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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/691,099	03/26/2007	Diankui Fu	56.1082	5103

27452 7590 02/27/2013

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EXAMINER	
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ART UNIT	PAPER NUMBER
3676	

NOTIFICATION DATE	DELIVERY MODE
02/27/2013	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DIANKUI FU, DMITRI OUSSOLTSEV,
ARTEM KLYUBIN, OLESYA LEVANYUK,
and KRESO KURT BUTULA

Appeal 2010-012232
Application 11/691,099
Technology Center 3600

Before JAMES P. CALVE, BENJAMIN D. M. WOOD, and,
HYUN J. JUNG, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the rejection of claim 9. App. Br. 5. Claims 1-8, 10-23, 27, 29, and 35-37 are cancelled. *See* Ans. 2-3, paras. (3), (4), and (7). Claims 24-26, 28, 30-34, and 38-40 are withdrawn. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

Claim 9, the sole claim on appeal, is reproduced below:

> 9. A method for treating a subterranean formation penetrated by a wellbore which comprises injecting into the subterranean formation a well treatment fluid comprising a viscoelastic surfactant having at least one degradable linkage, a hydrolysable fiber and a pH control material, wherein said viscoelastic surfactant and said hydrolysable fiber form non-solid products upon hydrolysis, and wherein said fluid has an initial pH of at least about 11.[1]

REJECTIONS

Claim 9 is rejected under 35 U.S.C. § 102(b) as being anticipated by Sullivan '300 (US 2004/0094300 A1; pub. May 20, 2004).

Claim 9 is rejected under 35 U.S.C. § 102(e) as being anticipated by Sullivan '731 (US 7,219,731 B2; iss. May 22, 2007).

ANALYSIS

Claim 9 as anticipated by Sullivan '300

The Examiner found that Sullivan '300 discloses a method of treating a subterranean formation penetrated by a well bore by injecting into the formation a well treatment fluid comprising a viscoelastic surfactant with at least one degradable linkage surfactant (*see* para. [0037]), a hydrolysable fiber (paras. [0025, 0044]), and a pH control material (para. [0035]) where the hydrolysable fiber and viscoelastic surfactant form non-solid products upon hydrolysis and the fluid has an initial pH of at least 11 (paras. [0035-

[1] *See* Advisory Action, mailed Apr. 8, 2010 (entering amendment with claim 9 re-written in independent form).

0037]). Ans. 3, 4-5. The Examiner found that Sullivan '300 discloses the use of viscoelastic surfactant fluids at pH's of 12.5 or higher. Ans. 4-5.

Appellants argue that Sullivan '300 does not disclose a method for treating a subterranean formation penetrated by a wellbore by injecting the formation with a well treatment fluid having an initial pH of at least about 11. App. Br. 9. In particular, Appellants assert that the Examiner's analysis presented in an Advisory Action does not accurately characterize Sullivan '300. *Id.* Appellants argue that Sullivan '300 forms a filter cake with a solid base-soluble material (first stage) and after that the solid base-soluble material is degraded with a base (second stage). Appellants further argue that examples 1 and 2 of Sullivan '300 refer to "embodiments where a base is added not to the initial fluid, but after to a viscoelastic fluid." App. Br. 10. Appellants also argue that example 2 of Sullivan '300 can only refer to the second stage corresponding to introduction of a base for the degradation of the solid base-soluble material. App. Br. 10.

The Examiner responds that the limitation of "wherein said fluid has an initial pH of at least about 11" is disclosed at paragraphs [0035] to [0037] of Sullivan '300. Ans. 4. The Examiner finds that these paragraphs disclose that "[s]ome of the [viscoelastic surfactant] fluids described are normally used at pH's of as much as 12.5 or higher," and therefore, Sullivan '300 provides for an initial pH of the fluid of at least about 11. Ans. 4-5.

Appellants' arguments do not persuade us of error in the Examiner's findings that Sullivan '300 discloses the claimed method with a well treatment fluid with an initial pH of at least about 11, as set forth at pages 3-5 of the Answer. Sullivan '300 discloses that any viscoelastic surfactant

(VES) fluids can be used for hydraulic fracturing in or after the pad and some VES fluids are used at pH's of 12.5 or higher. Sullivan '300, para. [0037]. We sustain the rejection of claim 9.

Claim 9 as anticipated by Sullivan '731

The Examiner found that Sullivan '731 discloses a method for treating subterranean formations penetrated by a well bore by injecting the formation with a well treatment fluid comprising a VES having at least one degradable linkage (col. 10, ll. 1-23 incorporating US patents), a hydrolysable fiber (col. 12, ll. 7-19), and a pH control material (col. 7, ll. 34-37), where hydrolysable fiber and viscoelastic surfactants form non-solid products upon hydrolysis and the fluid has an initial pH of at least about 11 (col. 10, ll. 6-11). Ans. 4, 5-6. The Examiner also found that Sullivan '731 discloses that VES systems may not always be beneficial with the solid acid pH control agents of the invention, but Sullivan '731 does not exclude all uses of VES systems with a pH above 12 with a solid acid/pH control agent combination of the disclosed invention of Sullivan '731. Ans. 6 (citing col. 10, ll. 6-11).

Appellants argue that Sullivan '731 does not disclose that the VES has an initial pH above 11 but instead highlights the difference between a VES system typically buffered to a pH of above 12 in normal use and the solid acid/pH control agent combination described in Sullivan '731, which shows the highest pH buffer being at pH 9.5. App. Br. 11. Appellants argue that nothing in Sullivan '731 shows a system made of a VES, a solid acid, and buffer with a pH above 11. *Id.* These arguments do not persuade us of error in the Examiner's findings that Sullivan '731 discloses a method for treating a subterranean formation by injecting a well treatment fluid with a VES with

an initial pH above 11 and other claimed components, as set forth at pages 4 and 5-6 of the Answer. Sullivan '731 discloses the use of VES systems with a pH of above 12 and notes that the solid acid/pH control agent combination of Sullivan '731's invention may not always be beneficial with such VES systems. Ans. 5-6; Sullivan '731, col. 10, ll. 7-11. We sustain the rejection of claim 9.

DECISION

We AFFIRM the rejections of claim 9.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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