columns are aligned to the first **oil** layer; the second sand prevention pipe columns are aligned to the second **oil** layer; the third sand prevention pipe columns are aligned to the third **oil** layer; and the supporting **slips** are mounted at the lower end of the blind pipe and positioned below the third **oil** layer. According to the invention, the number of layered stages is not limited, so that the setting **seal** and examining **seal** operations can be performed at the same time, thereby guaranteeing the **seal** effect of the packers in all stages and improving the **well** repairing efficiency.

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- PN - [CN202431222U](#) U 20120912
- PR - CN20112416943U 20111028
- AP - CN20112416943U 20111028
- DT - I

PA - PUYANG ZHONGSHI GROUP CO LTD

TI - Casing head for tie-back in **well** repair

AB - A casing head for tie-back in **well** repair relates to a device for **well** repair in an **oil** field, solves the problems existing in other technologies, and adopts the structure that the upper end of an intermediate casing is **connected** to the lower end of a **casing** head housing; an **oil-string casing** is positioned in the intermediate casing; a press plate is fixed on the outer wall at the upper end of the **oil-string casing** through jackscrews; an integrated **slip** hanger is mounted in a position 10 MM below an **oil-string casing** collar and directly sits on the inner conical surface of the casing head to be guided and hung by the internal taper of the casing head housing; an injection flange is mounted at the upper part of the casing head housing, and a **sealing** gasket is arranged between the injection flange and the casing head housing for **sealing**; meanwhile, the **oil-string casing** collar is **sealed** by the injection flange; the injection flange wraps the **oil-string casing** collar; and the injection flange and the casing head housing are **connected** and fixed through flange bolts.

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PN - [RU2010148515](#) A 20120610

PNFP - RU2459921 C2 20120827

PR - RU20100148515 20101126

AP - RU20100148515 20101126

DT - I

PA - (C2)
OOO NT I EHKSPERTNYJ TS NOVYKH EHKOTEKHNOLOGIJ V GIDROGEOLOGIJ I
GIDROTEKHNIKE NOVOTEHK [RU]

TI - (C2)
DEVICE FOR OPENING ARTESIAN AQUIFERS BY RISING, DIRECTIONAL OR
DOWNHOLE **WELL**

AB - (C2)
FIELD: mining. ^ SUBSTANCE: device includes drilling installation that consists of drilling rig, **oil**-pumping station, **oil** pipelines, control panel, drill pump, drill string, filter column, **well** head equipment that consists of conductor string, gate valve, exit branch and **sealer** of drill **string** in performance that includes **casing** and **sealing** element and press-on bush arranged inside it. The device is equipped with two pairs of additional hydraulic cylinders with drives **connected** to control panel and additional **sealer** of drill string in statics. The **sealing** element in the **sealer** of drill string in performance is done in a form of hollow cylinder from rubber with end surfaces in a form of conical surfaces, one of which is directed inside the cylinder, and the other - outside, and arranged between two rings, one of which has outer conical surface and the other - inner conical surface, note that the angles of rings cone are identical to the angles of end surfaces cone of **sealing** element, under the ring there is additional **sealing** element from material with low friction coefficient, press-on bush has a longitudinal slot for drill string, and rods of a pair of additional hydraulic cylinders **connected** to press-on bush have articulated joints turning around which provides the access to additional **sealing** element. The **sealer** of drill string in statics is mounted before the **sealer** of drill string in performance and includes the housing with attachment and supporting flanges, inside the housing the supporting flanges are **connected** to the **sealing** element in a form of hollow cylinder and **slips** embracing this **sealing** element installed capable of its snapping and **connected** to the rods of the second pair of additional hydraulic cylinders. ^ EFFECT: increase of drilling installation operation reliability, increase of

mining operations safety at construction of drain holes with high pressure at head, improvement of operating personnel labour conditions, improvement of labour efficiency, provision of possibility to repair the **sealer** in performance in process, mechanisation of operations on annular space **sealing**. ^ 4 dwg, 2 ex

7/8 © EPODOC / EPO

- PN - [CN202249924U](#) U 20120530
- PR - CN20112270065U 20110728
- AP - CN20112270065U 20110728
- DT - I
- PA - CNPC GROUP WESTERN DRILLING ENG CO LTD
- TI - Tail pipe suspending packing assembly special for shallow horizontal **well**
- AB - The utility model relates to the technical field of tail pipe suspending device serviced in a shallow horizontal **well** in **oil** exploitation, in particular to a tail pipe suspending packing assembly special for a shallow horizontal **well**. The tail pipe suspending packing assembly comprises an upper joint, a core pipe body, a rubber plug separating device, a seat device and a suspending device, wherein a core pipe chamber is mounted in the core pipe body; the upper part of the core pipe body is fixedly provided with the upper joint while the lower part thereof is provided with a core pipe lower screw at the outside, wherein the core pipe lower screw is **connected** with a **casing string**. The tail pipe suspending packing assembly provided by the utility model has reasonable and compact structure and convenience of use, and is capable of keeping down pressure after putting the tools into the **well** so as to make the suspending piston pipe shear the suspending shear pin and upwards shift, as **well** as adopting the suspending piston pipe to push the **slips** to achieve suspension, continuously keeping down pressure to make the seat piston pipe cut the seat shear pin and upwards shift, and upwards pushing the seat piston pipe to press the rubber plug separating device to achieve seat; once double-stage pressure can make hydraulic suspension and hydraulic **seal** done. The tail pipe suspending packing assembly provided by the utility model has the characteristics of smaller volume, simple structure, lower cost, convenience, and high efficiency.

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- PN - [US2004154795](#) A1 20040812

- PNFP - US6823944 B2 20041130

- PR - US20030359886 20030206

- AP - US20030359886 20030206



DT - *; Rep

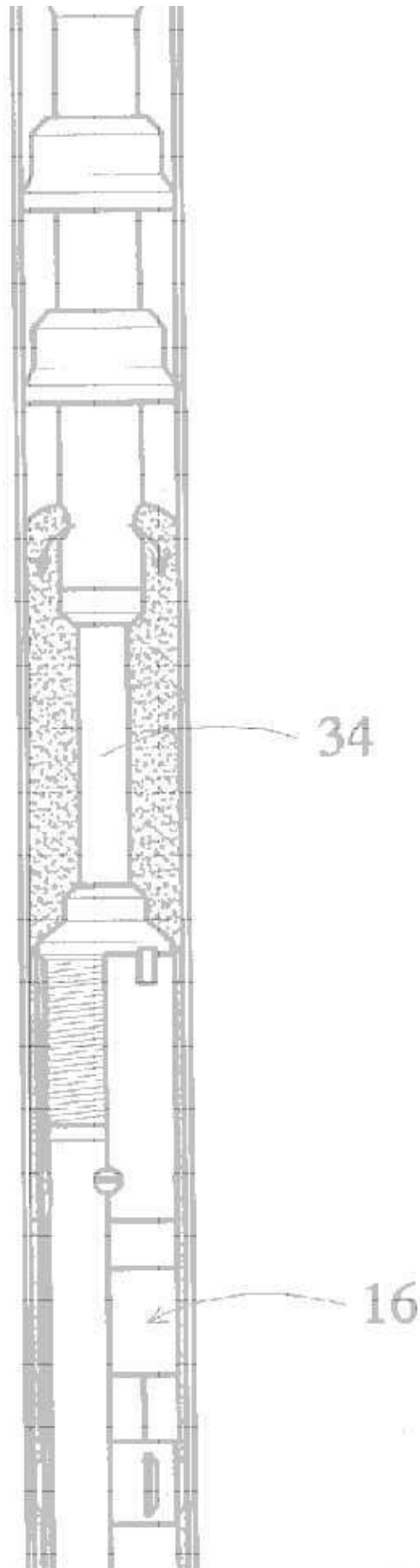
CT - || STSE (B2)
[US3721292](#) A 19730320 [
] (AHLSTONE A)
[US4479544](#) A 19841030 [
] (CALLIHAN RUDY B [US], et al)
[US4693309](#) A 19870915 [
] (CASKEY KENNETH D [US])
[US4911237](#) A 19900327 [
] (MELENYZER GEORGE J [US])
 - || R141 (A1)
[US3721292](#) A [];
[US4911237](#) A [];
[US4693309](#) A [];
[US4479544](#) A []

CCI - [E21B33/10](#) ; [E21B33/128](#) ;
[E21B43/10](#)

PA - (B2)
 TRYAD SERVICE CORP [US]

TI - (A1 B2)
 Apparatus and method for
 completing a **well**

AB - (A1 B2)
 A method and apparatus
 for **sealing** the top of a liner
 within a **casing string** of an **oil**
well which does not require a
 second trip of the work string
 to **seal** off the top of the liner
 within the casing. The
 liner **connected** to the



liner, connected to the apparatus, is run into the **well** on a work string until the bottom of the liner sets on the bottom of the **well**. After the bottom of the liner is set on the bottom of the **well** and, if desired, a gravel slurry is circulated into place, the apparatus is actuated by setting weight on the work string, which causes a cylindrical **sealing** element to expand and **seal** against the inside wall of the casing. The apparatus does not require **slips** to hold it in position within the casing.

