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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/103,777	04/12/2005	Michael C. Vincent	34955.55	7817

27683 7590 02/27/2007
HAYNES AND BOONE, LLP
901 MAIN STREET, SUITE 3100
DALLAS, TX 75202

EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

11/103,777

Applicant(s)

VINCENT, MICHAEL C.

Examiner

Monique R. Jackson

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-17,32,34,35,39,41-44,48-54,57 and 62-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-17,32,34,35,39,41-44,48-54,57 and 62-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1773

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/7/06 has been entered. Claims 1-8, 18-31, 33, 36-38, 40, 45-47, 55-56, and 58-61 have been cancelled. New Claims 65-73 have been added. Claims 9-17, 32, 34, 35, 39, 41-44, 48-54, 57, and 62-73 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 9-17, 32, 34, 35, 39, 41-44, 48-54, 57, and 62-64 are rejected under 35 U.S.C. 102(a) as being anticipated by Nguyen et al (US 2004/0023818A1), or under 35 U.S.C. 102(b) wherein the Examiner notes that the instant claims do not appear to be supported by the provisional application 60/561,486, and hence are not provided the benefit of the earlier filing date.

Nguyen et al teach particles coated with a water-repellant organo-silicon material including polyalkylsiloxanes such as polymethylsiloxanes and polydimethylsiloxane as well as other silicon resins, wherein the treated particles are then pumped downhole to the fractures to function as a proppant in a carrier fluid or to the wellbore-screen annuls to function as a gravel pack, greatly enhancing the conductivity or permeability, respectively (Abstract; Paragraphs 0004-0006 and 0010.) Nguyen et al teach that the organo-silicon compound can be applied to

Art Unit: 1773

the particles by dissolving an oil-soluble organo-silicon compound in a solvent, admixing or spraying the resultant solution on the particles, and then evaporating the solvent to form a thin film of siloxane or silane encapsulating the particles, thereby dry coating the particles (Paragraph 0007; Claims 1 and 25.) Nguyen et al further teach that if the particles are coated when the particles are flowing, then the solvent should be readily miscible in the water-based gel carrier fluid, and that as a non-limiting example, approximately 0.01% to 3% of organo-silicon by weight of particles can be used to coat onto the particles (hence no drying step and the coated particles are wet upon mixing with the carrier fluid; Paragraph 0008; Claims 63 and 75.) Nguyen et al teach that the proppant particles can be sand, bauxite, and ceramic, and generally have a particle size in the range from about 2 to about 400 mesh, with preferred particles being sand having a particle size of about 10 to about 70 mesh, hence inherently having a surface porosity (Paragraph 0016.) Though Nguyen et al do not specifically teach the bulk density, crush strength and apparent specific gravity of the particles, the Examiner takes the position that the particles taught by Nguyen et al would inherently possess the same properties considering the particles are formed from the same materials.

4. Claims 9-13, 15, 32, 34, 35, 39, 41, 42, 48-52, 57, and 62-64 are rejected under 35 U.S.C. 102(e) as being anticipated by Sinclair et al (USPN 7,135,231.) Sinclair et al teach coated proppants for oil and gas well hydraulic fracturing wherein the spheroidal proppants comprise a particulate substrate, generally sand or lightweight ceramic or bauxite, incrementally coated with several different particle microlayers that completely encapsulate the particulate substrate (Abstract; Col. 6, lines 58-Col. 7, line 9; Figure 3.) The particulate substrate are particles typically utilized as propping agents in the art, such as sand, having a particle size in the range of

Art Unit: 1773

minus 20 mesh to plus 40 mesh with suitable mesh sizes recited at Col. 8, lines 9-10 but the generally 20/40 mesh proppants are used (Col. 7, line 10-Col. 8, line 11.) Sinclair et al teach that the particles are sprayed with a powdered or liquid form resin in an amount from about 0.5 to about 5% by weight of the substrate, with suitable resins including siloxanes such as methyl siloxanes (Col. 8, line 60-Col. 9, line 21.) Sinclair et al further teach that the permeability of the treated propping agents decreases less rapidly than does the permeability of the control proppants (Col. 27, lines 15-25.) Sinclair et al also generally teach the method of fracturing a subterranean formation by injecting a fluid comprising proppants (Col. 1-2.) Though Sinclair et al do not specifically teach the bulk density, crush strength and apparent specific gravity of the particles, the Examiner takes the position that the particles taught by Sinclair et al would inherently possess the same properties considering the particles are formed from the same materials.

5. Claims 65-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Palmer et al (USPN 4,993,491.) Palmer et al teach a method of fracturing a subterranean formation comprising injecting a fracturing fluid into a fracture, wherein the fluid comprises a plurality of essentially spherical particles such as sand and sintered bauxite having a particle size preferably ranging from 40/70 mesh to 12/20 mesh, and the fracturing fluid may be non-aqueous fracturing fluids such as gelled oil and diesel fluids (*reads upon the claimed hydrophobic hydrocarbon*) (Col. 3-Col. 4, line 44.) The Examiner takes the position that the sand or bauxite particles inherently have a surface porosity which would inherently be covered by the fracturing fluid, namely the diesel fluid, upon blending and hence anticipates the claimed invention. With respect to Claims 66, 69 and 71, the Examiner notes that plant oils are not positively recited considering the parent claims recite plant oils in the alternative.

Art Unit: 1773

Response to Arguments

6. Applicant's arguments filed 12/7/06 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Monique R. Jackson
Primary Examiner
Technology Center 1700
February 20, 2007