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AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON NOVEMBER 17, 1997 REGISTRATION NO. 333-SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549 FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 DAWSON GEOPHYSICAL COMPANY (Exact name of registrant as specified in its charter) TEXAS 1382 75-0970548 (State or other jurisdiction of (Primary Standard Industrial incorporation or organization) Classification Code Number) (I.R.S. Employer Identification No.) L. DECKER DAWSON PRESIDENT DAWSON GEOPHYSICAL COMPANY 208 SOUTH MARIENFELD 208 SOUTH MARIENFELD MIDLAND, TEXAS 79701 (915) 682-7356 MIDLAND, TEXAS 79701 (915) 682-7356 (Address, including zip code, and telephone (Name, address, including zip code, and number, including area code, of registrant's telephone number, including area code, of principal executive offices) agent for service) COPIES TO: JACK D. LADD C. NEEL LEMON III STUBBEMAN, MCRAE, SEALY, THOMPSON & KNIGHT, P.C. LAUGHLIN & BROWDER, INC. 1700 PACIFIC AVE. 550 W. TEXAS AVE., SUITE 800 SUITE 3300 MIDLAND, TEXAS 79701 DALLAS, TEXAS 75201 APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the Registration Statement becomes effective. If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, 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, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. [X] 333-38393 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 this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration 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, check the following box. [] CALCULATION OF REGISTRATION FEE ______

| TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED | AMOUNT TO BE REGISTERED(1) | PROPOSED MAXIMUM OFFERING PRICE PER SHARE(2) | PROPOSED MAXIMUM AGGREGATE OFFERING PRICE(2) | AMOUNT OF REGISTRATION FEE |
|---|----------------------------------|---|---|-------------------------------|
| Common Stock, \$.33 1/3 par value per share | 172,500 shares | \$20.00 | \$3,450,000 | \$1,045.45 |

(1) Includes up to 22,500 shares of Common Stock which may be purchased by Underwriters to cover over-allotments, if any. Does not include 1,725,000 shares of Common Stock having an aggregate offering price of \$39,028,125 registered pursuant to Registration Statement No. 333-38393 as to which a

EXPLANATORY NOTE

This Registration Statement is being filed pursuant to Rule 462(b) and General Instruction V of Form S-1, both promulgated under the Securities Act of 1933, as amended. The contents of Registration Statement No. 333-38393, including any prospectuses and prospectus supplements filed pursuant thereto in accordance with Rule 424 promulgated under such Act, are hereby incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Midland, and the State of Texas, on the 17th day of November, 1997.

DAWSON GEOPHYSICAL COMPANY

By /s/ L. DECKER DAWSON L. Decker Dawson President

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

| SIGNATURE | TITLE | DATE | |
|--|---|-------------------|--|
| /s/ L. DECKER DAWSON L. Decker Dawson | | November 17, 1997 | |
| /s/ FLOYD B. GRAHAM* | Director, Executive Vice President | November 17, 1997 | |
| Floyd B. Graham | | | |
| /s/ HOWELL W. PARDUE* | Director, Executive Vice President | November 17, 1997 | |
| Howell W. Pardue | | | |
| /s/ CALVIN J. CLEMENTS* | Director | November 17, 1997 | |
| Calvin J. Clements | | | |
| /s/ MATTHEW P. MURPHY* | Director | November 17, 1997 | |
| Matthew P. Murphy | | | |
| /s/ TIM C. THOMPSON* | Director | November 17, 1997 | |
| Tim C. Thompson | | | |
| /s/ CHRISTINA W. HAGAN* | Vice President, Chief Financial | • | |
| Christina W. Hagan | Officer (Principal Financial and Accounting Officer) | | |
| *By: /s/ L. DECKER DAWSON | | | |
| L. Decker Dawson Attorney-in-fact | | | |

INDEX TO EXHIBITS

DESCRIPTION

- 5.1 -- Opinion of Stubbeman, McRae, Sealy, Laughlin & Browder, Inc.
- 23.1 -- Consent of KPMG Peat Marwick LLP.
- 23.2 -- Consent of Stubbeman, McRae, Sealy, Laughlin & Browder, Inc. (contained in its opinion filed as Exhibit 5.1).
- 24.1 -- Power of Attorney (filed as Exhibit 24.1 to the Registrant's Registration Statement on Form S-1 (No. 333-38393) and incorporated herein by reference).
- 99.1 -- Certificate of Registrant as to payment of additional filing fee.

[Letterhead of Stubbeman, McRae, Sealy, Laughlin & Browder, Inc.]

November 17, 1997

Dawson Geophysical Company 208 South Marienfeld Midland, TX 79702

Re: Dawson Geophysical Company/Public Offering

Gentlemen:

We have acted as counsel for Dawson Geophysical Company, a Texas corporation (the "Company"), and are familiar with the proceedings taken by the Company in connection with the proposed offering covering up to 1,897,500 shares (the "Subject Shares") of its Common Stock, par value \$0.33-1/3 per share (the "Common Stock"), all on the terms and conditions set forth in (1) the Company's Registration Statement on Form S-1 (Registration No. 333-38393), filed with the Securities and Exchange Commission (the "Commission") on October 21, 1997 and amended by Amendment No. 1 thereto filed with the Commission on November 12, 1997 (as amended, the "Registration Statement"), and (2) the Company's abbreviated Registration Statement on Form S-1 pursuant to Rule 462(b) of the Rules and Regulations under the Securities Act of 1933, as amended (the "Rule 462(b) Registration Statement"). Of the Subject Shares, up to 1,397,500 shares of Common Stock will be issued and sold by the Company (including 247,500 shares of Common Stock subject to an over-allotment option granted by the Company), and 500,000 shares will be sold by L. Decker Dawson (the "Selling Shareholder").

In addition, we have examined such corporate records and other documents and made such examinations thereof as we considered necessary for the purposes of this opinion.

Based upon the foregoing, we are of the opinion:

- 1. The Company has been duly incorporated and is validly existing and in good standing under the laws of the State of Texas.
- 2. The 1,150,000 shares included in the Subject Shares (or up to 1,397,500 shares if the over allotment option is exercised) being offered by the Company, when sold in accordance with the terms of the offering described in the Registration Statement and the Rule 462(b) Registration Statement, will be legally issued and outstanding, fully paid and non-assessable shares of Common Stock of the Company.

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- 3. The 500,000 shares included in the Subject Shares being offered by the Selling Shareholder are legally issued and outstanding, fully paid and non-assessable shares of common stock of the Company.
- 4. When the applicable provisions of the Securities Act of 1933, as amended, and of the securities or Blue Sky laws of various states have been complied with, the Subject Shares may be legally sold as contemplated in the Registration Statement and the Rule 462(b) Registration Statement.
- 5. The Company has reserved a total of 1,397,500 shares of its authorized but unissued Common Stock for issuance.

We hereby consent to the reference to our firm under the caption "Legal Matters" in the Prospectus forming a part of the Registration Statement and the Rule 462(b) Registration Statement and to the filing of this opinion as an exhibit to such registration statements.

Sincerely,

Stubbeman, McRae, Sealy, Laughlin & Browder, Inc.

By: /s/ JACK D. LADD Jack D. Ladd

JDL/jae

The Board of Directors and Shareholders Dawson Geophysical Company:

We consent to the use of our report included herein and to the reference to our firm under the headings "Selected Financial Data" and "Experts" in the Prospectus.

KPMG PEAT MARWICK LLP

Midland, Texas November 17, 1997

CERTIFICATE OF DAWSON GEOPHYSICAL COMPANY AS TO PAYMENT OF ADDITIONAL REGISTRATION FEE

Dawson Geophysical Company (the "Registrant") hereby certifies to the Securities and Exchange Commission (the "Commission") that on November 17, 1997:

 (i) The Registrant has instructed its wiring service to wire transfer to the Commission the requisite filing fee of \$1,045.45 due in connection with the filing of its Registration Statement with the Commission on November 17, 1997 pursuant to Rule 462(b) under the Securities Act of 1933, as amended;

(ii) The Registrant will not revoke such instructions; and

(iii) The Registrant has sufficient funds in the account from which the wire transfer will originate to cover the amount of the filing fee.

The Registrant hereby undertakes to confirm on November 18, 1997 that its wiring service has received such instructions.

DAWSON GEOPHYSICAL COMPANY

By: /s/ L. DECKER DAWSON L. Decker Dawson President