

**Expert Declaration for the OSES Motion to Amend
in IPR2014-00216 for U.S. Patent No. 6,179,053 by Dallas for
Lockdown Mechanism for Well Tools Requiring Fixed-Point Packoff**

Prepared by:

Gary R. Wooley

Wooley & Associates, Inc.

3100 S. Gessner, Suite 325
Houston, Texas 77063
Phone 713.781.8974
Email gary@wooley.com

Prepared for:

Mr. C. Erik Hawes

Morgan, Lewis & Bockius LLP

1000 Louisiana St., Suite 4000
Houston, Texas 77002-5006
Phone 713.890.5165

27 August 2014

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Basic Fracturing and Wellhead Protection Processes	2
	1. Drilling	3
	2. Completion	4
	3. Fracture Stimulation	5
	4. Wellhead Protection	8
III.	Overview of U. S. Patent 6,179,053 to Dallas	10
	1. Dallas '053 Patent Concepts	10
	2. Dallas '053 Patent Claim 1.....	16
	3. Dallas '053 Patent Claim 22.....	18
IV.	Proposed Amended Claims of the '053 Patent	20
V.	Legal Standards and Claim Construction.....	23
	1. Law of Invalidity	23
	2. Person of Ordinary Skill in the Art	25
	3. Claim Construction.....	25
VI.	The Scope and Content of the Prior Art	27
VII.	The Proposed Amended Claims Are Novel.....	30
	1. The Dallas '118 Application	30
	2. The Herricks Patent	33
VIII.	The Proposed Amended Claims Would Not Have Been Obvious to One of Ordinary Skill in the Art at the Time the '053 Invention Was Made	34
	1. The Scope and Content of the Prior Art.....	34
	2. Level of Ordinary Skill in the Art	35
	3. Differences Between the Claimed Invention and the Prior Art	36
	4. Objective Evidence of Nonobviousness.....	37
	5. Analysis of Obviousness Factors	63
IX.	Basic Facts and Conclusions.....	67

X. Appendix.....68

- 1. References Cited.....68
- 2. References Considered68
- 3. Resumé for Gary R. Wooley73
- 4. List of Recent Wooley Testimony75

I. Introduction

1. Stinger Wellhead Protection Inc. of Oklahoma City, OK was incorporated in Texas in August 1988 to provide wellhead protection service to the oil and gas industry. Stinger provides services in the U.S., Canada and internationally. On 30 January 2001, L. Murray Dallas of Fairview, Texas, an executive with Stinger, was awarded U.S. Patent 6,179,053 (“the ’053 Patent”) (Ex. 1001), which related to Stinger’s wellhead protection services. In May 2005 Oil States International, Inc., now Oil States Energy Services (OSES), acquired Stinger, including rights to its patents.

2. OSES filed a lawsuit against Petitioner Greene’s Energy Group, LLC (“Greene’s” or “Petitioner”) for infringement of the ’053 Patent in 2012. On December 3, 2013, Petitioner filed the instant *inter partes* review challenging the validity of the ’053 Patent. OSES retained the law firm Morgan, Lewis & Bockius, LLP of Houston, Texas to handle both the litigation and the *inter partes* review. Morgan, Lewis & Bockius, LLP contacted Wooley & Associates, Inc. to assist with certain technical issues and to provide expert opinions.

3. This report contains facts, opinions and conclusions based on my training and experience and the information reviewed at the time of this writing. The Appendix lists the documents that were provided to me. My resumé is also presented in the Appendix along with my recent testimony.

4. This report contains my general opinions, but obviously not all details are included. If asked questions on these facts and opinions or other subjects, I may have opinions not specifically listed herein. There may be documents and testimony that support my opinions that are not included herein.

5. As additional information is examined, these facts, opinions and conclusions may be changed and/or supplemented. Upon review of additional documents and testimony I may supplement or revise my opinions. Also, after reading any opinions submitted by Greene's expert, I may have opinions to rebut those opinions.

II. Basic Fracturing and Wellhead Protection Processes

6. For a discussion of the basic principles of hydraulic fracturing and wellhead protection, I repeat Section (II) of my contemporaneous declaration submitted in support of OSES's primary opposition to Greene's petition for *inter partes* review.

7. A petroleum operating company drills a well for the purpose of reaching a productive reservoir containing oil or gas at a particular depth and location in a geologic structure. After drilling, it is sometimes necessary to stimulate the reservoir to improve productivity. This section describes general concepts for drilling and completion, fracture stimulation and the use of wellhead protection devices.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.