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09/953,993					
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Patent Coop	peration Treaty (PCT)				
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Char	cles W. Gaines	Charlet Faire	01/15/2002		
Name	e of Person Signing	Signature	Date		

PATENT REEL: 012547 FRAME: 0946

ASSIGNMENT

WHEREAS, we, Bob Hardage, a citizen of United States of America and resident of Travis County, and the State of Texas, and Robert J. Graebner, a citizen of United States of America and resident of Dallas County, and the State of Texas, have invented certain new and useful improvements in a "DETERMINING VERTICAL FRACTURES IN A STRATUM USING SCATTERED VERTICAL AND HORIZONTAL SHEAR MODES" disclosed in an application for United States Letters Patent (Application No. 09/953,993, filed 09/17/2001), said application having been previously executed.

WHEREAS, Board of Regents for the University of Texas System, a corporation of the State of Texas, having offices at 201 West 7th Street, Austin, Texas 78701 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our entire right, title and interest in and to the invention, and in and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, continuations-in-part and extensions thereof; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom, insofar as our interest is concerned, to the said ASSIGNEE of our entire right, title and interest.

We also hereby sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said application throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and we further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

We hereby further agree that we will communicate to said ASSIGNEE, or to its successors, assigns and legal representatives, any facts known to us respecting any improvements; and, at the expense of said ASSIGNEE, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and substitute applications, and make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

PATENT REEL: 012547 FRAME: 0947

IN WITNESS WHEREOF, we have hereun November, 2001.	nto set our hands and seal this day of
	Bob Hardage
STATE OF Texas COUNTY OF Travis	§ § §
On this 7th day of November	2001 hofom ma margarally some Dah

> Synda a Miller Notary Public

My Commission Expires:

8-28-2005

Robert J. Graebner

STATE OF	TEXAS	_
COUNTY OF	DALLAS	_

On this ______ day of ______, 2001, before me personally came Robert J. Graebner, to me known to be the individual described herein and who executed the foregoing instrument, and acknowledged execution of the same.

KEVIN B. CARLSON
MY COMMISSION EXPIRES
February 21, 2005

RECORDED: 02/01/2002

Notary Public

My Commission Expires:

FORWARY 21, 2005