

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Dawson Geophysical Company

(Exact name of registrant as specified in its charter)

Texas
*(State or other jurisdiction of
incorporation or organization)*

1382
*(Primary Standard Industrial
Classification Code Number)*

75-0970548
*(I.R.S. Employer
Identification No.)*

**508 West Wall, Suite 800
Midland, Texas 79701
(432) 684-3000**
*(Address, including zip code, and telephone number,
including area code, of registrants' principal executive offices)*

**L. Decker Dawson
Chief Executive Officer
Dawson Geophysical Company
508 West Wall, Suite 800
Midland, Texas 79701
(432) 684-3000**
*(Name, address, including zip code, and telephone number,
including area code, of agent for service)*
Copies to:

**Neel Lemon
Sarah Rechter
Baker Botts L.L.P.
2001 Ross Avenue, Suite 700
Dallas, Texas 75201-2980
Telephone: (214) 953-6500
Facsimile: (214) 953-6503**

**Thomas P. Mason
Vinson & Elkins L.L.P.
2300 First City Tower
1001 Fannin Street
Houston, Texas 77002
Telephone: (713) 758-2222
Facsimile: (713) 758-2346**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are being offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. Registration No. 333-121236

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box.

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock, \$.33 1/3 par value per share	309,500 shares	\$7,582,750	\$893

- (1) Includes 9,500 shares issuable upon exercise of the Underwriters' over-allotment option. Does not include an aggregate of 1,725,000 shares of common stock registered by Dawson Geophysical Company on its registration statement on Form S-3 (Registration No. 333-121236) for the same offering.
- (2) In accordance with Rule 462(b) under the Securities Act of 1993, as amended, an additional amount of securities having a proposed maximum offering price of no more than 20% of the proposed maximum aggregate offering price (\$37,924,125) of the 1,725,000 shares of common stock eligible to be sold under the registrant's Registration Statement on Form S-3 (File No. 333-121236) is registered hereby.

Pursuant to Rule 429 under the Securities Act of 1933, the prospectus also relates to the securities registered pursuant to the prior registration statement on Form S-3 (File No. 333-121236).

This Registration Statement shall become effective upon filing with the Commission in accordance with Rule 462(b) under the Securities Act of 1933.

**Explanatory Note and
Incorporation by Reference of Registration Statement on Form S-3 Registration No. 333-121236**

This Registration Statement on Form S-3 of Dawson Geophysical Company (the "Company") is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and General Instruction IV to Form S-3. The Company hereby incorporates by reference into this Registration Statement on Form S-3 in its entirety the Registration Statement on Form S-3 (Registration No. 333-121236), relating to the offering of 1,725,000 shares of common stock, which was declared effective on February 28, 2005 by the Securities and Exchange Commission (the "Commission"), including each of the documents filed by the Company with the Commission and incorporated or deemed to be incorporated by reference therein. This Registration Statement is filed solely for the purpose of registering an additional 309,500 shares of the Company's common stock.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Midland, State of Texas, on March 1, 2005.

DAWSON GEOPHYSICAL COMPANY.

By: /s/ L. Decker Dawson
Name: L. Decker Dawson
Title: Chairman of the Board of Directors and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated below.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ L. Decker Dawson</u> L. Decker Dawson	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	March 1, 2005
<u>/s/ Stephen C. Jumper</u> Stephen C. Jumper	President, Chief Operating Officer and Director	March 1, 2005
<u>*</u> Paul H. Brown	Director	March 1, 2005
<u>*</u> Gary M. Hoover	Director	March 1, 2005
<u>*</u> Tim C. Thompson	Director	March 1, 2005
<u>/s/ Christina W. Hagan</u> Christina W. Hagan	Executive Vice President, Secretary, Treasurer and Chief Financial Officer (Principal Financial and Accounting Officer)	March 1, 2005

*By: /s/ Stephen C. Jumper
Stephen C. Jumper
Attorney-in-Fact

INDEX TO EXHIBITS

<u>Exhibit Number</u>	<u>Description</u>
5.1*	Opinion of Baker Botts L.L.P.
23.1*	Consent of Baker Botts L.L.P. (included in Exhibit 5.1).
23.2*	Consent of KPMG LLP, an independent registered accounting firm.
24.1	Power of Attorney (incorporated by reference from the Company's Registration Statement on Form S-3 filed with the Commission on December 14, 2004, as amended (File No. 333-121236)).

* Filed herewith.

2001 ROSS AVENUE
DALLAS, TEXAS
75201-2980
214.953.6500
FAX 214.953.6503

AUSTIN
DALLAS
HOUSTON
LONDON
MOSCOW
NEW YORK
RIYADH
WASHINGTON

BAKER BOTTS LLP

EXHIBIT 5.1

March 1, 2005

Dawson Geophysical Company
508 West Wall, Suite 800
Midland, Texas 79701

Re: Dawson Geophysical Company
Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Dawson Geophysical Company, a Texas corporation (the "Company"), in connection with the preparation and filing by the Company with the Securities and Exchange Commission of (i) the registration statement on Form S-3 (Registration No. 333-121236) (the "Initial Registration Statement") under the Securities Act of 1933, as amended, relating to the offering and sale of up to an aggregate of 1,725,000 shares of the Company's common stock, par value \$0.33 1/3 per share ("Common Stock"), including 225,000 shares subject to an over-allotment option granted by the Company to the underwriters, and (ii) the second registration statement on Form S-3, filed on the date hereof, relating to the registration of 309,500 additional shares of the Company's Common Stock (the "Subsequent Registration Statement," and together with the Initial Registration Statement, the "Registration Statements"), including 9,500 shares subject to an over-allotment option granted by the Company to the underwriters.

As the basis for the opinion hereinafter expressed, we have examined the Restated Articles of Incorporation and Bylaws of the Company as amended and the originals, or copies certified or otherwise identified, of corporate records of the Company, certificates of public officials and of representatives of the Company, statutes and other instruments and documents that we have deemed necessary or advisable for the purposes of this opinion. In such examination, we have assumed, without independent investigation, the authenticity of all documents submitted to us as originals and the conformity with the original documents of all documents submitted to us as copies

On the basis of the foregoing, and subject to the assumptions, limitations and qualifications hereinafter set forth, we are of the opinion that:

1. The Company is a corporation duly incorporated and validly existing under the laws of the State of Texas.
-

2. The shares of Common Stock registered pursuant to the Registration Statements, when issued and delivered by the Company against payment therefor as described in the Company's Registration Statements, will be duly authorized, validly issued, fully paid and nonassessable.

This opinion is limited to the laws of the State of Texas and the applicable federal laws of the United States.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Subsequent Registration Statement and to the reference to us under "Legal Matters" in the prospectus incorporated by reference into the Subsequent Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Baker Botts L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Dawson Geophysical Company

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated November 11, 2004, except as to Note 12, which is as of January 18, 2005, which is included in the registration statement on Form S-3 (File No. 333-121236) (the "Prior Registration Statement") of Dawson Geophysical Company (the "Company") incorporated herein, with respect to the balance sheets of the Company as of September 30, 2004 and 2003, and the related statements of operations, changes in stockholders' equity and comprehensive income, and cash flows for each of the years in the three-year period ended September 30, 2004. In addition, we hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated November 11, 2004, except with respect to Note 12, which is as of January 18, 2005, and our report dated November 11, 2004, which are included in the Company's annual report on Form 10-K/A and incorporated by reference into the Prior Registration Statement, with respect to the balance sheets of the Company as of September 30, 2004 and 2003, and the related statements of operations, changes in stockholders' equity and comprehensive income, and cash flows for each of the years in the three-year period ended September 30, 2004 and the financial statement schedules. We also hereby consent to the reference to our firm under the heading "Experts" in the prospectus incorporated by reference into this Registration Statement.

/s/ KPMG LLP

Midland, Texas
March 1, 2005