

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte G. ALLAN STAHL, AHMAD MORADI-  
ARAGHI, I. JOHN WESTERMAN  
and HENRY L. HSIEH

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Appeal No. 94-4409  
Application 07/958,526<sup>1</sup>

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ON BRIEF

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Before JOHN D. SMITH, GARRIS and OWENS, Administrative Patent Judges.

JOHN D. SMITH, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal pursuant to 35 USC § 134 from the final

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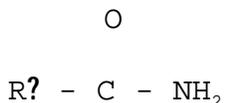
<sup>1</sup> Application for patent filed October 28, 1992. According to appellants, the application is a continuation of Application 07/788,051, filed November 5, 1991, which is a division of Application 06/756,851, filed July 18, 1985, now Patent No. 5,080,809, granted January 14, 1992, which is a continuation-in-part of Application 06/568,363, filed January 9, 1984, now Patent No. 4,951,921, granted August 28, 1990, which is a continuation-in-part of Application 06/461,707, filed January 28, 1983, now Patent No. 4,644,020, granted February 17, 1987.

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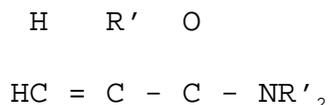
rejection of claims 40 through 43, 45, 47, 48, 57 through 62, 64, 66 through 75, and 87. Claims 49 through 56, 76 through 80, 84, 85 and 88 through 92 are allowed. Claims 81 through 83 and 86 are objected to but are also considered allowable.

The subject matter on appeal is directed to certain drilling fluid compositions and processes for forming and using the drilling fluids in a bore hole wherein "hostile conditions" are encountered. To illustrate the invention and to show further details thereof, representative claims 40, 45, and 66 are reproduced below:

40. A process comprising forming a drilling fluid comprising clay and a polymer produced from a monomer composition consisting essentially of at least one hydrophilic N-vinyl lactam and at least one hydrophilic unsaturated amide selected from the group consisting of monomers represented by the formulas,



where R' is an unsaturated radical and



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where each R' is individually selected from H or methyl, and circulating said drilling fluid in a bore hole during the drilling of a well wherein said fluid encounters hostile conditions as defined by a temperature and divalent ion concentration above the infinite days line of FIGURE 14.

45. A process comprising forming a drilling fluid comprising water, clay and polymer produced from a monomer composition consisting essentially of at least one hydrophilic N-vinyl lactam and at least one 2-acrylamido-2-methylpropane sulfonic acid or the sulfonate salts thereof, and circulating said drilling fluid in a bore hole during the drilling of a well wherein said fluid encounters hostile conditions as defined by a temperature and divalent ion concentration above the infinite days line of FIGURE 14.

66. A drilling fluid comprising

(a) a base fluid comprising water and an insoluble weighting material and

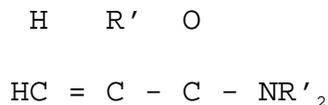
(b) water-soluble polymer present in the range of about 0.5 to about 5 lb/bbl produced from a monomer composition consisting essentially of at least one hydrophilic N-vinyl lactam, at least one hydrophilic unsaturated amide selected from the group consisting of monomers represented by the formulas,

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where R? is an unsaturated radical and

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where each R' is individually selected from H or methyl, and at least one hydrophilic vinyl-containing sulfonic acid or a sulfonate salt thereof.

The references of record relied upon by the examiner are:

Uhl et al. (Uhl)	4,471,097	Sep. 11, 1984
Patel et al. (Patel)	5,204,320	Apr. 20, 1993

All appealed claims stand rejected under 35 USC § 103 over Uhl. Additionally, claims 45, 59 and 62 stand rejected based on the judicially-created doctrine of obviousness-type double patenting over claims 1 and 9 of U.S. Patent No. 5,204,320 issued to Patel.

#### **THE REJECTION UNDER 35 USC § 103**

The appealed claims stand rejected under 35 USC § 103 for obviousness over Uhl. We affirm this rejection essentially for the reasons set forth by the examiner in his Answer.

Appellants submit that the current appealed claims are

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readily distinguishable over Uhl for three principal reasons. First, appellants contend that Uhl fails to teach or make obvious the use of a polymer prepared from a monomeric mixture free of appreciable vinyl imidazole monomer. Appellants' argument is predicated on the presumption that the claimed language "a polymer produced from a monomer composition consisting essentially of" acts to exclude the vinyl imidazole monomer component of Uhl's polymer.

It is well settled that the claim language "consisting essentially of" limits the scope of a claimed element, e.g., a composition, to the specified ingredients and those that do not materially affect the basic and novel characteristics of the composition. In re Herz, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976); Ex parte Davis, 80 USPQ 448, 450 (Bd. App. 1948). When such language is used, e.g., as here, defining a polymer produced from a monomer composition "consisting essentially of", the dispositive issue is whether the introduction of a disclosed component, e.g., a monomer of a prior art polymer, unrecited in the claimed polymer, would materially change the characteristics of the claimed polymer

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when added thereto.

In Ex parte Davis, 80 USPQ at 450, where the appealed claims recited an adhesive composition "consisting essentially of" three ingredients and the prior art reference disclosed a composition having the same three ingredients plus a fourth ingredient (referred to as a modifier), the question raised was whether the claim language "consisting essentially of" excluded the fourth ingredient. The Davis board held, based on the facts before it, that the fourth ingredient was excluded because when added to the three ingredient composition of the appealed claims, it materially changed the fundamental character of the claimed composition. Id.

However, in Herz, 190 USPQ at 463, in reviewing the evidence before it, the court found nothing that would indicate that a dispersant, which was an additional ingredient of a prior art composition, would materially affect the basic and novel characteristics of the claimed composition therein; the court noting that the prior art composition possessed additional enhanced detergent-dispersant qualities because of this component.

As noted by the examiner, the Uhl patent discloses a

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drilling fluid composition containing, as a drilling fluid additive, a water soluble copolymer containing, *inter alia*, vinyl imidazole, as a required monomeric constituent.

According to Uhl, the polymers of his invention have excellent calcium tolerance and excellent thermal stability compared with commercial fluid additives. However, even if objective evidence were of record demonstrating that the vinyl imidazole component of the prior art polymer were the sole causative agent for the enhanced properties reported by the Uhl patent, this fact alone would not lead one to the conclusion that the presence of a vinyl imidazole monomer in the claimed polymer would materially affect the basic and novel characteristics of the claimed composition. Accordingly, given the above claim construction, that Uhl arguably fails to teach or make obvious the use of a polymer

prepared from a monomeric mixture ?free of appreciable vinyl imidazole monomer? is not basis for distinguishing the claimed subject matter from the prior art.

Appellants' second major argument on appeal concerns the

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claimed limitation involving the bore hole hostile conditions which is defined by temperature and divalent ion concentration ?above the infinite days line of Figure 14.? As appellants note in their Brief at page 12, with the exception of claim 87 which recites hostile conditions to be at temperature of at least 100EF and a salinity of at least 10g/kg solution, all appealed claims recite hostile conditions as defined by temperature and multivalent ion concentration above the infinite days line of Figure 14. Appellants further point out and note that this nominally requires a temperature in excess of 160EF. Appellants argue that Uhl fails to make obvious the process of forming a drilling fluid containing the defined polymers and circulating the drilling fluid and the bore hole during the drilling of a well wherein the fluid is exposed to the ?hostile conditions? as defined in the claims. We disagree with appellants' assessment of the teachings in Uhl.

Initially, we point out that Uhl describes the polymers of his invention as having excellent calcium tolerance (multivalent ion concentration) and excellent thermal stability compared with commercial fluid additives. See the reference at column 1, lines 16 through 18. Uhl further

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points out that copolymers according to his invention are excellent when used as a drilling fluid additive during drilling operations, and that the products covered by the Uhl invention have a favorable impact especially ?in applications for critical drilling operations under difficult conditions at great depths and in the presence of formation water with a very high content of electrolytes? (column 7, lines 16 through 20). Thus Uhl, in our view, fairly suggests the use of his materials in drilling operations encountering ?hostile conditions? as defined by certain of the appealed claims.

Appellants' third major argument on appeal is that Uhl fails to teach or make obvious what is alleged to be unexpected stabilizing properties imparted to a polymer prepared from an unsaturated amide monomer of designated formula (e.g., an acrylamide) by the addition of an N-vinyl lactam to the monomeric mixture when the polymer is subsequently exposed to conditions conducive to hydrolysis. As evidence of this unexpected result, appellants refer to the specification at page 31, lines 5 through 14 and three papers attached to their Brief as Exhibit B which indicate, *inter*

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*alia*, that the presence of vinylpyrrolidone (an N-vinyl lactam) in a copolymer of vinylpyrrolidone-acrylamide apparently restricts the level of hydrolysis of the copolymer in hard brines at high temperatures. However, in our view, whether or not Uhl expressly reported this observed advantage is not persuasive of patentability, inasmuch as Uhl discloses copolymers including N-vinylpyrrolidone combined with acrylamide. Compare the working Examples 9 and 13 in Table I and Example 29 in Table II of Uhl which Tables appear in the reference at columns 9 and 10. Appellants have made no showing that the vinyl imidazole component of such polymers interferes negatively with any of the properties inherently possessed by these prior art polymers.

Based on the foregoing, we agree with the examiner's conclusion that the claimed subject matter on appeal would have been obvious within the meaning of 35 USC § 103. Therefore, we affirm the examiner's rejection of the appealed claims under this section of the statute.

**THE OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION**

Process claim 45 and composition of matter claims 59 and

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62 were finally rejected under the judicially-created doctrine of obviousness-type double patenting in view of claims 1 and 9 of U.S. Patent No. 5,204,320.

It is apparently agreed that U.S. Patent No. 5,204,320 to Patel is a commonly owned, later filed "improvement patent" and thus a "two-way" test is required to determine obviousness-type double patenting. In re Berg, 140 F.3d 1428, 1432, 46 USPQ2d 1226, 1229 (Fed. Cir. 1998). However, the examiner argues that a "two-way" test is not required herein because appellants have not diligently prosecuted the present application which includes claims to the basic invention. As evidence thereof, the examiner contends, *inter alia*, that appealed claims 66 and 76 herein were originally filed so broadly as to read on "admitted prior art". However, the examiner never identifies what "admitted prior art" is relied on by him. Moreover, as best as we can determine from the multi-year prosecution of the present application and its parents, the Uhl patent was first applied in an office action mailed July 9, 1992. Thus it is our view that the examiner has failed to meet his burden of showing that it has been appellants' lack of diligence

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which held up the rate of prosecution of the present application. We therefore ?procedurally? reverse the stated rejection under the judicially-created doctrine of obviousness-type double patenting.

In summary, the examiner's rejection of the appealed claims for obviousness (35 USC § 103) is affirmed. The examiner's rejection of certain of the appealed claims based on the judicially-created doctrine of obviousness-type double patenting is reversed. The decision of the examiner is affirmed.

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

**AFFIRMED**

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	)	
JOHN D. SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
BRADLEY R. GARRIS	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
TERRY J. OWENS	)	)
Administrative Patent Judge	)	

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